

## United States Court of Appeals for the Federal Circuit

02-1524

SUNRACE ROOTS ENTERPRISE CO., LTD.  
and SUN VICTORY TRADING CO., INC.,

Plaintiffs-Appellees,

v.

SRAM CORPORATION,

Defendant-Appellant.

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With him on the brief were Frank B. Janoski, Keith J. Grady, and Michael J. Hickey.

Appealed from: United States District Court for the Northern District of California

Judge Vaughn R. Walker

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DECIDED: July 17, 2003

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Before LOURIE, BRYSON, and GAJARSA, Circuit Judges.

BRYSON, Circuit Judge.

SRAM Corporation appeals from an order of the United States District Court for the Northern District of California granting SunRace Roots Enterprise Co., Ltd., and Sun Victory Trading Co., Inc., (collectively “SunRace”) a declaratory judgment of noninfringement of SRAM’s patent relating to bicycle gear-shifting devices. Because we conclude that the district court erred in construing the term “shift actuator,” as used in SRAM’s patent, we reverse and remand.

### I

SRAM owns U.S. Patent No. 4,900,291 (“the ’291 patent”) and produces shift actuators known as “twist-shifters” that allow a bicycle rider to change gears by twisting a portion of the handlebar. A bicycle gear-shifting system typically includes a shifter (or “shift actuator”) at or near the handlebars, a derailleur to control the chain, and a control cable that connects the shifter and the derailleur.

The ’291 patent contains both method and apparatus claims related to gear-shifting on multi-speed bicycles through the use of a shift actuator that is designed to effect precise control over the movement of the derailleur. In a system that uses indexed shifting, the shift actuator moves a discrete amount to cause the derailleur to move the bicycle chain the precise distance necessary to effect a gear shift. One way that indexed shifting can be implemented in a twist-shifter is through the use of a cam mechanism. In such a system, the cylindrical cam member fits over the handlebar and the cam operating face (consisting of peaks and valleys) interacts with a cam pin as the shift actuator is rotated. The apparatus claims of the ’291 patent include the limitation of a “handgrip shift actuator cam means” or a “handgrip shift actuator indexing cam means,” while the method claims, including claim 16, employ the term “shift actuator” without reference to a cam.

The written description of the '291 patent recites the objects of the invention. They include providing a derailleur shifting system with a shift actuator that is rotatably mounted on the handlebar so that the bicycle rider need not remove his hands from the handlebar to shift gears; providing a derailleur shifting system having a handgrip shift actuator embodying a generally helical cam that defines the derailleur mechanism movements; providing a derailleur shifting system that compensates for "cumulative lost motion" (the amount the shifter must move in order to take up any slack in the system before the derailleur begins to move) in the derailleur mechanism and its cable to enable precise index shifting; and providing a derailleur shifting system that produces an optimum amount of overshift when down-shifting, without requiring manual input to define that overshift. Overshifting is "movement of the chain beyond the destination sprocket, and then back into alignment with the destination sprocket," '291 patent, col. 1, ll. 52-55; in essence, the cable is moved farther than necessary so that the derailleur is more easily aligned with the appropriate sprocket during down-shifting.

The written description states that "[a]pplicant has found that for accurate index shifting, substantially all of th[e] cumulative lost motion must first be taken up at the shift actuator before the actual shift increment of travel between adjacent sprockets is applied during a down-shifting event. Applicant is not aware of any specific consideration of this problem in the prior art." '291 patent, col. 2, ll. 61-67. Original claim 16 recited a method for down-shifting from a smaller sprocket to a larger sprocket, in which the movement of the shift actuator first takes up the cumulative lost motion and then transfers the chain to the larger sprocket.

