Varian Medical Systems, Inc. v. ViewRay, Inc.

2020 | Cited 0 times | N.D. California | July 24, 2020

UNITED STATES DISTRICT COURT NORTHERN DISTRICT OF CALIFORNIA

VARIAN MEDICAL SYSTEMS, INC.,

Plaintiff, v. VIEWRAY, INC., et al.,

Defendants.

Case No. 19-cv-05697-SI

CLAIM CONSTRUCTION ORDER

On July 7, 2020, the Court held a claim construction hearing. After consideration of the

BACKGROUND Plaintiff Varian Medical Systems defendants ViewRay, Inc. and ViewRay Tech September 10, 2019. Varian alleges that defendants infringe two patents: U.S. Patent Nos.

, which are 841 patent, and they share the same specification.

A Multileaf Collimator (MLC) is a device used in radiotherapy, a cancer treatment in which a beam is generated by a radiation source to administer a dose of radiation to the target tissue. The Asserted Patents claim an invention for multi level MLCs and methods of shaping radiation beams that can reduce radiation lea - 55. All implicated claims are reproduced here for reference, with the disputed terms in bold:

I. U.S. Patent No. 8,637,841: Multi Level Multileaf Collimators (Dkt. No. 37-1, Exhibit

A) 1 patent discloses a device used in radiotherapy to shape the radiation beam as it passes from the radiation source to the treatment site.

Claim 1: A multileaf collimator comprising: a first set of a plurality of pairs of beam blocking leaves arranged adjacent one another, leaves of each pair in the first set being disposed in an opposed relationship and longitudinally movable relative to each other in a first direction; and a second set of a plurality of pairs of beam blocking leaves arranged adjacent one another, leaves of each pair in the second set being disposed in an opposed relationship and longitudinally movable relative to each

other in a second direction generally parallel to the first direction; wherein the first and second sets of pairs of leaves are disposed in different planes, each of the first and second sets includes an inner first section of a plurality of pairs of leaves having a first cross section and an outer second section of a plurality of pairs of leaves having a second cross section, and the first cross section of the leaves in the first section of the first set is thinner than the first cross section of the leaves in the first section of the second set; and wherein the second section in each of the first and second sets includes a plurality of pairs of leaves at each side of the inner first section. Claim 12 (representative of claims 13-19): A multileaf collimator, comprising: a first set of a plurality of pairs of beam blocking leaves arranged adjacent one another, leaves of each pair in the first set being disposed in an opposed relationship and longitudinally movable relative to each other in a first direction; and a second set of a plurality of pairs of beam blocking leaves arranged adjacent one another, leaves of each pair in the second set being disposed in an opposed relationship and longitudinally movable relative to each other in a second direction generally parallel to the first direction; wherein the first and second sets of pairs of leaves are disposed in different planes, and each leaf in the first set is offset from a leaf in the second set by about half a leaf width in a direction generally traverse to the first and second directions, and wherein each leaf in the first set has a substantially same first cross-section, and each leaf in the second set has a substantially same second cross-section, and the first cross-section is different from the second cross-section.

Claim 19: The multileaf collimator of claim 12 wherein the leaves in the first set include a main portion having a height and an end portion having one or two projections extended beyond the height of the main portion.

Claim 20: A method of shaping radiation beams from a radiation source, comprising: providing a multileaf collimator between a radiation source and an isocenter, said multileaf collimator comprising first and second sets of a plurality of beam blocking leaves disposed in first and second planes, leaves in each of the first and second sets being arranged in two opposing arrays forming a plurality of pairs of leaves in the first and second sets respectively, leaves of each pair being arranged in an opposed relationship and longitudinally movable relative each other, and the longitudinal moving directions being substantially parallel generally traverse to a beam direction; and moving selected pairs of leaves in the first and second sets from the two opposing arrays in a substantially parallel direction to close ends of opposing leaves of the selected pairs to block a selected portion of a radiation beam; wherein in moving the selected pairs of leaves to close the ends of opposing leaves to block the selected portion of the radiation beam, a pair of leaves in the first set close at a first location, a corresponding pair of leaves in the second set close at a second location, and the first and second locations are offset from a beam's point of view.

