United States Court of Appeals for the Federal Circuit

2009-1006

EDWARDS LIFESCIENCES LLC
and ENDOGAD RESEARCH PTY LIMITED,

Plaintiffs-Appellants,

v.

COOK INCORPORATED,

Defendant-Appellee,

and

W.L. GORE & ASSOCIATES, INC.,

Defendant-Appellee.

Hugh A. Abrams, Sidley Austin LLP, of Chicago, Illinois, argued for plaintiffs-appellants. With him on the brief were Constantine L. Trela, Jr., David T. Pritikin and Lisa A. Schneider.

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Harry C. Marcus, Locke Lord Bissell & Liddell LLP, of New York, New York, argued for defendant-appellee W.L. Gore & Associates, Inc. With him on the brief was Matthew K. Blackburn, of San Francisco, California.

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

Judge Jeffrey S. White

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Defendant-Appellee.

Appeal from the United States District Court for the Northern District of California in Case No. 03-CV-03817, Judge Jeffrey S. White.

DECIDED: September 22, 2009

Before LOURIE, RADER, and MOORE, Circuit Judges.

LOURIE, Circuit Judge.

Edwards Lifesciences LLC and Endogad Research PTY Limited (collectively, "Edwards") appeal from the judgment of the United States District Court for the Northern District of California granting summary judgment of noninfringement of several claims of U.S. Patents 6,582,458 ("the '458 patent"); 6,613,073 ("the '073 patent"); 6,685,736 ("the '736 patent"); and 6,689,158 ("the '158 patent"). See Edwards Lifesciences LLC v. Cook, No. C 03-03817 JSW, 2007 U.S. Dist. Lexis 55634 (N.D. Cal. July 23, 2007) ("Claim Construction Order"); Edwards Lifesciences LLC v. Cook, No. C 03-03817 JSW,

2008 U.S. Dist. Lexis 21248 (N.D. Cal. Mar. 18, 2008) ("Order Granting Cook Summary Judgment"); Edwards Lifesciences LLC v. Cook, No. C 03-03817 JSW, 2008 U.S. Dist. Lexis 70130 (N.D. Cal. Sept. 15, 2008) ("Order Granting Gore Summary Judgment"). Because the court correctly construed certain claim terms and correctly determined that Cook Incorporated's and W.L. Gore & Associates, Inc.'s (collectively, "Appellees'") devices did not infringe under those constructions, we affirm.

BACKGROUND

Edwards owns the four patents in suit, which are related and share a common specification.[1] The patents relate to intraluminal grafts for treating aneurisms and occlusive diseases of the blood vessels without open surgery. See '458 patent col.1 ll.11–20. An aneurism is a weakness in a blood vessel, such as the aorta, that can cause enlargement or dilation of the vessel. If an aneurism is not repaired, the vessel can rupture, resulting in serious injury or death. To avoid the adverse consequences of open surgery, the medical profession has developed techniques for repairing aneurisms endovascularly, or intraluminally, allowing surgeons to make a small incision and guide a specially made device through the arteries to the aneurism. In endovascular aneurism repair, a graft reinforced with a metal framework, also called a stent-graft, is compressed onto a delivery catheter, which is guided through the artery to the aneurism site. Once at the site, the graft is expanded into position against the walls of the blood vessel. Stents, and therefore stent-grafts, are generally classified into two types, self-expanding and balloon expandable. A self-expanding stent or stent-graft is inserted into a blood vessel inside a catheter. Upon release from the catheter, it automatically

[1] Because the patents in suit share a common specification, for ease of reference, we will cite only the specification of the '458 patent throughout this opinion.

expands to the size of the vessel. See id. at col.1 ll.20–31. A balloon expandable stent or stent-graft, on the other hand, is guided through a catheter on an inflatable balloon until it extends from the catheter into the vessel. See id. at col.1 ll.54–63. At that point, the balloon is inflated, expanding the stent or stent-graft to the size of the vessel, and then the balloon is deflated and removed. See id.

The specification describes one method of treating an aneurism using two overlapping grafts, whereby the degree of overlap can be adjusted to change the overall length of the graft. '458 patent col.4 ll.4–17. The specification also describes a "trouser graft," which has a bifurcation at its downstream end, and a supplemental graft that overlaps with one of the legs of the trouser graft. Id. at col.4 ll.18–31.