#### A

Upon petitions from SRAM and a competitor, Shimano, Inc., the Patent and Trademark Office ("PTO") reexamined the '291 patent. SRAM requested reexamination after prior art not considered during the initial prosecution of the '291 patent was raised in litigation with Shimano. In a June 10, 1997, office action, the examiner initially deemed claims 5 through 26 patentable, but rejected claims 1 through 4. SRAM then submitted an amendment in which it sought to add claims 27 and 28, which were dependent on claim 16. Claim 27 added the limitation "said shift actuator being rotatably mounted on the bicycle handlebar generally coaxially of the handlebar and engaged over the outside of the handlebar" and specified that the actuator was rotated (as opposed to moved) to take up the cumulative lost motion. Claim 28, dependent on claim 27, added the limitation "said shift actuator being mounted inboard of a fixed handgrip on an end of the handlebar." In October 1997, the PTO issued a Notice of Intent to Issue Reexamination Certificate in which it stated that it had found claims 16, 24, 27, and 28 to be patentable.

Meanwhile, Shimano filed its own request for reexamination. The PTO then consolidated the proceedings for the two reexamination requests. Shimano's request alleged that original claim 16

is extremely broad and can cover even conventional lever style shifters. All claim 16 requires is any kind of bicycle shifting mechanism which takes up slack in the device and then moves the derailleur from one sprocket to another. It is not even necessary to have a handlebar mounted or twist-grip shifter. That requirement does not arise until claim 24 below.[1]

In response, SRAM agreed that original claim 16 "does not require a handlebar mounted or twist-grip shifter." SRAM did not argue that the use of a cam distinguished claim 16 from the prior art. Rather, SRAM distinguished the prior art references based on the fact that they disclosed taking up slack in or during the first climb or downshift. When discussing the apparatus claims that included a "handgrip shift actuator cam means," SRAM took a different approach, arguing that the prior art references did not disclose the "special cam configuration spelled out in the claim[s]."

In January 1999, the examiner issued an office action rejecting claims 4-10, 14-20, and 24-28. The examiner found claim 16 to be obvious in light of the French Huret Patent 1,499,803. SRAM then amended claim 16, adding the limitation that the shift actuator is "rotatably mounted on a bicycle handlebar generally coaxially of the handlebar, said shift actuator being mounted on and engaged over an outside of the handlebar inboard of a fixed handgrip on an end of the handlebar." SRAM requested that claims 27 and 28 be withdrawn, noting that "claim 16 is amended to include the subject matter of claims 27 and 28." SRAM maintained its request that the PTO confirm the remaining claims, including claim 24. With respect to claim 16, SRAM argued, inter alia, that Huret was a defective reference and did not disclose a shift actuator mounted inboard of a fixed handgrip on the handlebar. In the context of claim 5, SRAM argued that Huret did not mention compensating for lost motion at all.

The patent emerged from reexamination in 2000. Claims 1-3 were cancelled; claims 4, 5, 9-14, 16, 17, 19, and 21-23 were ruled patentable as amended; and dependent claims 6-8, 15, 18, 20, and 24 were determined to be patentable without

amendment.

Claim 16, as found in the reexamination certificate, provides:

In a bicycle derailleur gear shifting system having a rear derailleur shifting mechanism, a shift actuator rotatably mounted on a bicycle handlebar generally coaxially of the handlebar, said shift actuator being mounted on and engaged over an outside of the handlebar inboard of a fixed handgrip on an end of the handlebar, and control cable means operatively connecting said actuator to said shifting mechanism, a method of performing down-shifting events from a relatively smaller origin freewheel sprocket to a relatively larger destination freewheel sprocket, which comprises:

first [moving] rotating said shift actuator a sufficient amount to take up substantially all of the cumulative lost motion in said derailleur mechanism and said cable means; and

then [moving] rotating said shift actuator a further amount [to] so as to move the bicycle chain at least substantially the distance between the centers of said origin and destination sprockets.

'291 Reexamination Certificate, col. 4, l. 66, to col. 5, l. 17 (brackets indicate text deleted through amendment; underlining indicates text added through amendment).

