

United States District Court,  
D. Colorado.

**A MAJOR DIFFERENCE, INC., a Colorado corporation,**  
Plaintiff.

v.

**ERCHONIA MEDICAL, INC., an Arizona corporation, Erchonia Medical Lasers, L.L.C., an Arizona limited liability company, Erchonia Patent Holdings, L.L.C., An Arizona Limited Liability Company,**  
Defendants.

**and**

**Erchonia Patent Holdings, L.L.C., an Arizona limited liability company, Erchonia Medical, Inc., an Arizona corporation,**  
Counterclaimants and Third-Party Plaintiffs.

v.

**A Major Difference, Inc., a Colorado corporation, Robert E. Moroney, an individual, Robert E. Moroney, L.L.C., a Colorado limited liability company, Miki Smith, an individual, KMS Marketing, Inc., a Colorado corporation, Stargate International, Inc., a Colorado corporation,**  
Counterdefendant and Third-Party Defendants.

No. 04-cv-01769-MSK-CBS

**Jan. 12, 2006.**

Robert R. Brunelli, Benjamin Baughman Lieb, Scott Robert Bialecki, Sheridan Ross, P.C., Paul Sung Cha, Holme Roberts & Owen, LLP, Denver, CO, for Plaintiff, Counterdefendant and Third-Party Defendants.

Charles R. Ledbetter, John Roger Mann, Valerie A. Garcia, Kennedy Childs & Fogg, PC, Richard Lance Gabriel, Holme Roberts & Owen, LLP, Denver, CO, Ira M. Schwartz, Deconcini McDonald Yerwin & Lacy, P.C., Phoenix, AZ, for Defendants, Counterclaimants and Third-Party Plaintiffs.

### **ORDER CONSTRUING PATENT CLAIM TERMS**

**MARCIA S. KRIEGER, District Judge.**

THIS MATTER comes before the Court on the parties' FN1 Joint Motion for Construction as a Matter of Law of Disputed Claim Terms of U.S. Patent No. 6,746,473 (# 105). The Court held an evidentiary hearing on the motion on November 17, 2005. Having considered the motion, the parties' briefs (# 102, # 109), the evidence FN2 and arguments presented at the hearing, and the designated portions of the deposition testimony of Mike Robinson, the Court finds and concludes as follows.

FN1. The Plaintiff and Third-Party Defendants are aligned in this matter. For purposes of this ruling, the

Court refers to them as "AMD." The Court refers to the Defendants/Third-Party Plaintiffs as "Erchonia."

FN2. At the hearing, the Court received Exhibits 1 through 18 on the condition that they would not be admitted unless referred to during the testimony or argument. Of these, all but Exhibits 8, 14, 15 and 17 were referred to during the testimony or argument. Therefore, the Court admits Exhibits 1 through 7, 9 through 13, 16 and 18.

## I. Jurisdiction

The Court exercises subject matter jurisdiction pursuant to 28 U.S.C. s.s. 1331 and 1338(a).

## II. Issues Presented

Pursuant to *Markman v. Westview Inst., Inc.*, 52 F.3d 967 (Fed. Cir.1995), *aff'd*, 517 U.S. 370 (1996), the parties ask the Court to construe terms in U.S. Patent No. 6,746,473 ("the '473 patent") owned by Erchonia Medical, Inc. The disputed claim terms are as follows, in bold print:

1. A laser device comprising: ...

c) **an optical arrangement attached to the wand** for receiving the laser beams and for **transforming each of the laser beams** into a **desired spot shape**. ...

7. A device according to claim 1 wherein at least one of the spot shapes is **substantially linear**.

8. A device according to claim 1 further comprising a first laser beam having a first spot shape and a second laser beam having a second spot shape wherein the first spot shape is **substantially linear** and the second spot shape is circular....

13. A therapeutic laser device comprising: ...

c) **an optical arrangement** mounted in the interior cavity of the wand for receiving the laser beams and for **transforming each of the laser beams** into a **desired** spot shape wherein the first laser beam's spot shape is **substantially linear** and the second laser beam's spot shape is substantially circular;....