II. U.S. Patent No. 9,082,520: Multi Level Multileaf Collimators (Dkt. No. 37-2, Exhibit

B) .

Claim 1 (representative of claim 3): A multileaf collimator comprising: a first set of a plurality of pairs of beam blocking leaves arranged adjacent one another, leaves of each pair in the first set being disposed in an opposed relationship and longitudinally movable relative to each other in a first direction; and a second set of a plurality of pairs of beam blocking leaves arranged adjacent one another, leaves of each pair in the second set being disposed in an opposed relationship and longitudinally movable relative to each other in a second direction generally parallel to the first direction; wherein the first and second sets of pairs of leaves are disposed in different planes and the first set of pairs of leaves comprises a first quantity of pairs of leaves and the second set of pairs of leaves comprises a second quantity of pairs of leaves wherein the first quantity and the second quantity are different. Claim 6: A multileaf collimator, comprising: a first set of a plurality of pairs of beam blocking leaves arranged adjacent one another, leaves of each pair in the first set being disposed in an opposed relationship and longitudinally movable relative to each other in a first direction; and a second set of a plurality of pairs of beam blocking leaves arranged adjacent one another, leaves of each pair in the second set being disposed in an opposed relationship and longitudinally movable relative to each other in a second direction generally parallel to the first direction; wherein

the leaves of the first set are disposed in a first level providing first projected widths at an isocenter plane, and the leaves of the second set are disposed in a second level providing, at the isocenter plane, second projected widths that are substantially same as the corresponding first projected widths; and the leaves in the first level are arranged offset from the leaves in the second level in a direction generally traverse to the first and second directions such that one of the first projected widths offsets about half of corresponding one of the second projected widths at the isocenter. Claim 14: The multileaf collimator of claim 6 wherein at least some of the leaves of the first set have an end portion having an upward and/or downward extended portion.

LEGAL STANDARD Claim construction is a matter of law. Markman v. Westview Instr., Inc., 517 U.S. 370, 372

Phillips v. AWH Corp., meaning of a claim term is the meaning that the term would have to a person of ordinary skill in the

Id. at 1313. In determining the proper construction of a claim, a court begins with the intrinsic evidence of record, consisting of the claim language, the patent specification, and, if in evidence, the prosecution history. Id. at 1314; see also Vitronics Corp. v. Conceptronic, Inc., 90 F Comark Communications, Inc. v. Harris Corp., 156 F.3d 1182, 1186 (Fed. Cir. 1998); see also Abtox, Inc. v. Exitron Corp., 122 F.3d 1019, 1023 (Fed. Cir. 1997).

Accordingly, although claims speak to those skilled in the art, claim terms are construed in light of their ordinary and accustomed meaning, unless examination of the specification, prosecution history, and other claims indicates that the inventor intended otherwise. See Electro Medical Systems, S.A. v.

Cooper Life Sciences, Inc., 34 F.3d 1048, 1054 (Fed. Cir. 1994). The written description can provide guidance as to the meaning of the claims, thereby dictating the manner in which the claims are to be construed, even if the guidance is not provided in explicit definitional format. SciMed Life Systems, Inc. v. Advanced Cardiovascular Systems, Inc., 242 F.3d 1337, 1344 Vitronics, 90 F.3d at 1582, 1584 n.6.

In addition, the claims must be read in view of the specification. Markman v. Westview Instruments, Inc., 52 F.3d 967, 979 (Fed. Cir. 1995), , 517 U.S. 370 (1996). Although claims are interpreted in light of the specification, Raytheon Co. v. Roper Corp., 724 F.2d 951, 957

(Fed. Cir. 1983). For instance, limitations from a preferred embodiment described in the specification generally should not be read into the claim language. See Comark, 156 F.3d at 1187. Phillips, 415 F.3d at 1316 (citations omitted). Therefore, if the specification

reveals an intentional disclaimer or disavowal of claim scope, the claims must be read consistently with that limitation. Id.