## B

After the PTO issued the '291 Reexamination Certificate, SRAM sent a letter to SunRace asserting that SunRace was infringing the reexamined patent. On September 6, 2000, SunRace filed a declaratory judgment action claiming that SunRace does not infringe the '291 patent and that the patent is invalid and unenforceable. SRAM counterclaimed for infringement of claims 16 and 20 of the reexamined '291 patent.

The parties submitted competing constructions of the terms "shift actuator" (from claim 16) and "moving said shift actuator back" (from claim 20). The district court issued an order on July 26, 2001, construing the two terms. The court concluded that the plain and ordinary meaning of the term "shift actuator" is "a mechanism that controls the changing of gears." In light of the specification and prosecution history, however, the district court ruled that the term "shift actuator," as used in the '291 patent, is limited to "a mechanism for controlling the changing of gears that contains a cam configured with a series of lobes and valleys that rotates so as to engage a cam follower."

The parties acknowledged that the specification contained no explicit definition of the term "shift actuator." The court concluded, however, that "the specification reveals that the cam is truly integral to the invention" and that "each [embodiment of the invention] uses a cam operating face with valleys and detents." The court further stated that the specification does not "even hint that the invention might be embodied in a structure that does not use a cam." With respect to the prosecution history, the court acknowledged that when the PTO required SRAM to add the mounting limitation on the handlebar to claim 16 it did not require SRAM to explicitly specify a cam in the claim language. Nevertheless, the court held that the prosecution history indicated that SRAM and the examiner considered the term "shift actuator" to require the use of a cam mechanism.

On the stipulation of the parties that the accused devices do not infringe claim 16 under the district court's claim construction, the district court entered judgment of noninfringement. The court also construed the term "moving back" in claim 20, but SRAM has not appealed from the district court's construction of that term. The court's construction of claim 20 is therefore not at issue in this appeal.

## II

SRAM argues that the district court erred in its construction of the term "shift actuator" in claim 16 of the reexamined '291 patent, and that the appropriate construction of the term is "a mechanism that controls the changing of gears." SRAM contends that the district court did not give enough weight to the ordinary meaning of the term, that it disregarded the claim differentiation doctrine, that it improperly read limitations from the specification into the claim, and that it ignored the distinction between the apparatus and method claims of the patent.

## A

We have repeatedly stated that claim terms must be given their ordinary and accustomed meaning unless the patent expresses

an intention to impart novel meaning to claim terms. See York Prods., Inc. v. Central Tractor Farm & Farming Ctr., 99 F.3d 1568, 1572 (Fed. Cir. 1996). “Generally speaking, we indulge a ‘heavy presumption’ that a claim term carries its ordinary and customary meaning.” CCS Fitness, Inc. v. Brunswick Corp., 288 F.3d 1359, 1366 (Fed. Cir. 2002). Both parties and the district court agreed that the ordinary meaning of “shift actuator” to one of ordinary skill in the art is “a mechanism that controls the changing of gears.” Moreover, the parties agree that the method of claim 16 can be practiced without the use of a cam. The question in this case is whether the presumption that the ordinary meaning was intended has been overcome.

The doctrine of claim differentiation undermines SunRace’s argument that the term “shift actuator” should be defined more narrowly than its ordinary meaning would suggest. “While we recognize that the doctrine of claim differentiation is not a hard and fast rule of construction, it does create a presumption that each claim in a patent has a different scope.” Comark Communications, Inc. v. Harris Corp., 156 F.3d 1182, 1187 (Fed. Cir. 1998). See also Amgen Inc. v. Hoechst Marion Roussel, Inc., 314 F.3d 1313, 1326 (Fed. Cir. 2003) (“Our court has made clear that when a patent claim ‘does not contain a certain limitation and another claim does, that limitation cannot be read into the former claim in determining either validity or infringement.’ . . . There is a rebuttable presumption that different claims are of different scope.”). That presumption is especially strong when the limitation in dispute is the only meaningful difference between an independent and dependent claim, and one party is urging that the limitation in the dependent claim should be read into the independent claim. Ecolab Inc. v. Paraclipse, Inc., 285 F.3d 1362, 1375 (Fed. Cir. 2002).