The construction of a patent claim presents a question of law. *See Markman*, 517 U.S. at 372. A court's task is to determine what a person of ordinary skill in the relevant art would understand the disputed claim terms to mean as of the effective filing date of the patent application. *See Vanderlande Industries Nederland BV v. Int'l Trade Commission*, 366 F.3d 1311, 1318 (Fed.Cir.2004); *Phillips v. AWH Corp.*, 415 F.3d 1303, 1313 (Fed.Cir.2005), *petition for cert. filed*, 74 USLW 3308 (Nov. 9, 2005) (No. 05-602). A court construes the claims without regard to the device which is alleged to infringe the patent. *See Young Dental Mfg. Co., Inc. v. Q3 Special Products, Inc.*, 112 F.3d 1137, 1141 (Fed.Cir.1997); *Texas Digital Systems, Inc. v. Telegenix, Inc.*, 308 F.3d 1193, 1202 (Fed.Cir.2002).

A court gives intrinsic evidence- *i.e.*, the claim language, the specification, and the prosecution history before the U.S. Patent and Trademark Office (if in evidence)-primary consideration in determining the legally operative meaning of the claim terms. *See Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582

(Fed.Cir.1996). The specification is usually "the single best guide to the meaning of a disputed term." *See id.* However, a court should be cautious not to confine the patent claims to the specific embodiments described in the specification unless it is clear that the patentee intended such embodiments to be co-extensive with the scope of the patent claims. *See Phillips*, 415 F.3d at 1323. The prosecution history, which generally consists of the record of proceedings before the U.S. Patent and Trademark Office, including prior art cited during examination of the patent, can also have "critical significance." *See id.* at 1317; *Vitronics Corp.*, 90 F.3d at 1582. The context in which the disputed claim term appears also can be instructive. *See Phillips*, 415 F.3d at 1314.

A court should not consider extrinsic evidence- *i.e.*, expert testimony, inventor testimony, dictionaries, technical treatises, and anything else external to the patent and file history-if the intrinsic evidence resolves any ambiguity in a disputed claim term. *See Vitronics Corp.*, 90 F.3d at 1583-84. However, a court should consider extrinsic evidence when the intrinsic evidence is not sufficient to resolve the ambiguity. *See id.* at 1584. Under no circumstances should a court rely upon extrinsic evidence to vary or contradict the claim language or specification. *See id.*

Extrinsic evidence can also shed light on what the relevant art is, even if such evidence is not used to construe the patent terms. *See Vanderlande Industries Nederland BV*, 366 F.3d at 1318. When the consideration of extrinsic evidence would be improper *vis a vis* construction of the claim, a court may still rely upon technical dictionaries to better understand the underlying technology. *See Vitronics Corp.*, 90 F.3d at 1584 n.6. Common-usage dictionaries (as opposed to technical dictionaries) generally are irrelevant unless a person skilled in the relevant art would understand their definitions to apply. *See Vanderlande Industries Nederland BV*, 366 F.3d at 1318. Reliance upon a common-usage or technical dictionary may also be inappropriate when it defines a term differently than how the patentee would define it. *See Phillips*, 415 F.3d at 1322.

### III. Analysis

#### A. The '473 Patent and Prosecution History

The '473 patent describes a hand-held "therapeutic laser device" which

can simultaneously provide multiple types of low level laser therapy treatments. The device enables laser light of different pulse widths, different beam shapes and spot sizes to be applied externally to a patient's body. The device includes multiple laser sources. In the preferred embodiment, two semiconductor diode laser sources simultaneously provide two separate laser beams, one laser beam producing a line of continuous red laser light and the other producing a spot of pulsed laser light.

Under "Field of Invention," the '473 patent states: "This invention relates generally to medical devices that employ lasers. More particularly, this invention relates to an improved hand-held laser light generator device."

When the inventors of this device first applied for a patent, the examiners rejected all thirteen claims in the application. The examiners concluded that these claims were anticipated by U.S. Patent 6,267,779 to Gerdes, who disclosed

an apparatus for therapeutic laser treatment that includes handheld wands that each may deliver two wavelengths of laser energy, one in the near infrared range and the other in the visible range from solid state

diode lasers. The beams are combined and delivered to the wands which include adjustable optics to focus and shape the beams. The beam shape may be circular or rectangular. Rectangular is interpreted as being substantially linear....