In August 2003, Edwards sued Cook for infringement of claims 1–3, 6, 8, 9, 11, 12, 15, and 17–20 of the '458 patent; claims 1–3, 6, 8, 9, 12, and 14–19 of the '073 patent; claims 1–4, 6, 9, 10, 12, 14–20, and 22–25 of the '736 patent; and claims 1, 15, 17, and 18–23 of the '158 patent. Edwards sued Gore for infringement of claims 1–3, 7, 8, 11, 12, and 16–20 of the '458 patent; claims 1–3, 7–9, 13–15, and 17–19 of the '073 patent; claims 1–3, 7–9, 12–15, and 22–25 of the '736 patent; and claims 1, 2, 4–6, 8, 11–14, and 17–22 of the '158 patent. Claim 1 of the '458 patent is representative of the asserted claims:

> 1. A prosthesis comprising:
>
> (i) a bifurcated base structure which defines a common flow lumen and a pair of connector legs which define divergent flow lumens from the common flow lumen; and
>
> (ii) a graft which is adapted to be anchored within one of the flow lumens of said bifurcated base structure to form a continuous extension of that lumen.

’458 patent col.6 ll.12–19. All of the asserted independent claims recite two of the following structures (in addition to any recitations in the preambles): a “graft” (’458 patent claim 1), a “graft body” (’073 patent claim 1; ’736 patent claims 1, 20, 22), a “graft structure” (’158 patent claims 1, 15, 17, 23), a “bifurcated base structure” (’458 patent claim 1), and a “bifurcated base graft structure” (’158 patent claims 1, 15, 17, 23). Further, in all of the asserted independent claims, those two structures are “anchored” (’458 patent claim 1; ’158 patent claim 1), “attached” (’158 patent claims 15, 17, 23), “attachable” (’736 patent claims 1, 20, 22), or “dockable” (’073 patent claim 1) to each other while they are inside the vessel.[2]

In July 2007, the district court construed certain limitations of the asserted claims. The court construed the claim term “graft” to mean “an intraluminal device that is used in unitary fashion to substitute, repair, or replace a missing or defective part of a vessel.” Claim Construction Order, 2007 U.S. Dist. Lexis 55634, at *26. The court reasoned that the graft had to be intraluminal because the specification used the term “graft” as shorthand for “intraluminal graft” and referred to an “intraluminal graft” as “the invention.” Id. at *19–22. The court further reasoned that the claimed “graft” could not encompass a traditional surgically implanted vascular graft because all of the disclosed embodiments contained wires, which the parties agreed are a feature of intraluminal grafts. Id. at *22–26. According to the court, the claimed “graft” could not include a traditional vascular graft also because the claims required that the “graft” components

[2] Because the asserted dependent claims all depend from an asserted independent claim, each of the asserted claims, both independent and dependent, contains one of those limitations.

be used together in a unitary fashion, preventing the device from being comprised, in part, of a device that had already been implanted. Id.

The court construed the term "graft body" to mean "an artificial device formed of plastic or fabric for use inside of a vessel." Claim Construction Order, 2007 U.S. Dist. Lexis 55634, at *37. The court reasoned that the graft body did not include malleable wires because, throughout the specification, the inventors distinguished between the material of the graft body and the wires. Id. at *35–37.

The court construed the terms "bifurcated base structure" and "bifurcated base graft structure" to mean "an intraluminal graft that has one opening at its upstream end and two openings at its downstream end and which includes at least one malleable wire." Claim Construction Order, 2007 U.S. Dist. Lexis 55634, at *33. As with the term "graft," the court reasoned that the specification demonstrates that the structure must be intraluminal because it describes only embodiments that are placed into a vessel. Id. at *28–29. The court also found that at least one wire was required because something more than a graft was required to give meaning to the word "base." Id. at *31–32. Further, although Edwards asserted that claim differentiation should prevent the terms from necessarily including wires because dependent claims later added wires, according to the court, claim differentiation did not apply where, as here, the dependent claim adds other features as well as wires. Id. at *29–31. Finally, the court reasoned that the specification disclaims grafts with self-expanding wires, so the wires must not be self-expanding but, instead, must be "malleable." Id. at *32–33.