Reference to other claims supports the conclusion that the term “shift actuator,” as used in the ’291 patent, is not limited to a device that uses a cam. Dependent claim 24 adds to independent claim 16 only the clause: “wherein said shift actuator comprises cam means rotatably mounted on the bicycle handlebar generally coaxially of the handlebar.” Because amended claim 16 already provides that the shift actuator must be rotatably mounted on the handlebar generally coaxially of the handlebar, dependent claim 24 simply adds the structural limitation of a cam means. This is therefore a strong case for inferring that the limitation added by the dependent claim should not be read into the independent claim. If the “shift actuator” of claim 16 were required to include a cam means, claim 24 would be rendered entirely redundant.

SunRace responds that SRAM created the redundancy through its amendment of claim 16 during reexamination. Because SunRace believes that all shift actuators of the ’291 patent must employ a cam, it argues that the only difference between claim 24 and original claim 16 was the language “rotatably mounted on the bicycle handlebar generally coaxially of the handlebar.” When SRAM added that limitation to claim 16, SunRace argues, the effect of the amendment was to narrow the scope of amended claim 16 to make it the same as dependent claim 24.

We have a different understanding of the evolution of the claims. Taking into account the amendment that added the handgrip mounting limitations through claims 27 and 28 and the continued presence of claim 24, it appears that original claim 16 used the term “shift actuator” consistently with its ordinary meaning, and that the term was not defined as limited to a device mounted on the handlebars or incorporating a cam. At that point, claim 27 differed from original claim 16 solely through the “rotatably mounted on the bicycle handlebar” limitation, while claim 24 differed from original claim 16 both by the “rotatably mounted on the bicycle handlebar” limitation and by the requirement of a cam means.

If, as SunRace contends, the shift actuators in claim 16, and thus in claim 27, were already limited to those containing a cam, there would have been no difference between claim 24 and claim 27. Yet the patent examiner deemed both claim 24 and claim 27 to be patentable. Had SRAM understood the term “shift actuator” to be limited to devices containing a cam, one would assume that SRAM would have requested that claim 24 be cancelled (as it did in the case of claims 27 and 28 once claim 16 was amended). Instead, SRAM continued to prosecute claim 24, and the examiner found it patentable, even after claim 16 was amended to include the structural mounting limitation of the shift actuator on the handlebar. We infer from that course of events that both SRAM and the examiner regarded claim 24 as adding something—the cam means—to the limitations found in claim 16 as amended in reexamination.

## B

We next look to the specification to determine whether SunRace has satisfied its burden of showing that SRAM meant to define the term “shift actuator” more restrictively than is suggested by its ordinary meaning and by the doctrine of claim differentiation. A “claim term will not receive its ordinary meaning if the patentee acted as his own lexicographer and clearly set forth a definition of the disputed claim term” in the specification. CCS Fitness, 288 F.3d at 1662. See also Renishaw PLC v. Marposs Societa' per Azioni, 158 F.3d 1243, 1249 (Fed. Cir. 1998) (“The patentee’s lexicography must, of course, appear ‘with reasonable clarity, deliberateness, and precision’ before it can affect the claim.”). We have recently held that “claim terms take on their ordinary and accustomed meanings unless the patentee demonstrated an intent to deviate from the ordinary and accustomed meaning of a claim term by redefining the term or by characterizing the invention in the intrinsic record using words or expressions of manifest exclusion or restriction, representing a clear disavowal of claim scope.”

Teleflex, Inc. v. Ficosa N. Am. Corp., 299 F.3d 1313, 1327 (Fed. Cir. 2002).

