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United States Court of Appeals for the Federal Circuit

00-1339

OPTIMAL RECREATION SOLUTIONS, LLP
(doing business as Optimal Golf Solutions),

Plaintiff-Appellant,

v.

LEADING EDGE TECHNOLOGIES, INC.,

Defendant-Appellee.

DECIDED: April 6, 2001

Before SCHALL, GAJARSA, and LINN, Circuit Judges.

Opinion for the court filed by Circuit Judge LINN. Circuit Judge GAJARSA dissents in part.

LINN, Circuit Judge.

Optimal Recreation Solutions, LLP ("Optimal") seeks review of a final judgment of no literal infringement of claims 1, 2, 15, and 19 of U.S. Patent No. 5,364,093 ("'093 patent") from the United States District Court for the District of Arizona. Optimal Recreation Solutions, LLP v.

Leading Edge Techs., Inc., No. CIV 96-2560-PHX-SMM (Ariz. Mar. 21, 2000). The parties stipulated to the entry of final judgment after the district court construed the disputed claim limitations and sanctioned Optimal for discovery abuses by precluding Optimal from presenting evidence of doctrine of equivalents ("DOE") infringement. We hold that the district court acted within its discretion in sanctioning Optimal, but erred in its claim construction. Accordingly, we affirm the evidentiary sanction, vacate the judgment of no literal infringement, and remand for further consideration of literal infringement consistent with this opinion.

BACKGROUND

The '093 patent discloses a Global Positioning System ("GPS") application. The preferred embodiment involves adapting a standard GPS receiver to compute various distances on any given hole of a golf course. These distances include the distance from a golfer to the cup or to an arbitrary golfer-selected location on that hole, and the distance from that arbitrary golfer-selected location to either the cup or to another arbitrary golfer-selected location. The use of an arbitrary golfer-selected location is useful, for example, on holes with doglegs or hazards. The embodiment need only store the location of the cup for each hole and a layout of each hole. The golfer then obtains his/her present location, presumably near the golf ball, and the embodiment computes and displays the distance to the cup or to the selected location. Aided by the displayed distance, the golfer chooses the appropriate club for the shot.

Claims 1 and 15 are representative of the claims in issue and are reproduced below.

1. A method for determining the approximate distance of a golf ball to a golf cup using a global positioning satellite system comprising the steps of:

locating the position of the cup;

storing the position of the cup;

positioning a remote global positioning satellite receiver near the golf ball;

determining a position of the remote receiver using the global positioning satellite system; and

determining the distance from the remote receiver to the cup using the stored cup position and the position of the remote receiver.

15. An apparatus for determining the approximate distance to a golf cup using a global positioning satellite system comprising:

a global positioning receiver means for receiving signals indicative of the apparent position of the receiver means using the global positioning satellite system;

memory means for storing the position of the golf cup;

means linked to said global positioning receiver means and said memory means for calculating the distance between the position of the receiver means and the position of the golf cup; and

display means for displaying the distance.

'093 patent, col. 8, l. 60 – col. 9, l. 3 (claim 1), col. 10, ll. 1-14 (claim 15).

The terms "position" and "location," used in the asserted claims, are central to the appeal. The district court construed these terms as, respectively, "position on the face of the earth in terms of latitude and longitude" and "location on the face of the earth in terms of latitude and longitude." Optimal Recreation Solutions, LLP v. Leading Edge Techs., Inc., No. CIV 96-2560-PHX-SMM, slip op. at 4 (Ariz. Sept. 29, 1999). The district court also determined that the terms "global positioning receiver means," "memory means," and "display means," in claim 15, were means-plus-function limitations subject to 35 U.S.C. § 112, paragraph 6. Id. at 6.

The district court precluded Optimal from using, at trial, any evidence of infringement under the DOE. The court made this ruling, in response to a motion in limine from LET, because of: (1) Optimal's failure to comply with Rule 26(a)(2)(B) of the Federal Rules of Civil Procedure regarding expert reports; (2) Optimal's failure to comply with the district court's discovery orders; and (3) Optimal's failure to update clearly posed interrogatories.