Edwards accused four of Cook's products of infringing the patents in suit: the Zenith AAA Endovascular Graft, the Zenith Flex AAA Endovascular Graft, the Zenith

Fenestrated AAA Endovascular Graft, and the Zenith TX2 Thoracic TAA Endovascular Graft. Order Granting Cook Summary Judgment, 2008 U.S. Dist. Lexis 21248, at *5. All four accused Cook devices include a fabric sleeve reinforced with wires both inside and outside the sleeve. Id. at *5–6. The Cook devices are compressed and constrained in a sheath until positioned in a patient's vessel, when the sheath is withdrawn. Id. at *6. As the pressure of the sheath is removed from the accused device, the wires expand to fit within the vessel. Id. A balloon may then be used to mold the device to more smoothly conform to the vessel walls. Id. at *7. Edwards also accused two of Gore's products of infringing the patents in suit, the Gore Excluder Bifurcated Endoprosthesis and the Gore TAG Thoracic Endoprosthesis. Order Granting Gore Summary Judgment, 2008 U.S. Dist. Lexis 70130, at *5. Gore's two accused devices operate similarly to Cook's. See id. at *5-7. Cook and Gore both moved for summary judgment of noninfringement, arguing that their devices could not infringe any of the asserted claims because all of the claims, as construed, required malleable wires, and their devices had resilient, self-expanding wires.

The court granted both Cook and Gore summary judgment of noninfringement, reasoning that Appellees' devices do not contain malleable wires, as required by the claim constructions, but instead contain self-expanding wires. Order Granting Cook Summary Judgment, 2008 U.S. Dist. Lexis 21248, at *11–19; Order Granting Gore Summary Judgment, 2008 U.S. Dist. Lexis 70130, at *9–13. The court stated that self-expanding wires cannot be "malleable," as the specification states that "malleable" means they do not "expand[ ] by virtue of their own resilience." Order Granting Cook Summary Judgment, 2008 U.S. Dist. Lexis 21248, at *12; Order Granting Gore

Summary Judgment, 2008 U.S. Dist. Lexis 70130, at *10. In response to Edwards' argument that Appellees' devices are a hybrid of self-expanding and balloon expandable wires, the court concluded that the evidence showed only that once the wires have expanded on their own, a balloon may be used to finish a seal or straighten out the body of a graft, not further expand the wires. Order Granting Cook Summary Judgment, 2008 U.S. Dist. Lexis 21248, at *13–19; Order Granting Gore Summary Judgment, 2008 U.S. Dist. Lexis 70130, at *11–13. The court further held that Appellees' devices could not infringe under the doctrine of equivalents because, if resilient wires could be equivalent to malleable wires, it would vitiate the "malleable" limitation required by the claims, and because the patents disclaimed the use of resilient wires. Order Granting Cook Summary Judgment, 2008 U.S. Dist. Lexis 21248, at *24–26; Order Granting Gore Summary Judgment, 2008 U.S. Dist. Lexis 70130, at *18.

Edwards timely appealed the district court's claim constructions and its grants of summary judgment of noninfringement in favor of Cook and Gore. We have jurisdiction pursuant to 28 U.S.C. § 1295(a)(1).

DISCUSSION

A. Claim Construction

We review claim construction de novo on appeal. Cybor Corp. v. FAS Techs., Inc., 138 F.3d 1448, 1456 (Fed. Cir. 1998) (en banc). We begin a claim construction analysis by considering the language of the claims themselves. See Phillips v. AWH Corp., 415 F.3d 1303, 1314 (Fed. Cir. 2005) (en banc). However, "claims must be read in view of the specification, of which they are a part." Id. at 1315 (quotation marks omitted). "[A] court should also consider the patent's prosecution history, if it is in

evidence. . . . Like the specification, the prosecution history provides evidence of how the [Patent Office] and the inventor understood the patent." Id. at 1317 (citations and quotation marks omitted). Furthermore, courts may "rely on dictionary definitions when construing claim terms, so long as the dictionary definition does not contradict any definition found in or ascertained by a reading of the patent documents." Id. at 1322–23 (quoting Vitronics Corp. v. Conceptronic, Inc., 90 F.3d 1576, 1584 n.6 (Fed. Cir. 1996)).