We believe the district court erred in relying on various statements in the written description to conclude that the term shift actuator should be limited to a device containing the cam structure of the preferred embodiment. The district court focused on the following statements in the written description: (1) One of the objects of the invention is “to provide a bicycle derailleur shifting system having a handgrip shift actuator embodying a generally helical cam which defines the derailleur mechanism movements,” ’291 patent, col. 3, ll. 32-36; (2) “Another important part of the invention is . . . the programming of the cam operating face of the handgrip shift actuators of the invention to accurately achieve such shifting limits for each available derailleur system,” id., col. 6, ll. 20 -26; (3) “Each handgrip shift actuator contains a generally cylindrical cam member having a generally helical operating face configured with a plurality of spaced detents or valleys with a cam peak or lobe between each pair of adjacent detents,” id., col. 4, ll. 49-53; and (4) “A rotary cam member 74 having a generally helical operating face is the heart of the rear handgrip shift actuator,” id., col. 9, ll. 64-66. The district court determined that those statements, in connection with the absence of any disclosure of a shift actuator other than one using a cam mechanism, had the effect of limiting the definition of shift actuator to a device that includes a cam.

The quoted statements do not sufficiently evidence an intention to depart from the ordinary meaning of “shift actuator.” The first two statements simply detail some of the goals of the invention that are achieved by some of the apparatus claims. Those are not the only goals of the invention, however. Some of the recited goals relate to compensating for lost motion and providing automatic overshift capabilities and do not specifically address the use of cams. The third and fourth statements are more problematic for SRAM, but they still do not define the term shift actuator, nor do they constitute expressions of clear exclusion. While SunRace would characterize the statement that every handgrip shift actuator contains a cam member as definitional, we believe it is more properly characterized as descriptive of the preferred embodiments and the structure recited in the apparatus claims. We note that original claim 16, unlike claim 1, was not limited to handgrip shift actuators, but simply recited a shift actuator as the structural element. It seems that the applicant contemplated a broad class of shift actuators containing a subcategory of handgrip shift actuators, which in turn contained a subcategory of handgrip shift actuators employing a cam mechanism. Accordingly, the statements from the written description do not narrow the ordinary definition of the term “shift actuator.”

The district court regarded this case as analogous to ATD Corp. v. Lydall, Inc., 159 F.3d 534 (Fed. Cir. 1998), and SciMed Life Systems, Inc. v. Advanced Cardiovascular Systems, Inc., 242 F.3d 1337 (Fed. Cir. 2001), in which claim language was limited based on a feature that was described as essential to the invention. It is true that this court has narrowly construed claim terms in light of the preferred embodiment when the patent has described the preferred embodiment as the invention itself. See, e.g., Wang Labs., Inc. v. Am. Online, Inc., 197 F.3d 1377 (Fed. Cir. 1999). The written description of the ’291 patent, however, does not state that the cam is the actual invention itself. Instead, it recites that, in the context of the preferred embodiments of the shifting system apparatus, the cam is the heart of the handgrip shift actuator. Moreover, this is not a case in which a feature was described in the written description as critical but was never explicitly listed in the claim language, suggesting that the relevant structure in the claims should be narrowly construed as having that feature. Rather, in this case, the cam feature was explicitly included as an element in numerous claims, but not in the claim in suit. Because many of the claims of the ’291 patent are explicitly directed to a shift actuator with a cam, we need not construe the term “shift actuator” to be limited to one consisting of a cam in order to give effect to the language in the specification extolling the significance of the cam.

We recognize that the written description does not explicitly address the claimed methods. In fact, the written description focuses exclusively on the gear shifting systems themselves. The complete absence of any discussion of the claimed method weakens SRAM’s argument that the statements in the written description regarding the cam appear only in the context of the description of the apparatuses. Yet nothing in the written description indicates that the invention is exclusively directed toward cams or suggests that systems not employing cams are outside the scope of the invention. Thus, while it is clear that the patentee was primarily focused on an embodiment of his invention using a cam, nothing in the patent limits the claims to that embodiment.