Finally, the Court may consider the prosecution history of the patent, if in evidence. Markman, 52 F.3d at 980. The prosecution history limits the interpretation of claim terms so as to exclude any interpretation that was disclaimed during prosecution. See Southwall Technologies, Inc. v. Cardinal IG Co., 54 F.3d 1570, 1576 (Fed. Cir. 1995). In most situations, analysis of this intrinsic evidence alone will resolve claim construction disputes. See Vitronics, 90 F.3d at 1583. Courts should not rely on extrinsic evidence in claim construction to contradict the meaning of claims discernable from examination of the claims, the written description, and the prosecution history. See Pitney Bowes, Inc. v. Hewlett-Packard Co., 182 F.3d 1298, 1308 (Fed. Cir. 1999) (citing Vitronics trustworthy extrinsic evidence to ensure that the claim construction it is tending to from the patent

file is not inconsistent with clearly expressed, plainly apposite, and widely held understandings in Id. at 1309. Extrinsi the patent and prosecution history, including expert and inventor testimony, dictionaries, and

Phillips, 415 F.3d at 1317 (citation omitted). All extrinsic evidence should be evaluated in light of the intrinsic evidence. Id. at 1319.

DISCUSSION Pursuant to Patent Local Rule 4-3(a), parties are required to identify up to ten terms whose construction will be most significant to the resolution of the case. Patent L. R. 4-6. The parties have identified eight disputed terms for construction. 1

I. 41 Patent -

section, and each leaf in the second set has a substantially same second cross-section, and the first cross-section is different from the second cross- s 12- 19)

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Plaintiff Defendant plain and ordinary meaning indefinite The Court finds this term indefinite pursuant to 35 U.S.C. § 112, ¶2. Varian argues that the term does not need construction, while ViewRay contends that the term is indefinite. A 35 U.S.C. § 112, ¶ 2. The Supreme Court has stated nt is invalid for indefiniteness if its

claims, read in light of the specification delineating the patent, and the prosecution history, fail to Nautilus, Inc. v. Biosig Instruments, Inc., 572 U.S. 898, 901 (2014). 2

Interval

Licensing LLC v. AOL, Inc., 766 F.3d 1364, 1370 (Fed. Cir. 2014) (quoting Nautilus, 572 U.S. at

1 Two terms that were initially submitted in the Joint Claim Construction Statement are no longer in dispute, as ViewRay agreed in its response brief that those terms should be given their plain and ordinary meanings.

2 rson of ordinary skill in the art (POSITA) to be at least two years of work experience with multileaf collimators. A person with less education but more rele

Dkt. No 70- ng in medical physics, specifically in the field of external beam radiotherapy (extensive experience and technical training Dkt. No. 70-3 at 5.

909).

because the and claim language (1) do not provide guidance on what it means for each , and (2) do not provide guidance on how different the cross section of leaves in the first set needs to be from the cross section of leaves in the second section for them t cross section is different from the second cross section.

Varian contends that numerical precision is not required under Nautilus, and that the Federal ot render a claim term indefinite. Varian also argues that the specification, and in particular Figures 2 and 6A and 6B, provide Both parties have submitted declarations from their experts on this issue, and the Court heard

testimony from the experts at the claim construction.