Optimal appeals the district court's judgment, challenging the claim construction and the DOE evidentiary ruling. We have exclusive appellate jurisdiction. 28 U.S.C. § 1295(a)(1) (1994).

DISCUSSION

A. Standard of Review

Claim construction is a matter of law and is reviewed de novo on appeal. Cybor Corp. v. FAS Techs., Inc., 138 F.3d 1448, 1456, 46 USPQ2d 1169, 1174 (Fed. Cir. 1998) (en banc).

A discovery sanction is not unique to patent law and, thus, this court applies the law of the pertinent regional circuit. Nike Inc. v. Wolverine World Wide, Inc., 43 F.3d 644, 647-48, 33 USPQ2d 1038, 1040 (Fed. Cir. 1994). The Ninth Circuit, the pertinent regional circuit in this case, reviews such sanctions for "an abuse of discretion and will not reverse absent a definite and firm conviction that the court made a clear error of judgment." Halaco Eng'g Co. v. Costle, 843 F.2d 376, 379 (9th Cir. 1988).

B. Claim Construction

1. General Rules of Construction

It is well-settled that in construing an asserted claim we look, first, to the claim language. E.g., Vitronics Corp. v. Conceptronic, Inc., 90 F.3d 1576, 1582, 39 USPQ2d 1573, 1576-77 (Fed. Cir. 1996). We then look to the rest of the intrinsic evidence, beginning with the specification, and concluding with the prosecution history if in evidence. Id. "If the claim language is clear on its face, then our consideration of the rest of the intrinsic evidence is restricted to determining if

a deviation from the clear language of the claims is specified." Interactive Gift Express, Inc. v. CompuServe Inc., 231 F.3d 859, 865, 56 USPQ2d 1647, 1652 (Fed. Cir. 2000). A deviation may be necessary if "a patentee [has chosen] to be his own lexicographer and use terms in a manner other than their ordinary meaning." Vitronics, 90 F.3d at 1582, 39 USPQ2d at 1576. Throughout the construction process, it is important to bear in mind that the viewing glass through which the claims are construed is that of a person skilled in the art. Intellicall, Inc. v. Phonometrics, Inc., 952 F.2d 1384, 1387, 21 USPQ2d 1383, 1386 (Fed. Cir. 1992).

2. "Position" and "Location"

The terms "position" and "location" are used in the claims in their ordinary sense. That ordinary sense is the common, broad understanding of both of these words as "where a thing is." The fact that "position" and "location" are broad terms does not detract from their clarity. The terms are not restricted to providing geodetic information and certainly not restricted to a particular coordinate system.

The broad sense of these terms can be seen in claim 1, for example, which uses the term "position" twice without any modifier or qualification before using the term in the context of a GPS receiver. Therefore, even accepting LET's argument that a GPS receiver always provides position or location using latitude/longitude or some other geodetic information, claim 1's use of the term "position" is not restricted to that narrow understanding. That is, claim 1 refers to the position of the cup without requiring it to be provided in terms of latitude/longitude or any other coordinate system. It is entirely consistent with claim 1 for the position of the cup to be expressed in relative terms such as, for example, 100 yards north of the first tee. It is true that any differences in how the positions of the cup and the ball are stored would have to be resolved before a distance could be computed. However, claim 1 does not limit the ways in which such differences can be resolved.

The term "location" is used interchangeably with "position" in the claims and has the same broad ordinary meaning. For example, the claims alternate between reciting the displaying of a position (claim 11) and the displaying of a location (claim 19), and between reciting the determining of a position (claim 1) and the determining of a location (claim 19). And it appears that claim 1's reference to the "position" of a remote receiver is intended to have the same meaning as claim 19's reference to the "location" of a remote receiver.