Other cases in which we have found that the specification limited the scope of the claims have elements that are absent here. For example, the SciMed patent distinguished prior art on the basis that it did not have the relevant features. 242 F.3d at 1343-44. In O.I. Corp. v. Tekmar Co., 115 F.3d 1576 (Fed. Cir. 1997), the court narrowed a term to a particular structural element when all the disclosed embodiments contained that element. As in SciMed, the written description expressly distinguished the prior art on the ground that the prior art did not incorporate that element. O.I. Corp., 115 F.3d at 1581-82. As noted, there is no such language of exclusion in the specification of the ’291 patent.

Our case law makes clear that while “[a]n accused infringer may overcome th[e] ‘heavy presumption’ [of ordinary meaning] and narrow a claim term’s ordinary meaning, [ ] he cannot do so simply by pointing to the preferred embodiment or other structures or steps disclosed in the specification or prosecution history.” CCS Fitness, 288 F.3d at 1662. “An applicant is not

required to describe in the specification every conceivable and possible future embodiment of his invention.” Rexnord Corp. v. Laitram Corp., 274 F.3d 1336, 1344 (Fed. Cir. 2001). “Whether an invention is fairly claimed more broadly than the ‘preferred embodiment’ in the specification is a question specific to the content of the specification, the context in which the embodiment is described, the prosecution history, and if appropriate the prior art.” Teleflex, 299 F.3d at 1327 (quoting Wang Labs., 197 F.3d at 1383). In this case, those considerations lead us to conclude that the term “shift actuator” is not limited to a device with a cam.

### C

We next examine the prosecution history to assess whether it confirms that the term “shift actuator” should be construed in a manner consistent with its ordinary meaning. “Although [it] is correct that the prosecution history is always relevant to claim construction, it is also true that the prosecution history may not be used to infer the intentional narrowing of a claim absent the applicant’s clear disavowal of claim coverage.” Amgen, 314 F.3d at 1327. To be given effect, such a disclaimer must be “clear and unmistakable.” Omega Eng’g, Inc. v. Raytek Corp., Nos. 01-1546, 02-1478, slip. op. at 17 (Fed. Cir. July 7, 2003).

The district court cited several instances in which it regarded SRAM or the examiner as having characterized claim 16 as encompassing a cam structure. The instances relied upon by the district court, however, are not clear statements of disclaimer. First, the court alluded to SRAM’s request for reexamination, which describes the ’291 patent as “involving an actuator comprising a cylindrical cam member 74 rotary on the outside of the handlebar and axially slidable relative to the handlebar” and refers to “actuator 66,” which contains a cam structure. The cited statement, however, was not specific to method claim 16 and in fact appears from its context to relate to the apparatus claims. A later paragraph in the request for reexamination addresses the method of operation of the gear-shifting system; that paragraph does not refer to a cam in the discussion of the claimed method.

Second, the court pointed to the examiner’s June 20, 1997, office action. The examiner stated that claims 5 through 26 were allowable over the prior art because “[t]hese claims comprise what the examiner considers to be ‘fine tuning’ features wherein specific embodiments are ‘configured’ so as to provide a more absolute control of the derailleur gear shifting system for a bicycle existing heretofore.” The district court considered that statement to be “plainly inconsistent with SRAM’s view that claim 16 embraces broadly a method of shifting gears unconstrained by any structural limitations requiring the use of a cam.” We disagree. That statement is merely the examiner’s general reason for allowance of 21 of the claims in the patent, including both apparatus claims and method claims. Various aspects of the 21 claims, including taking up cumulative motion and providing for overshifting, would likely allow for more control of the shifting system and would not necessarily be limited to a cam mechanism. The examiner’s remarks thus do not indicate that the examiner believed the term “shift actuator” was limited to a device having a cam mechanism. To the contrary, as we have noted, the fact that the examiner confirmed dependent claim 24, which added the cam means to independent claim 16, supports the contrary conclusion.