Figure 6A is a cross-sectional view of a portion of an exemplary multi level MLC providing variable width definition in accordance -36. 3

-section of trapezoidal, rectangular Id. at 8:42-43; id. at 6:35-40. With regard to Figure 6A, the specification teaches

3 Figure 6B illustrates another alternative embodiment with variable leaf widths. Id. at 9:24- 27.

[t]he MLC 610 may include a first section of leaves 622 with a first cross-section that provides for a first substantially same width definition (e.g. ½ cm), a second section of leaves 624 with a second cross-section that provides for a second substantially same width definition (e.g. 1 cm), and optionally a third section of leaves 626 with a third cross-section that provides for a third substantially same w Id. at 8:44-51. The specification also states that leaves that are ½ cm are different from leaves that are 1.0 cm wide. Id. at 8:36-39. Varian argues that Figure 6A shows what

However, the specification is silent as to whether the transition leaf in Figure 6A (627, ¾ cm wide) In addition, when describing cross sect the specification does not provide guidance whether an absolute value difference of ½ centimeter width is sufficient for the cross section to be different or whether it is the 100% increase in width from ½ to 1.0 cm that Further, the Court notes that while Figure 6A (and Figure 6B) could potentially shed some light on what is considered a -section in that the specification states that leaves .

See also Tr. at 46-47, 53- within the scope of Claim 12) (Dkt. No. 93).

Varian also argues that the patent provides additional guidance by explaining the purpose and significance of having similar versus different cross-sections, namely to account for beam divergence from the radiation source. Dkt. No. 79-4 at 8. width of leaves at different levels may be different to provide the same projected width definition at

the isocenter. -48. measurable geometric relationship for objectively determining whether leaves have substantially the

same or different cross-sections, guided by the goal of projecting substantially the same leaf widths -4 at 6-7. Varian argues that, as explained by Dr. Bush and in the

specification, leaf focus, dimensions, and angles are all relevant because the geometric relationship depicted in Figure 2 instructs a POSITA to account for beam divergence. Id. at 6-8.

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However, Figure 2 does not contain any dimensions or numerical information, and the at 3:31-33. At the claim he made calculations based upon Figure 2 and found that the relative size of the lower set (230) was approximately 14-15 percent larger than the upper set (220), and that otherwise the cross section of the leaves of lower set was identical in shape, angles, relative symmetry, and height to the cross section of the leaves of the upper set. Tr. at 18-19. Dr. Low also looked at the individual leaves within the upper set (220), and Id. at 20. Dr. Low stated that there was a fair amount of variation within the cross section of the leaves of the upper set with regard to shape, angles and offset. Id.

Thus, Dr.

and offset but where the leaves were all the same width, nor did it provide guidance as to what identical and the only difference was width. Id.

The Court concludes that claims 12-19 of the finite because the patent fails to inform with reasonable certainty those skilled in the art about the scope of what constitutes -sections. As an initial matter, the Court agrees with ViewRay that there is nothing in the plain language of the claims that sheds light on the boundary The Court also finds that the specification does not contain objective guidance to inform a POSITA regarding what cross sections would qualify as .

Ecolab, Inc. v. Envirochem, Inc., 264 F.3d 1358, 1367 (Fed. Cir. 2001). However, of the language in our prior cases may scope of the ph Interval Licensing, 766 F.3d at 1370-71 (quoting Datamize, LLC v. Plumtree

Software, Inc., 417 F.3d 1342, 1351 (Fed.Cir.2005). specification and the prosecution history, must provide objective boundaries for those of skill in the Interval Licensing, 766 F.3d at 1371. Here, there are no objective boundaries in the patent for Figure 6A provides some examples of what could be conside but Figure 6A does not provide guidance on the objective boundaries, nor is there any such guidance elsewhere in the specification. The Court also notes that Dr. Bush testified that a 1-3 percent difference in leaf width -50% in leaf width would not, and that a POSITA would know that based upon dimensions, angles, and position of the radiation source. Tr. at 51-56.

However, the specification does not disclose any dimensions, angles, or position of radiation source. Thus, the patent lacks information as to the boundaries of the claim.

Accordingly, the Court finds this claim term indefinite. 4

II. leaves arranged adjacent one another, leaves of each pair in the first set being

disposed in an opposed relationship and longitudinally movable relative to each other 1 and 12 1 and 6)

Plaintiff Defendant plain and ordinary meaning The first set may be above or below the

second set. arranged adjacent one another, leaves of each pair in the first set being disposed in an opposed

relationship and longitudinally movable relative to each other in a first direction (the first set may

Varian asserts that the parenthetical is unnecessary and that it improperly adds a positional

limitation. However, the claims at issue require that the first and second sets are disposed in different planes or a first and second level, and Varian agrees that The Court finds that the additional parenthetical will add

clarity for the jury.