Because "position" and "location" are used in their ordinary sense in the claims, we look to the specification only to determine if the patentee defined these terms differently. Interactive Gift Express, 231 F.3d at 865, 56 USPQ2d at 1652. In the specification, we find that the word "position," not surprisingly, can be used to mean many things, such as: (1) "known position" (col. 2, ll. 37-38); (2) "apparent position" (col. 2, ll. 38-39); (3) "corrected position" (col. 6, l. 45); and (4) "position A," a position on the X-Y grid of a display, not providing latitude/longitude or any other geodetic information (col. 6, l. 66). Similarly, the word "location" has various uses, including: (1) "apparent location" (col. 2, l. 29); (2) "corrected location" (col. 2, l. 32); and (3) "a location (e.g. 'A') on the display" (col. 6, ll. 57-58). These uses show the synonymous meaning attributed to the words "position" and "location" by the patentee in referring to positions or locations that were: (1) fixed or relative; (2) geodetic or not; and (3) in latitude/longitude, some other coordinate system, or none at all. These uses also show consistent attribution by the patentee of the common, broad understanding that one skilled in the art would have of these terms. The patentee did not, therefore, redefine these terms in the specification, and they retain their ordinary meaning.

LET argues that the specification's use of the terms "position" and "location," with respect to the ball and the cup, must presume the existence of latitude/longitude information. LET concludes, therefore, that these terms must be construed to require that a latitude/longitude be provided. This argument is not persuasive. Any position or location will have a latitude/longitude, but the specification does not define position or location to require that a latitude/longitude be specified. For example, the specification uses these terms with respect to the mark "A" on the display screen of one of the embodiments, but the user of the preferred embodiment is never informed of the latitude/longitude of this mark, being told only its distance to the ball, the cup, or another mark. '093 patent, col. 6, l. 54 – col. 7, l. 36.

3. The "means" Limitations

"If a claim element contains the word 'means' and recites a function, this court presumes that element is a means-plus-function element under § 112, ¶ 6. That presumption falls, however, if the claim itself recites sufficient structure to perform the claimed function." Envirco Corp. v. Clestra Cleanroom, Inc., 209 F.3d 1360, 1364, 54 USPQ2d 1449, 1452 (Fed. Cir. 2000) (citation omitted). As an aid in determining whether sufficient structure is recited by a term used in a claim limitation, this court has inquired into whether the "term, as the name for structure, has a reasonably well understood meaning in the art." Greenberg v. Ethicon Endo-Surgery, Inc., 91 F.3d 1580, 1583, 39 USPQ2d 1783, 1786 (Fed. Cir. 1996). Contrary to the position of the dissent, resort to the specification is appropriate in making this determination. See Rodime PLC v. Seagate Tech., Inc., 174 F.3d 1294, 1303-05, 50 USPQ2d 1429, 1435-37 (Fed. Cir. 1999) (looking to the written description to buttress both the determination that the claim recites sufficient structure and the identification of the claimed function); Unidynamics Corp. v. Automatic Prods. Int'l, Ltd., 157 F.3d 1311, 1319, 48 USPQ2d 1099, 1104 (Fed. Cir. 1998) (looking to the written description to determine whether the word "spring" recited sufficient structure to rebut the presumption that § 112, paragraph 6 applied).

This court, in Greenberg, also pointed out that "[m]any devices take their names from the functions they perform . . . , such as 'filter,' 'brake,' 'clamp,' 'screwdriver,' or 'lock.'" Id. at 1583, 39 USPQ2d at 1786. This court faced a similar situation in Envirco when we construed the limitation "second baffle means having inner surfaces for directing the airflow . . . inwardly." Envirco, 209 F.3d at 1363, 54 USPQ2d at 1450 (quoting claim). In Envirco, this court held that the second baffle means limitation was not subject to § 112, paragraph 6 because "the term 'baffle' itself imparts structure" sufficient to rebut the presumption that § 112, paragraph 6 applies. Id. at 1365, 54 USPQ2d at 1452. Additionally, this court held in Cole v. Kimberly-Clark, Corp., 102 F.3d 524, 41 USPQ2d 1001 (Fed. Cir. 1996), that "perforation means . . . for tearing" was not subject to § 112, paragraph 6 because "it describes the structure supporting the tearing function (i.e., perforations)." Id. at 531, 41 USPQ2d at 1006.