The inventors then submitted an Amendment and Response to First Office Action, which provided:

With respect to amended claims 7, 8, and 13, Gerdes does not anticipate these claims because Gerdes does not disclose the use of a linear beam spot. Applicant respectfully argues that, contrary to the Examiner's assertions, a rectangle of Gerdes' beam shape is not interpreted as substantially linear in the laser arts. A rectangle has length and width; a line has only length. It is more difficult to create a laser line emission than a comparatively wider rectangle. While arguably a line has the "width" of a single wave of light, because any shape can be described at a microscopic level as being a series of single waves, if the Examiner's assertion were true, all beams shapes would be equivalent; in essence, a series of waves ...

The examiners allowed the amended claims.

## **B. The Relevant Art**

AMD contends that the relevant art is laser technology. In contrast, Erchonia contends that the relevant art is optics.

### ***Intrinsic Evidence***

The intrinsic evidence supports AMD's construction. The patented device is a "therapeutic laser device," not a "therapeutic optical device." Under "Field of Invention," the patent states that the invention relates to medical devices that employ lasers. The patent specification and claims refer to an "optical arrangement" but otherwise make no reference to the optical arts. In applying for the '473 patent, the inventors referenced the "laser arts" when distinguishing their claims from those in the Gerdes patent. Therefore, the Court finds that based upon the intrinsic evidence, the relevant art is laser technology, rather than optics.

### ***Extrinsic Evidence***

Even if the intrinsic evidence did not resolve the issue of the relevant art, the extrinsic evidence supports the same conclusion.

Two experts testified at the hearing regarding the relevant art. Dr. Barbara Soltz, who holds a Ph.D. in physics, testified that the relevant art is laser technology. In contrast, Dr. John Greivenkamp, Jr., who holds a Ph.D. in optical sciences, testified that the relevant art is geometrical optics and optical system design because the patented device is mainly an optical system which includes a laser.

The patented device contains both laser and optical components. However, the device is primarily a laser device to be used in medical applications. Dr. Soltz, who has applied optics to laser technology since prior to 1983 and has founded one company which develops hand-held laser devices for medical applications, explained the role of optics in the laser arts. She testified that in order for a semiconductor laser diode to be useful, "it must use some kind of optics in order to collect and ultimately focus or to direct the light. So inherent in this technology is the use of optics."

The preferred embodiment of the patented device includes two semiconductor diode laser sources, and

Claim 5 of the '473 patent provides that at least one of the laser energy sources must be a semiconductor diode. The device's optical components simply affect the laser beam and resulting spot shape. To construct the device, a person would be required to understand the operation of semiconductor laser diodes and any optical elements used to affect the laser beam. Therefore, the relevant art is laser technology.

### **C. "An Optical Arrangement"**

AMD contends that "an optical arrangement" means "one or more lenses, mirrors, prisms, apertures, beam splitters, filters, diffraction gratings or fiber optic wires." It bases this contention upon the patent specification and testimony from Dr. Barbara Soltz.

In contrast, Erchonia contends that "an optical arrangement" means "one or more optical devices or optical elements." Erchonia bases its interpretation upon the meaning ascribed to such term in the field of optics, in particular by Dr. Greivenkamp. It also relies upon the patent specification, technical and common-usage dictionaries, and other extrinsic evidence.

#### ***Intrinsic Evidence***

The Detailed Description of the Invention describes two optical arrangements of the preferred embodiment. The optical arrangement of the linear spot shape "includes a collimating lens and a line generating prism" which "are disposed in serial relation to the laser energy source." The optical arrangement of the circular spot shape "includes a collimating lens and a beam spot shaping lens" which "are disposed in serial relation to the laser energy source." Nothing in the specification suggests that these are exclusive optical arrangements. Instead, the specification simply describes the preferred embodiment and states:

[I]t will be understood by those skilled in the art that various changes and modifications may be made, and equivalents may be substituted for elements thereof without departing from the true scope of the invention. Therefore, it is intended that this invention not be limited to the particular embodiment disclosed as the best mode contemplated for carrying out the invention, but that the invention will include all embodiments falling within the scope of the appended claims.