The a first set of a plurality of pairs of beam blocking leaves arranged adjacent one another, leaves of each pair in the first set being disposed in an opposed relationship and longitudinally movable relative to each other in a first direction (the first set may be above or below the second set).

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4 s in the IPR that are inconsistent with the indefiniteness contention it has advanced before this Court.

III. 1, 12 and 12 1, 3 and 6)

Plaintiff Defendant direction and a plurality of directions that

are parallel to the direction, as well as

A direction, including the opposite (i.e.

orthogonal) direction and a plurality of directions that are parallel to the direction, as well as both linear and arc trajectories. The C plurality of directions that are parallel to the direction, as well as both l

Asserted Patents. See Patent at 3:50-53 (

direction of the direction and a plurality of directions that are parallel to the direction. A direction -62 (same). his own lexicographer and use terms in a manner other than their ordinary meaning, as long as the

Vitronics Corp. v. Conceptronic, Inc., 90 F.3d 1576, 1582 (Fed. Cir. 1996).

The Court proposed parenthetical defining orthogonal is unsupported by any intrinsic or extrinsic evidence, and indeed ViewRay does not cite

he Court is not persuaded by because, according to ViewRay,

-4 at 19. orted by the specification, and thus the Court adopts it.

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IV.

plurality of pairs of leaves having a first cross section and an outer second section of a plurality of pairs 1)

Plaintiff Defendant plain and ordinary meaning The first cross section is different from the

second cross section (e.g. has a different width and/or shape). The Court construes this term in accordance with the plain and ordinary meaning.

The Court agrees with Varian that this term does not require construction, and that based upon a preferred embodiment shown in Figures 6A and 6B requiring that the first and second cross sections are different from each other. means that two cross sections exist; the first and second cross sections could be different from each other in width and/or shape, but the claim language and specification do not require that they be so. See, e.g., Linear Tech. Corp. , 566 F.3d 1049, 1055 (Fed. Cir. 2009) (

circuits [because] there is nothing in the claim language or specification that supports narrowly construing the t . The Court disagrees with ViewRay that the plain and ordinary meaning of the

term excludes the preferred embodiment because the plain and ordinary meaning allows for first and second cross sections that differ in shape and/or width.

The Court also finds the cases cited by ViewRay . See, e.g., MiTile, Ltd. v. Hasbro, Inc., 984 F. Supp. 2d 525, 531 (E.D. Va. 2013) (on summary judgment, finding that the communications unit and proximity sensor were separate components ; Mobile Telecommunications Techs., LLC

v. Leap Wireless Int'l, Inc., No. 2:13-CV-885-JRG-RSP, 2015 WL 2250056, at *7 (E.D. Tex. May 13, 2015) (of transmitters were not identical, construing the terms to r adding additional geographical limitation).

Therefore, the Court finds that broader interpretation to be more appropriate. The Court will construe this term according to its

plain and ordinary meaning.

V. econd sets includes

1)

Plaintiff Defendant plain and ordinary meaning Alternative construction:

the inner first section is positioned between the plurality of pairs of leaves of

The second section in each of the first and

second sets includes at least two pairs of leaves on one side of the inner first section and at least two pairs of leaves on the other side of the inner first section (i.e., the second section in each of the first and second set must include at least four pairs of leaves, which would include at least eight individual leaves). includes at least two pairs of leaves on one side of the inner first section and at least two pairs of

leaves on the other side of the inner first sec

The and ordinary meaning shared by both sides surrounding the inner section, or if each flank of the surrounding section has

its own Even if the patentee intended the former, as written neither the claim term nor any intrinsic evidence proffered by Varian alert a POSITA to scope of the claim a plurality of pairs of leaves at each side in each of the first and second sets includes at least two pairs of leaves on

one side of the inner first section and at least two pairs of leaves on the other side of the inner first section The additional parenthetical proposed by ViewRay is unnecessary.

