

# United States Court of Appeals for the Federal Circuit

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PACING TECHNOLOGIES, LLC,  
*Plaintiff-Appellant*

v.

GARMIN INTERNATIONAL, INC.,  
GARMIN USA, INC.,  
*Defendants-Appellees*

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2014-1396

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Appeal from the United States District Court for the  
Southern District of California in No. 3:12-cv-01067-BEN-  
JLB, Judge Roger T. Benitez.

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Decided: February 18, 2015

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VICTOR MORRIS WIGMAN, Blank Rome LLP, Washing-  
ton, DC, argued for plaintiff-appellant. Also represented  
by PAUL MARK HONIGBERG, BRIAN WM. HIGGINS, CHARLES  
R. WOLFE, JR., NICHOLAS M. NYEMAH.

NICHOLAS P. GROOMBRIDGE, Paul, Weiss, Rifkind,  
Wharton & Garrison LLP, New York, NY, argued for  
defendant-appellees. Also represented by JENNIFER H.  
WU, JENNY CHIA CHENG WU.

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Before LOURIE, MOORE, and REYNA, *Circuit Judges*.

MOORE, *Circuit Judge*.

Pacing Technologies, LLC (Pacing) appeals from the district court's grant of summary judgment that Garmin International, Inc.'s and Garmin USA, Inc.'s (collectively, Garmin) accused products do not infringe the asserted claims of Pacing's U.S. Patent No. 8,101,843. *We affirm*.

#### BACKGROUND

The '843 patent is directed to methods and systems for pacing users during activities that involve repeated motions, such as running, cycling, and swimming. '843 patent col. 1 ll. 16–22. The preferred embodiment of the '843 patent describes a method for aiding a user's pacing by providing the user with a tempo (for example, the beat of a song or flashes of light) corresponding to the user's desired pace. *Id.* col. 9 ll. 4–9, col. 11 ll. 7–13.

Pacing alleges that Garmin GPS fitness watches and microcomputers used by runners and bikers infringe the '843 patent. The Garmin Connect website allows users to design and transfer workouts to the Garmin devices. Workouts consist of a series of intervals to which the user can assign a duration and target pace value. The devices display the intervals of a particular workout during operation, for example, by counting down the time for which the user intends to maintain a particular pace. The devices may also display the user's actual pace, e.g., 50 to 70 spm, or steps per minute. The devices do not play music or output a beat corresponding to the user's desired or actual pace.

Claim 25 of the '843 patent, the only asserted independent claim, reads as follows (emphases added):

*A repetitive motion pacing system for pacing a user comprising:*

a web site adapted to allowing the user to pre-select from a set of user-selectable activity types an activity they wish to perform and entering one or more target tempo or target pace values corresponding to the activity;

a data storage and *playback device*; and

a communications device adapted to transferring data related to the pre-selected activity or the target tempo or the target pace values between the web site and the data storage and *playback device*.

The district court construed the term “playback device” as “a device capable of playing audio, video, or a visible signal.” *Pacing Techs., LLC v. Garmin Int’l, Inc.*, 977 F. Supp. 2d 1013, 1021 (S.D. Cal. 2013). The district court also held that the preamble to claim 25 is a limitation and construed it to mean “a system for providing a sensible output for setting the pace or rate of movement of a user in performing a repetitive motion activity.” *Id.* at 1021–24. This construction did not address whether the repetitive motion pacing system was required to play back the pace information using a tempo.

Garmin moved for summary judgment of noninfringement, contending that the accused devices are not “playback devices” under the district court’s construction. Pacing argued that the accused devices are “playback devices” because they “play” workout information to the user, which can include the user’s target and actual pace. To resolve this dispute, the district court supplemented its construction of “playback device” in the summary judgment order, holding that “[t]o be a playback device as envisioned in the patent, the device must play back the pace information.” *Pacing Techs., LLC v. Garmin Int’l, Inc.*, C.A. No. 12-CV-01067-BEN-JLB, at \*9 (S.D. Cal. Mar. 3, 2014), ECF No. 178. The court relied on the use of the term in the context of the specification and on its

earlier decision that the preamble to claim 25 is limiting. *Id.* at 8–9. The court granted summary judgment of noninfringement to Garmin, reasoning that while “[t]he [accused] devices repeat back or display the pace input or selections,” they “do not ‘play’ the target tempo or pace information . . . as audio, video, or visible signals.” *Id.* at 9–10. Both parties characterize the court’s construction of the term “playback device” as implicitly requiring the devices to play the pace information as a metronomic tempo, as described in the preferred embodiment of the ’843 patent. Pacing appeals. We have jurisdiction under 28 U.S.C. § 1295(a)(1).