Therefore, the patent specification and claim language do not resolve how "an optical arrangement" should be defined. The prosecution history is also silent on this issue. Therefore, the Court turns to the extrinsic evidence.

#### ***Extrinsic Evidence***

At the hearing, Dr. Soltz testified that "an optical arrangement is either two or more optical elements" such as "lenses, filters, gratings, apertures, prisms, [and] fiber optics." She also testified that an optical element could include a mirror or beam splitter.

Dr. Soltz' testimony is consistent with the testimony of Dr. Greivenkamp. He interpreted "optical arrangement" to mean "a collection of optical elements." He testified that "optical elements" can include lenses, prisms, mirrors, filters, gratings, apertures, fiber optic wires, crystals, and nonlinear optical elements. He also testified that a person's finger can become an optical element if placed in front of the laser beam.

Therefore, the Court concludes that an "optical arrangement" means "two or more optical elements." The Court declines to delineate the specific optical elements that might fall within this definition because the

patent specification and claims do not limit the device to particular optical elements, and it was apparent to both Dr. Soltz and Dr. Greivenkamp that a wide variety of objects could be used as optical elements.

#### **D. "Attached to the Wand"**

AMD asserts that "attached to the wand" means "directly fastened to the wand." It bases such assertion upon the patent specification, testimony from Dr. Soltz and a common-usage dictionary.

Erchonia asserts that "attached to the wand" means "connected, directly or indirectly, or the wand." It bases its assertion upon a Tenth Circuit decision from 1954, *see Pearl Assur. Co. v. School Dist. No. 1*, 212 F.2d 778, 781 (10th Cir.1954), an unpublished decision from the District of Delaware, *see Medtronic Vascular, Inc. v. Advanced Cardiovascular Systems, Inc.*, 2005 WL 46553 (D.Del. Jan. 5, 2005), and a common-usage dictionary.

#### ***Intrinsic Evidence***

The patent claims and specification do not explain how the wand is attached to any optical arrangement. Claim 13(c) provides that the optical arrangement is "mounted in the interior cavity of the wand" but does not describe how. The prosecution history also sheds no light on this issue. Therefore, the intrinsic evidence does not completely resolve the meaning of the word "attached."

#### ***Extrinsic Evidence***

The caselaw relied upon by Erchonia is not persuasive, because neither case interpreted the term "attachment" in the context of the laser arts. In *Pearl Assur. Co.*, 212 F.2d at 781, the Tenth Circuit concluded that a gymnasium was attached to a high school for purposes of an insurance policy when they were connected by a permanent enclosed passageway, a steam line, a hot water line, an electric power line and a common sewer. *Medtronic* does not interpret any permutation of the word "attach" at all.

Dr. Soltz testified that in the laser arts, "attachment" is a "physical mating" which occurs when there is a fixing, securing, or fastening, and does not conventionally occur when there is an intermediate piece. She testified that "'attachment' always means a direct attachment." She acknowledged that the definition she uses in the laser arts is the same as that found in a common-usage dictionary. Dr. Greivenkamp also testified that a person of ordinary skill in the relevant art would understand the word "attached" in the same manner as a lay person.

Therefore, the Court considers the definition of "attach" set forth in the American Heritage Dictionary. It defines "attach" as "to fasten, secure, or join[.]" According to a person of ordinary skill in the relevant art of laser technology, an attachment must be direct. Therefore, the Court concludes that "attached to the wand" means "fastened, secured, or joined to the wand directly."

#### **E. "Transforming Each of the Laser Beams"**

AMD contends that "transforming each of the laser beams" means "changing the appearance or form of the spot shape of the beam emitted by each laser energy source." It bases this contention upon the claim language, the patent specification, a common-usage dictionary, and the testimony of Dr. Soltz.

Erchonia contends that "transforming each of the laser beams" means "changing the appearance or form of

each of the laser beams." It bases its contention upon a common-usage dictionary.

### ***Intrinsic Evidence***

Nothing in the claim language, the specification, or the prosecution history defines "transforming each of the laser beams." Therefore, the Court considers extrinsic evidence on this issue.