Edwards asserts that the district court erred in its constructions of "graft," "bifurcated base structure," and "bifurcated base graft structure," all of which were construed (1) to be intraluminal, (2) to require wires, (3) to require that those wires be malleable, and (4) to preclude any resilience from such "malleable" wires. Edwards contends that the court should not have imposed any of those meanings on the claims. Edwards also argues that the court should not have implicitly imposed the same meanings on "graft body."

As an initial matter, we conclude that, although the district court separately analyzed the different terms for the claimed devices, viz., "graft," "graft body," "graft structure," "bifurcated base structure," and "bifurcated base graft structure," the court was correct to come to the same conclusions, either implicitly or explicitly, with respect to all of the terms. Each of the terms "graft," "graft structure," "bifurcated base structure," and "bifurcated base graft structure," is used interchangeably in the specification and the claims, at least with respect to whether the devices are intraluminal, whether they require wires, whether the wires must be malleable, and whether that malleability precludes the wires from being resilient. For example, according to the specification, one can implant "a graft according to the present

invention which has a bifurcation at its downstream end, a so-called 'trouser graft.'" '458 patent col.4 ll.20-22 (emphases added). The parties do not dispute that the "trouser graft" described in the specification is the support for the claimed "bifurcated base structure" and "bifurcated base graft structure," and the language of the specification clearly supports both structures being "grafts." See id. at col.4 ll.27–28 (describing a "graft of the 'trouser' type"). Similarly, although the specification does not mention a "graft structure," the parties do not argue that "graft structure" should be construed differently from "graft."

Finally, as for the construction of "graft body," Edwards argues that the "graft body" cannot require wires, especially given the court's construction that explicitly declined to require wires in a "graft body." See Claim Construction Order, 2007 U.S. Dist. Lexis 55634, at *35–37. Because Edwards' argument relates to whether the devices require wires, we will separately discuss it in our discussion of that issue, infra. However, a "graft body," as a piece of a "graft," clearly must be intraluminal if the graft as a whole is intraluminal. See '458 patent abstract ("An intraluminal graft includes a tubular graft body."); id. at col.1 ll.46–47 ("In a first aspect the present invention consists in an intraluminal graft comprising a tubular graft body . . . ."). Therefore, except in part 2 that discusses the wires requirement, we will generally discuss all of the disputed terms together.

1. The Devices Must Be Intraluminal

Edwards first argues that the court erred in requiring that all of the claimed devices were necessarily intraluminal. According to Edwards, the specification modifies the word "graft" with the word "intraluminal," showing that not all grafts are necessarily

intraluminal. Edwards also argues that some but not all of the claims in the four patents in suit include an "intraluminal" limitation, so those without the modifier cannot be so limited, and that the construction renders redundant those with the modifier. Further, Edwards asserts that during prosecution, the modifier "intraluminal" was deleted from some of the original claims, thus broadening them. Finally, according to Edwards, the prosecution history demonstrates that the inventors intended the claims to cover a surgically implanted graft combined with an intraluminal graft, as declarations submitted to the Patent Office described a surgically implanted device as a "graft," and the Patent Office relied on them to allow the claims. Because surgically implanted grafts are not intraluminal, Edwards argues that the claimed grafts need not be intraluminal.

Cook[3] responds that the court correctly interpreted the claimed "graft" devices to be intraluminal. According to Cook, the specification consistently describes the whole graft as intraluminal. Further, Cook asserts that using the word "intraluminal" to modify "graft" in certain claims does not mean that a "graft" by itself can be non-intraluminal, in the context of the patents in suit. According to Cook, Edwards cannot use the prosecution history to broaden what the specification describes. Finally, Cook argues that the Patent Office never relied on the declarations that Edwards seeks to rely on, as it never issued the requested notice of interference. Thus, Cook argues, nothing in the prosecution history allows for the inference that the claims cover surgically implanted devices.

[3] Although Cook and Gore submitted separate briefs on appeal, most of their positions are the same. Thus, except for those few points, including the "intraluminal" requirement, which Gore subsumed within its "wires" argument, we will address Appellees' arguments together in this opinion.