Third, the court relied on SRAM’s statements addressing the patentability of claims 27 and 28. As previously explained, prior to the reexamination amendment of claim 16 SRAM submitted an amendment in which it sought to add two claims dependent on claim 16—claims 27 and 28—that specified the structural mounting limitations now found in amended claim 16. According to the court, “[i]n asserting the patentability of these claims, SRAM directed the examiner to portions of the patent specification describing the cam structure.”

SRAM pointed to the discussion of the cam means of the preferred embodiment, however, not to define the term shift actuator nor to distinguish the shift actuators in the claims from prior art shift actuators that lacked cams. Rather, SRAM did so to show that the written description requirement was satisfied and that no new matter was being introduced with the amendment that added claims 27 and 28. SRAM stated that “[f]or disclosure of these limitations, the Examiner is referred to the description of the ‘Inboard Handgrip Shift Actuators’ starting in line 15 of column 30 of the ’291 patent, particularly including the following statements.” The discussion of the preferred embodiment incorporates the limitations that SRAM sought to include through the addition of claims 27 and 28, such as having the shift actuator mounted inboard on the fixed handgrip of a handlebar and rotatably mounted to take up cumulative lost motion in the derailleur mechanism. However, the disclosure of these features in an embodiment employing a cam does not limit those claims to a cam. It appears that the features may also be present in actuators lacking a cam mechanism.

We agree with the district court that SRAM’s statements addressing the Huret reference and responding to Shimano’s arguments against patentability do not provide the requisite disclaimer. In fact, other portions of the prosecution history confirm that SRAM did not argue for the patentability of claim 16 based on the absence of a cam means from the prior art, even though it made that argument for several apparatus claims. For example, SRAM’s submission to the PTO in response to Shimano’s request for reexamination never mentions a cam, but explains that the method of claim 16 was not previously

disclosed because the prior art references only “mention[] slack take-up in or during the first climb or first downshift.” In the May 17, 1999, amendment and response to the PTO, SRAM argued that other prior art references did not “show[] a shift actuator mounted inboard of a fixed handgrip on the handlebar.” Moreover, SRAM concurred with Shimano’s statement in its request for reexamination that the shift actuator of original claim 16 “does not require a handlebar mounted or twist-shifter.” If SRAM was not even arguing to limit the shift actuator to a handlebar mounted shifter or twist-grip shifter, it was not putting the public on notice that the shift actuators were limited to those employing a cam mechanism to effect the twist shift.

D

SunRace points to extrinsic evidence to support the district court's construction, including the deposition testimony of the inventor in previous litigation with Shimano involving the '291 patent. In this case, however, the intrinsic evidence resolves any ambiguity about the appropriate construction of “shift actuator,” and therefore consideration of extrinsic evidence is inappropriate. Digital Biometrics, Inc. v. Identix, Inc., 149 F.3d 1335, 1344 (Fed. Cir. 1998).

In sum, while we commend the district court for its thorough analysis of the difficult claim construction issue presented by this case, we conclude that the court’s claim construction was unduly restrictive. Although this is a close case, we conclude that the ordinary meaning of the term “shift actuator” controls because neither the specification nor the prosecution history clearly defines the shift actuator as including a cam or disclaims a shift actuator that does not include a cam. Because the intrinsic evidence does not clearly narrow the term “shift actuator” to a device containing a cam, the district court erred by construing the term in that manner. Accordingly, we reverse the district court’s claim construction of the term “shift actuator” in claim 16 and remand the case to the district court for further proceedings consistent with this opinion.

REVERSED and REMANDED.

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[1] Claim 24 provides: “A method according to claim 16, wherein said shift actuator comprises cam means rotatably mounted on the bicycle handlebar generally coaxially of the handlebar.”