Applying this precedent, we must determine whether, to one skilled in the art: (1) a "global positioning receiver" describes, or imparts, sufficient structure "for receiving signals indicative of the apparent position of the receiver means using the [GPS] system"; (2) a "memory" describes sufficient structure "for storing the position of the golf cup"; and (3) a "display" describes sufficient structure "for displaying the distance."

It is important to bear in mind the context of the invention and the relevant arts involved. The context of the claim is a GPS receiver. '093 patent, col. 8, l. 68. The specification points out that a GPS receiver essentially comprises a hand-held computer, communicating with multiple orbiting satellites. Id. at col. 3, l. 35 – col. 4, l. 14. The specification describes that a standard

GPS receiver can be reprogrammed to carry out the claimed invention. Id. at col. 4, l. 16 – col. 5, l. 27. The reprogramming entails modifying display routines and storing a variety of formulas and data in memory. Id. at col. 6, l. 50 – col. 8, l. 58.

The specification repeatedly refers to GPS receivers, memories, and displays. E.g., id. at col. 3, l. 53 – col. 4, l. 28 (GPS receivers), col. 5, ll. 23, 46, 57 (memories), col. 4, ll. 32-42 (displays). The specification discusses global positioning receivers, memories, and displays as structural terms. Id. at col. 4, ll. 24-28 ("The GPS receiver 22 is preferably the 3 channel receiver such as used in the TransPak Model made by Trimble navigation of Sunnyvale, Calif. Other commercially available substitutes are acceptable such as . . ."), col. 4, ll. 52-59 ("The storage 25 preferably includes nonvolatile memory Battery backed-up RAM is preferred, but other alternatives are operable and offer some advantages, such as a WORM optical disc coupled to RAM or EEPROM. Volatile memory stores the current error correction."), col. 4, ll. 32-35 ("The display 26 is illustrated in FIGS. 1 and 2. The display 26 is preferably a 640x480 pixel LCD supertwist, ISA bus compatible display, but other conventional types of displays are operable."). From the passages cited above, it is clear that, to one skilled in the arts of GPS receivers and computer programming, a "global positioning receiver," a "memory," and a "display," as the names for structure, have reasonably well understood meanings in those arts and are sufficient structure for accomplishing the functions recited in the pertinent claim limitations. The fact that these particular terms may be broad does not detract from their well understood meanings as the names for structure. Thus, none of these three limitations is subject to § 112, paragraph 6.

The ordinary meaning of these terms, to one of skill in the art, is clear and the specification does not redefine them. Accordingly, we construe a "global positioning receiver" as a GPS receiver, a "memory" as a device capable of storing data, and a "display" as a device capable of visually representing information.

4. DOE Preclusion

This court has previously observed that, under Ninth Circuit law, the district court's determination that a party violated a discovery order is "entitled to considerable weight because the district court judge is best equipped to assess the circumstances of the non-compliance." Nike, 43 F.3d at 648, 33 USPQ2d at 1040 (citing Halaco, 843 F.2d at 379). The record supports the district court's determination that Optimal failed to update interrogatories and failed to comply with the Federal Rules of Civil Procedure and the district court's discovery orders. On this record, we find no abuse of discretion.

Optimal argues that the district court's sanction effectively dismissed Optimal's claim and that Ninth Circuit case law provides for a less deferential standard of review in such cases. Optimal's logic is that: (1) the district court had issued its claim construction prior to the imposition of the discovery sanction; and (2) at the time of the sanction, the district court was aware that, under its claim construction, Optimal could not prove literal infringement. We are not persuaded. Immediately prior to the district court's ruling on the sanction, Optimal argued to the district court judge that "[w]e plan to prove infringement both literally and under the Doctrine of Equivalents." Optimal contends that this assertion was premised on getting the claims construed differently. But even after the district court's ruling, Optimal did not immediately concede literal infringement, stating only that it was "hopeful" that the claim construction would be changed.