## DISCUSSION

“[W]hen the district court reviews only evidence intrinsic to the patent (the patent claims and specification[], along with the patent’s prosecution history), the judge’s determination will amount solely to a determination of law, and the Court of Appeals will review that construction de novo.” *Teva Pharm. USA Inc. v. Sandoz, Inc.*, 135 S. Ct. 831, 841 (2015) (italics omitted). Because the only evidence at issue on appeal and presented to the district court in this claim construction was intrinsic, our review of the constructions is de novo. We review a grant of summary judgment from a court in the Ninth Circuit de novo. *Genentech, Inc. v. Amgen, Inc.*, 289 F.3d 761, 767 (Fed. Cir. 2002).

### I. Claim Construction

On appeal, the parties dispute whether the asserted claims require the claimed devices to play back the pace information using a tempo, such as the beat of a song or flashes of light. This dispute turns on whether the preamble to claim 25 is limiting and on the construction of a “repetitive motion pacing system” as recited in the preamble.

We hold that the preamble to claim 25, which reads “[a] repetitive motion pacing system for pacing a user . . .,” is limiting. “Preamble language that merely states the purpose or intended use of an invention is generally not treated as limiting the scope of the claim.” *Bicon, Inc. v. Straumann Co.*, 441 F.3d 945, 952 (Fed. Cir. 2006). However, “[w]hen limitations in the body of the claim rely upon and derive antecedent basis from the preamble, then the preamble may act as a necessary component of the claimed invention.” *Eaton Corp. v. Rockwell Int’l Corp.*, 323 F.3d 1332, 1339 (Fed. Cir. 2003).

That is the case here. The term “user” in the preamble of claim 25 provides antecedent basis for the term “user” in the body of that claim. The body of claim 25 recites “a web site adapted to allowing *the user* to pre-select from a set of user-selectable activity types an activity they wish to perform and entering one or more target tempo or target pace values corresponding to the activity.” *Id.* col. 19 ll. 29–32 (emphasis added). The term “repetitive motion pacing system” in the preamble of claim 25 similarly provides antecedent basis for the term “repetitive motion pacing system” recited as a positive limitation in the body of claim 28, which depends from claim 25. Claim 28 of the ’843 patent reads: “[t]he repetitive motion pacing system of claim 25, wherein the repetitive motion pacing system can determine a geographic location of the data storage and playback device.” ’843 patent col. 19 ll. 46–48. Because the preamble terms “user” and “repetitive motion pacing system” provide antecedent basis for and are necessary to understand positive limitations in the body of claims in the ’843 patent, we hold that the preamble to claim 25 is limiting.

The plain and ordinary meaning of the phrase “repetitive motion pacing system for pacing a user” does not require the claimed system to pace the user by playing back the pace information using a tempo. However, claim

terms are construed in light of the specification and prosecution history, not in isolation. See *Phillips v. AWH Corp.*, 415 F.3d 1303, 1313 (Fed. Cir. 2005) (en banc). The specification and prosecution history compel departure from the plain meaning in only two instances: lexicography and disavowal. *Thorner v. Sony Computer Entm't Am. LLC*, 669 F.3d 1362, 1365 (Fed. Cir. 2012). The standards for finding lexicography and disavowal are “exacting.” *GE Lighting Solutions, LLC v. AgiLight, Inc.*, 750 F.3d 1304, 1309 (Fed. Cir. 2014). To act as a lexicographer, a patentee must “clearly set forth a definition of the disputed claim term” and “clearly express an intent to define the term.” *Thorner*, 669 F.3d at 1365. Similarly, disavowal requires that “the specification [or prosecution history] make[] clear that the invention does not include a particular feature.” *SciMed Life Sys. Inc. v. Advanced Cardiovascular Sys., Inc.*, 242 F.3d 1337, 1341 (Fed. Cir. 2001).

We have found disavowal or disclaimer based on clear and unmistakable statements by the patentee that limit the claims, such as “the present invention includes . . .” or “the present invention is . . .” or “all embodiments of the present invention are . . .” See, e.g., *Regents of Univ. of Minn. v. AGA Med. Corp.*, 717 F.3d 929, 936 (Fed. Cir. 2013); *Honeywell Int'l, Inc. v. ITT Indus., Inc.*, 452 F.3d 1312, 1316–19 (Fed. Cir. 2006); *SciMed Life Sys., Inc.*, 242 F.3d at 1343–44. We have found disclaimer when the specification indicated that, for “successful manufacture,” a particular step was “require[d].” *Andersen Corp. v. Fiber Composites, LLC*, 474 F.3d 1361, 1367 (Fed. Cir. 2007). We have found disclaimer when the specification indicated that the invention operated by “pushing (as opposed to pulling) forces,” and then characterized the “pushing forces” as “an important feature of the present invention.” *SafeTCare Mfg., Inc. v. Tele-Made, Inc.*, 497 F.3d 1262, 1269–70 (Fed. Cir. 2007). We also have found

disclaimer when the patent repeatedly disparaged an embodiment as “antiquated,” having “inherent inadequacies,” and then detailed the “deficiencies [that] make it difficult” to use. *Chi. Bd. Options Exch., Inc. v. Int’l Sec. Exch., LLC*, 677 F.3d 1361, 1372 (Fed. Cir. 2012). Likewise, we have used disclaimer to limit a claim element to a feature of the preferred embodiment when the specification described that feature as a “very important feature . . . in an aspect of the present invention,” and disparaged alternatives to that feature. *Inpro II Licensing, S.A.R.L. v. T-Mobile USA Inc.*, 450 F.3d 1350, 1354–55 (Fed. Cir. 2008). When a patentee “describes the features of the ‘present invention’ as a whole,” he alerts the reader that “this description limits the scope of the invention.” *AGA Med. Corp.*, 717 F.3d at 936.