We agree with Cook that, in light of the specification's written description, the claimed "graft" devices must all be intraluminal. Although the construction of a claimed term is usually controlled by its ordinary meaning, we will adopt an alternative meaning "if the intrinsic evidence shows that the patentee distinguished that term from prior art on the basis of a particular embodiment, expressly disclaimed subject matter, or described a particular embodiment as important to the invention." CCS Fitness, Inc. v. Brunswick Corp., 288 F.3d 1359, 1366–67 (Fed. Cir. 2002). Similarly, we will adopt a definition that is different from the ordinary meaning when "the patentee acted as his own lexicographer and clearly set forth a definition of the disputed claim term in either the specification or prosecution history." Id. at 1366. In this case, the specification consistently uses the words "graft" and "intraluminal graft" interchangeably. It states that "an intraluminal graft as defined above" is carried through a catheter "until the graft extends into the vessel." '458 patent col.1 ll.57-59 (emphases added); see also id. at col.5 ll.11, 17, 21, 24, 26, 27, 55, 58, 64, 65, 67, col.6 ll.1, 9 (interchangeably referring to the device identified by numeral 10 as "graft 10" and "intraluminal graft 10."). The interchangeable use of the two terms is akin to a definition equating the two.

Further, the only devices described in the specification are intraluminal, supporting an interpretation that is consistent with that description. See SciMed Life Sys., Inc. v. Advanced Cardiovascular Sys., Inc., 242 F.3d 1337, 1341 (Fed. Cir. 2001) ("Where the specification makes clear that the invention does not include a particular feature, that feature is deemed to be outside the reach of the claims of the patent, even though the language of the claims, read without reference to the specification, might be considered broad enough to encompass the feature in question."). For example, as the

district court noted, the specification states that, when an aneurism extends up to or beyond an arterial bifurcation, "it is possible to place a [trouser] graft according to the present invention . . . wholly within the primary artery." '458 patent col.4 ll.18-22 (emphases added); see Claim Construction Order, 2007 U.S. Dist. Lexis 55634, at *28. Thus, the specification assumed that the graft that it was describing was intended to be within the artery, or intraluminal.

Moreover, "when the preferred embodiment is described in the specification as the invention itself, the claims are not necessarily entitled to a scope broader than that embodiment." Chimie v. PPG Indus. Inc., 402 F.3d 1371, 1379 (Fed. Cir. 2005) (quotation marks omitted); see Honeywell Int'l, Inc. v. ITT Indus., Inc., 452 F.3d 1312, 1318 (Fed. Cir. 2006) (construing claim term to include fuel filter because "[o]n at least four occasions, the written description refers to the fuel filter as 'this invention' or 'the present invention'"); SciMed, 242 F.3d at 1343 (construing term to include feature characterized as "the present invention"). Here, the specification frequently describes an "intraluminal graft" as "the present invention" or "this invention," indicating an intent to limit the invention to intraluminal devices. See, e.g., '458 patent col.1 ll.11–12, 40–41, 45–46, col.3 ll.33, 39–40, 45, col.4 ll.5–6, 20, 56.

Finally, the claim language itself supports the district court's construction. Certain claims, namely, all of those reciting "graft bodies," require that the two graft bodies be attachable "while inside of a vessel." '073 patent claim 1; '736 patent claims 1, 20, 22. Traditional vascular grafts are not implanted "inside of a vessel," and "intraluminal" specifically means "inside of a vessel." Therefore, the claims support the court's interpretation that a "graft body" must be intraluminal rather than being part of a

traditional vascular graft. Because a "graft body" is a piece of a "graft," and no piece of a traditional vascular graft is intraluminal, the claim language further supports the court's conclusion that all of the claimed "graft" devices must be intraluminal.

We further agree with Cook that claim differentiation does not require that "graft" be read differently from "intraluminal graft." "When different words or phrases are used in separate claims, a difference in meaning is presumed." Nystrom v. TREX Co., 424 F.3d 1136, 1143 (Fed. Cir. 2005). "However, simply noting the difference in the use of claim language does not end the matter. Different terms or phrases in separate claims may be construed to cover the same subject matter where the written description and prosecution history indicate that such a reading of the terms or phrases is proper." Id. Although, as Edwards points out, claim 10 of the '458 patent recites a "second graft . . . adapted to be intravascularly inserted into a lumen of [a] first graft," the intravascular insertion and the "intraluminal grafts" are not redundant. Instead, an "intraluminal graft" describes the ultimate location of the graft, whereas the intravascular insertion describes the process of moving the graft to that location. In other words, a device could theoretically be "intravascularly inserted" but ultimately reside outside of the vessel, such as inside the heart. Even if the claim construction had rendered the dependent claim redundant, the doctrine of claim differentiation does not require us to give the "graft" devices their broadest possible meaning. We may instead limit "grafts" to "intraluminal" devices, as demanded by the specification. See id.