CONCLUSION

The district court acted within its discretion in precluding Optimal from presenting evidence of DOE infringement, but erred in its claim construction. Accordingly, we affirm-in-part, vacate-in-part, and remand for further consideration of literal infringement consistent with this opinion.

United States Court of Appeals for the Federal Circuit

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OPTIMAL RECREATION SOLUTIONS, LLP
(doing business as Optimal Golf Solutions),

Plaintiff-Appellant,

v.

LEADING EDGE TECHNOLOGIES, INC.,

Defendant-Appellee.

GAJARSA, Circuit Judge, dissenting in part.

I write separately to dissent from the majority's conclusion that "memory means" and "display means" are not means plus function limitations. In the course of finding that the terms "memory" and "display" impart sufficient structure to take the limitations out of the realm of § 112 ¶6, the majority misconstrues this court's precedents.

As recognized by the majority, use of the word "means" creates a presumption that a claim limitation falls within the bounds of § 112 ¶6. Envirco Corp. v. Clestra Cleanroom, Inc., 209 F.3d 1360, 1364, 54 USPQ2d 1449, 1452 (Fed. Cir. 2000). This presumption is rebuttable if a

"means" limitation recites not only a function, but also specific, definite structure that performs the entire function from the view of a person of ordinary skill in the art. Sage Prods., Inc. v. Devon Indus., Inc., 126 F.3d 1420, 1427-28, 44 USPQ2d 1103, 1109 (Fed. Cir. 1997) ("[W]here a claim recites a function, but then goes on to elaborate sufficient structure, material, or acts within the claim itself to perform entirely the recited function, the claim is not in means-plus-function format."); Data Line Corp. v. Micro Techs., Inc., 813 F.2d 1196, 1201, 1 USPQ2d 2052, 2055 (Fed. Cir. 1987) ("[W]here a claim sets forth a means for performing a specific function, without reciting any specific structure for performing that function, [§ 112 ¶6 applies]."); Serrano v. Telular Corp., 111 F.3d 1578, 1582, 42 USPQ2d 1538, 1541 (Fed. Cir. 1997) ("The 'determination means' limitation . . . recites a means for determining the last digit without reciting definite structure in support of that function and that limitation therefore is a 'means plus function' limitation. . . ."); Cole v. Kimberly-Clark Corp., 102 F.3d 524, 531, 41 USPQ2d 1001, 1006 (Fed. Cir. 1997) ("An element with such a detailed recitation of its structure, as opposed to its function, cannot meet the requirements of [§112 ¶6]."); Micro Chem., Inc. v. Great Plains Chem. Co., 194 F.3d 1250, 1257, 52 USPQ2d 1258, 1263 (Fed. Cir. 1999) ("[T]his presumption remains unrebutted because neither claim recites structure sufficient to perform the recited function."). Cf. Laitram Corp. v. Rexnord, Inc., 939 F.2d 1533, 1536, 19 USPQ2d 1367, 1369 (Fed. Cir. 1991) ("The recitation of some structure in a means plus function element does not preclude the applicability of section 112(6).").

In this case, there is no specific, definite structure that is well understood in the art corresponding to the claim terms "memory" or "display." The majority's citation of language from Greenberg indicating that devices such as "brakes" and "screwdrivers" take their names from the functions they perform is inapposite. The terms "memory" and "display" do not describe devices; these terms simply describe functions. One of ordinary skill in the GPS field would not equate "display" to any specific, definite structure. Likewise, one of ordinary skill in the GPS field would not associate the term "memory" with any specific, definite structure. Therefore, the presumption that "memory means" and "display means" fall within the ambit of § 112 ¶6 is not rebutted by the claim language itself because these limitations do not recite sufficient structure to perform the "memory" and "display" functions. The majority's references to the use of the terms "memory" and "display" in the specification of the '093 patent is inappropriate. Whenever claim terms, such as "memory" and "display," have generally accepted meanings in the art, it is unnecessary to consider the specification to assess those meanings.

For the reasons stated hereinabove, I dissent in part.

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