VI. projec

Plaintiff Defendant plain and ordinary meaning The end portion (i.e., the leading edge of a

leaf that is inserted into a radiation field to abut an opposing leaf) has one or two projections extended beyond the height of the main portion (i.e., beyond the height of the side surface throughout the remainder of the length of the leaf). a main portion having a height and an end portion (i.e., the leading edge of a leaf that is inserted into a radiation field) having one or two projections

n [t]he end portion (i.e., the

leading edge of a leaf that is inserted into a radiation field to abut an opposing leaf) has one or two projections extended beyond the height of the main portion (i.e., beyond the height of the side Dkt. No. 70-1 at 3. The Court agrees with ViewR radiation field, or the end of the leaf attached to the motor. The intrinsic evidence supports the

former interpretation. See -44 (referring to Figure 5, describing the upper and id. at 5:63- However, the further

re improperly equates the height of the main portion with the height of the side surface, and impliedly adds the limitation that the height of the side surface remain constant throughout the remainder of the leaf. Neither of these limitations is supported by intrinsic evidence.

i.e., the leading edge of a leaf that is inserted into a radiation field) has one or two projections extended beyond the height of the main portio

VII.

Plaintiff Defendant plain and ordinary meaning The end portion (i.e., the leading edge of a

leaf that is inserted into a radiation field to abut an opposing leaf) has an upward and/or downward extended portion that extends beyond the height of the main portion (i.e., beyond the height of the side surface throughout the remainder of the length of the leaf).

For the same reasons as discussed for Term #6, the Court construes this term as end portion (i.e., the leading edge of a leaf that is inserted into a radiation field) having an upward

and/or downward extended portion

VIII. pair of leaves in the second set close at a second location, and the first and second

locations are offset fro 20)

Plaintiff Defendant plain and ordinary meaning alternative construction:

first location, a corresponding pair of leaves in the second set close at a second location, and the first and second locations are offset from a

The first and second locations are offset

from each other in the leaf moving direction or lateral direction or any other direction from the source towards the leaves in the

direction of the radiation beam.

a corresponding pair of leaves in the second set close at a second location, and the first and second

point of view is the view from the source towards the leaves in the direction of the radiation

This term appears in the final wherein clause of method Claim 20. Claim 20 is directed to a method of shaping radiation beams using a set of a plurality of beam blocking leaves on a first plane and a set of a plurality of beam blocking leaves on a second plane. The first step of Claim 20 move lengthwise travel through -18. The second step of Claim

20 requires that selected pairs of leaves in each Id. at 14:20-22. The final wherein clause, which includes the disputed term, modifies the second

ste of leaves in the second set close at a second location, and the first a second locations are offset from

Id. at 14:23-28. Bec substantially parallel direction A lateral

offset, or any other kind of offset besides in the direction of leaf movement, would fail to address the problem of leakage between abutting leaves during closure, and the Court is not persuaded by

The See id. at 9:47- a treatment field, the ends of the abutted leaves at a level may close at a position slightly offset, in

the leaf travel direction (e.g., x-direction), from the position where the ends of the abutted leaves see also id. at Figs. 7A-7B, 9:54-10:20. Figures 7A and 7B illustrate the offset in the direction of leaf movement: Therefore, the Court finds the appropriate construction to be ir of leaves in the first set close at a first location, a corresponding pairs of leaves in the second set close at a second location,

movement (t direction of the radiation beam). The Court finds that the he is the view from the source towards the leaves in the direction of the radiation beam) and it is supported by the specification. See -27.

CONCLUSION For the foregoing reasons and for good cause shown, the Court adopts the constructions set forth above.

IT IS SO ORDERED.

Dated: July 24, 2020 _____

SUSAN ILLSTON United States District Judge