As for Edwards' prosecution history arguments, we do not find them persuasive. Edwards points out that, during prosecution, the inventors amended claim 12 (which ultimately issued as claim 1 of the '073 patent) and its dependent claims to delete the

word "intraluminal," modifying "graft." See J.A. 3828–32. Thus, Edwards argues, the inventors specifically intended for "graft" to have a meaning broader than "intraluminal graft." However, the accompanying remarks stated that "[i]ndependent claim 12 defines an intraluminal graft." J.A. 3854 (emphasis added). Thus, the inventors' statements urged a change in claim language that did not affect the breadth of the claim, and we cannot allow the claim to now be broadened. See Alloc, Inc. v. Int'l Trade Comm'n, 342 F.3d 1361, 1371–72 (Fed. Cir. 2003) (Deletion of "play" from claims, together with remarks stating that "play" feature was nevertheless present, precluded patentee from arguing that "play" was not a limitation of the claimed system.). Edwards also asserts that the inventors' submission of two declarations describing a traditional vascular graft as a "graft" overrides the court's construction. See J.A. 2883 ¶ 4, 2925 ¶ 6. However, the declarations to which Edwards refers were submitted only for the purpose of provoking an interference. See 37 C.F.R. § 1.608(b) (2000) (then-existing rule establishing how the Patent Office could declare an interference based on certain evidence). Edwards does not dispute that the Patent Office never issued a notice of interference in this case, and thus we cannot infer that the examiner relied on the declarations for any reason. We therefore agree with Cook that the prosecution history does not affect the interpretation that all of the claimed "graft" devices must be intraluminal.

2. Intraluminal Devices Must Have Wires

Edwards also asserts that, even if the claimed devices are required to be intraluminal, such intraluminal devices need not have wires. According to Edwards, certain claims require wires, and others do not. Thus, Edwards argues, when the

inventors intended not to require wires, they purposely did not include wires in those claims.

Appellees respond that the district court correctly interpreted the claims to include wires, as Edwards admitted that wires provide the structure that permits the graft components to overlap and are required to anchor the device. According to Appellees, Edwards' claim differentiation argument fails because it does not trump the clear import of the specification and because the claims that add wire limitations also add further limitations, so the dependent claims are narrower not only because of the addition of wires.

We agree with Appellees that the claimed graft devices must have wires because they are intraluminal and because each of the claims recites an attachment that requires wires. As the district court noted, the parties agreed at trial that intraluminal devices require wires. Claim Construction Order, 2007 U.S. Dist. Lexis 55634, at *22; Order Granting Cook Summary Judgment, 2008 U.S. Dist. Lexis 21248, at *13 n.1. Further, every embodiment described in the specification and shown in the drawings includes wires. See, e.g., '458 patent col.1 ll.46–49 (describing "the present invention" as including wires); id. at col.1 l.64–col.2 l.61 (describing shapes of wires); id. at col.3 ll.8–32 (describing interaction between wires and graft body); id. at col.3 ll.39-41 (describing X-ray detectibility of wires); id. at col.3 l.51–col.4 l.3 (describing ends of wires); id. at col.5 ll.26–57 (describing specific details and spacing of wires 17); id. at col.6 ll.5–7 (describing process of expanding wires). Every claim also has a requirement that the two graft devices be "anchored," "attached," "attachable," or "dockable" to each other while they are inside the vessel. As the court noted, the

parties agreed that only wires perform that function. Claim Construction Order, 2007 U.S. Dist. Lexis 55634, at *38 (quoting Edwards' statement that "[t]he parties seem to be in agreement that the structure that allows the anchoring to occur is the wires").

Moreover, even though the claimed "graft body" does not itself include wires, see Claim Construction Order, 2007 U.S. Dist. Lexis 55634, at *35–37, the claims that recite "graft bodies" also all recite that the two "graft bodies" are "dockable" ('073 patent claim 1) or "attachable" ('736 patent claims 1, 20, 22) to each other. Because the parties agree that such an attachment relationship requires wires, we agree with the district court that each of the claimed "graft" devices must include wires.