### ***Extrinsic Evidence***

Dr. Soltz testified that in the laser arts, "transforming each of the laser beams" means "to control, to shape, to otherwise transfer this highly divergent beam that is characteristic of a laser diode specifically ... into a different shape." She also stated that "transforming" would result in a different shape, appearance and form. She testified that her definition of "transforming" is essentially the definition that would be found in a common-usage dictionary. Dr. Greivenkamp also testified that a person of ordinary skill in the relevant art would understand the word "transforming" in the same manner as a lay person.

Therefore, the Court refers to a common-usage dictionary. The American Heritage Dictionary defines "transform" as "to change markedly the appearance or form of[.]" It also defines it as "to change the nature, function, or condition of[.]" Of these two definitions, the former is a better fit. Here, various optical elements are used to manipulate the invention's laser beams to produce various spot shapes. Therefore, "transforming each of the laser beams" means "changing the appearance or form of the laser beams."

## **F. "Desired Spot Shape"**

AMD asserts that "desired spot shape" means "a spot shape wanted by the laser device designer." It bases such assertion upon the patent specification, a common-usage dictionary, and the testimony of Dr. Soltz.

Erchonia asserts that "desired spot shape" means "a spot shape desired by anyone." It bases its assertion upon the context of the claim language.

### ***Intrinsic Evidence***

There is no language in the patent's specification or claims which suggests what a "desired spot shape" is. The prosecution history is also silent on this issue. Therefore, the intrinsic evidence does not resolve any ambiguity in the definition of "desired spot shape."

### ***Extrinsic Evidence***

Dr. Soltz testified that in the laser arts, "desired" means "something that is wanted." She conceded that her definition of "desired" is essentially the definition that would be found in a common-usage dictionary. Dr. Greivenkamp testified that a person of ordinary skill in the relevant art would understand the word "desired" in the same manner as a lay person. Therefore, the Court looks to the definition of "desired" set forth in a common-usage dictionary.

The American Heritage Dictionary defines "desire" as "to wish or long for; want." This definition, however, does not resolve "who" must desire the spot shape. Dr. Soltz stated that it could be the manufacturer, designer, customer, client or anybody else as long as the desire was developed prior to the sale of the product. Steven Shanks, one of the named inventors on the '473 patent, agreed that the "desired spot shape"

could be desired by the manufacturer, customer or client. Therefore, the Court concludes that "desired spot shape" means "a spot shape desired by anyone."

### **G. "Substantially Linear"**

AMD contends that "substantially linear" means "a line having minimal width." In support of such contention, AMD relies upon the prosecution history, the patent specification, and a common-usage dictionary.

Erchonia contends that "substantially linear" means "has the appearance of a length significantly greater than its width." In support of such contention, it relies upon both common-usage and technical dictionaries, as well as the claim language.

#### ***Intrinsic Evidence***

The patent claim and specification shed no light on the definition of "substantially linear." However, in applying for the '473 patent, Erchonia explained that a rectangle-shaped laser beam is not "substantially linear" for purposes of the laser arts because a rectangle has length and width, and a line has only length, arguably with the width of a single wave of light. Therefore, the Court finds that "substantially linear" means "a line having minimal width".

#### ***Extrinsic Evidence***

The extrinsic evidence is contrary to the patent's prosecution history. Dr. Greivenkamp testified that "substantially linear" means "that a shape has acquired some of the properties of a line." He stated that when the aspect ratio is elongated, for instance, when it is 20 or 30 to 1, it is substantially linear. He also stated that determining whether something is substantially linear would depend upon the particular observer. He conceded that in formulating this opinion, he did not rely on the patent's prosecution history. Therefore, Court declines to adopt Dr. Greivenkamp's definition.

**IT IS THEREFORE ORDERED** that:

(1) The Joint Motion for Construction as a Matter of Law of Disputed Claim Terms of U.S. Patent No. 6,746,473 (# 105) is **GRANTED**.

(2) The Court defines the disputed patent claim terms as follows:

(a) "Optical arrangement" means "two or more optical elements."

(b) "Attached to the wand" means "fastened, secured, or joined to the wand directly."

(c) "Transforming each of the laser beams" means "changing the appearance or form of the laser beams."

(d) "Desired spot shape" means "a spot shape desired by anyone ."

(e) "Substantially linear" means "a line having minimal width."

A Major Difference, Inc. v. Erchonia Medical, Inc.

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