Here, the specification similarly contains a clear and unmistakable statement of disavowal or disclaimer. In a section entitled “Summary and Objects of the Invention,” the ’843 patent states that “it is a principal object of the present invention to provide a computer-implemented, network-based system having a networked server, database, client computer, and input/output device for use by individuals engaged in repetitive motion activities . . . .” ’843 patent col. 3 ll. 9–13. It then lists 18 additional features, each time preceding the feature with the phrase “[i]t is another object of the present invention” or “[i]t is still another object of the present invention.” *Id.* col. 3 ll. 9 – col. 4 ll. 52. This is a common practice in patent drafting. Many times, the patent drafter will cast certain features as “an object of the present invention,” and often those “objects of the present invention” correspond to features recited in the claims. That is the case here, as many of the different “objects of the present invention” disclosed in the ’843 patent are recited as features in one or more independent or dependent claims. The characterization of a feature as “an object” or “another object,” or

even as a “principal object,” will not always rise to the level of disclaimer. In this case, where the patent includes a long list of different “objects of the present invention” that correspond to features positively recited in one or more claims, it seems unlikely that the inventor intended for each claim to be limited to all of the many objects of the invention. However, the ’843 patent goes further, and includes additional language that constitutes unmistakable disclaimer when considered in the context of the patent as a whole. Immediately following the enumeration of the different objects of the present invention, the ’843 patent states that “[t]hose [listed 19 objects] and other objects and features of the present invention are accomplished, as embodied and fully described herein, by a repetitive motion pacing system that includes . . . a data storage and playback device adapted to producing the sensible tempo.” *Id.* col. 4 ll. 53–67. With these words, the patentee does not describe yet another object of the invention—he alerts the reader that the invention accomplishes *all* of its objects and features (the enumerated 19 and all others) with a repetitive motion pacing system that includes a data storage and playback device adapted to produce a sensible tempo. In the context of this patent, this clearly and unmistakably limits “the present invention” to a repetitive motion pacing system having a data storage and playback device that is adapted to producing a sensible tempo.

Pacing argues that a “repetitive motion pacing system for pacing a user” cannot be limited to devices that produce a sensible tempo because the ’843 patent discloses an embodiment of a repetitive motion pacing system where the playback device does not need to produce a sensible tempo. Pacing points to the specification’s description of a repetitive motion pacing system having a playback device that plays video landscapes to a user who is, for example, running on a treadmill, with the video “automatically

calibrated to match the speed of the user's . . . pace," to simulate the user running through the actual landscape. '843 patent col. 16 ll. 51–61. Pacing argues that if the claim is construed to limit the invention to a repetitive motion pacing device adapted to producing a sensible tempo, this particular embodiment will not be covered. Pacing argues that for this reason, we should reject the construction.

We disagree for two reasons. First, it is not clear that our construction excludes this embodiment. Our construction requires the repetitive motion pacing system to produce a sensible tempo, but it does not exclude additional features, such as outputting video matching a user's pace. Moreover, the description of the embodiment that Pacing points to does not, as Pacing argues, exclude the production of a sensible tempo as required by the construction. Just because an embodiment does not expressly disclose a feature does not mean that embodiment excludes that feature. Second, even if Pacing is correct that this embodiment does not play a sensible tempo and therefore would be excluded under our construction, this is not a reason to ignore the specification's clear and unmistakable disavowal. It is true that constructions that exclude the preferred embodiment are disfavored. *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1583 (Fed. Cir. 1996). However, in a case such as this, where the patent describes multiple embodiments, every claim does not need to cover every embodiment. *See Aug. Tech. Corp. v. Camtek, Ltd.*, 655 F.3d 1278, 1285 (Fed. Cir. 2011). This is particularly true where the plain language of a limitation of the claim does not appear to cover that embodiment. The preamble of claim 25 differs from the preambles of the other seven independent claims. Claim 25 requires a "repetitive motion pacing system *for pacing a user.*" The plain language requires the system to pace the user. We conclude that the system

of claim 25 must be capable of producing a sensible tempo for pacing the user.

## II. Infringement

We hold that there is no genuine dispute of material fact as to whether the Garmin devices produce a sensible tempo. Merely displaying the rate of a user's pace—for example, displaying “100 steps per minute”—does not produce a sensible tempo. Garmin's accused devices are therefore not repetitive motion pacing devices. We affirm the district court's grant of summary judgment of noninfringement of the '843 patent.

**AFFIRMED**