We disagree with Edwards that claim differentiation requires us to hold otherwise. According to Edwards, because, for example, claim 2 of the '736 patent adds "a wire structure" to the graft of claim 1, the graft of claim 1 must be broader than a graft with a wire structure. However, claim differentiation is a rule of thumb that does not trump the clear import of the specification. See Netcraft Corp. v. eBay, Inc., 549 F.3d 1394, 1400 n.1 (Fed. Cir. 2008) ("While claim differentiation may be helpful in some cases, it is just one of many tools used by courts in the analysis of claim terms."). Here, the specification and the parties' agreement in the district court make clear that the claimed graft devices require wires.

3. The Wires in Intraluminal Devices Must Be Malleable

Edwards next argues that, even if all of the claimed graft devices require wires, those wires need not be malleable but may instead be resilient. According to Edwards, the word "malleable" does not appear in any of the claims. Further, Edwards argues that claim 14 of the '158 patent requires resilient wire, so the inventors could not have

disclaimed resilient wire. Edwards also asserts that, in the specification, the word "malleable" only describes three particular embodiments and does not limit the whole invention. Further, according to Edwards, the alleged disclaimer in the specification disparaging the prior art's lack of precise control of the graft's expansion is not limited to resilient wires. Finally, Edwards argues that "malleable" wires were removed from some claims during prosecution, showing the intent for a broader definition of "wires," and the inventors requested an interference with another application that described resilient, self-expanding wires, showing an intent to claim such wires.

Appellees respond that the court correctly required the wire in the claimed "graft" devices to be malleable, as the inventors clearly disclaimed resilient wire throughout the written description, including in the description of the prior art and in requiring that the wires be able to bell outward by balloon expansion. Further, according to Appellees, the resilient skirt required by claim 14 of the '158 patent is separate from the other wires, which must be malleable. Appellees assert that the prosecution history of claim amendments is trumped by the specification's clear disavowal of scope. Appellees argue that, in attempting to distinguish claims that did not expressly require malleable wires over prior art, the inventors stated that the wires were required to be malleable.

We agree with Appellees that the wires required by the claims must be malleable, as the inventors disclaimed the use of resilient, or self-expanding, wires. As the court properly noted, the inventors disparaged prior art resilient wires in their "background art" section of the specification. The specification states that "[i]t is known to form . . . an intraluminal graft of a sleeve in which is disposed a plurality of self expanding wire stents. . . . There are a number of problems associated with such known

grafts." '458 patent col.1 ll.15–33; see Claim Construction Order, 2007 U.S. Dist. Lexis 55634, at *32. The problems that the specification then discusses include a "lack of precise control of the expansion of the graft in the lumen." '458 patent col.1 ll.36–37; see Claim Construction Order, 2007 U.S. Dist. Lexis 55634, at *32. The specification then describes the wires of the invention as malleable and states that the device is expanded by use of balloons. See, e.g., '458 patent col.1 ll.49, 60–63, col.2 ll.8–15, col.3 ll.8–9, col.5 ll.32–36, 58–60, 66–67, col.6 ll.5–7; see also Claim Construction Order, 2007 U.S. Dist. Lexis 55634, at *32–33. "Where the general summary or description of the invention describes a feature of the invention . . . and criticizes other products . . . that lack that same feature, this operates as a clear disavowal of these other products . . . ." Astrazeneca AB v. Mut. Pharm. Co., 384 F.3d 1333, 1340 (Fed. Cir. 2004). Thus, as the court properly concluded, when the claims are read in light of the specification, "a person of ordinary skill in the art would clearly understand that this invention requires malleable, rather than resilient, wires." Claim Construction Order, 2007 U.S. Dist. Lexis 55634, at *33.

Although, as Edwards points out, claim 14 of the '158 patent requires "a downstream end of the bifurcated base graft structure [that] is provided with at least one resilient reinforcement wire," that resilient wire is in the skirt portion of the graft described in the specification. As the specification states, "the skirt may be provided with at least one resilient annular reinforcement wire. . . . This . . . arrangement is particularly suitable in the case of 'trouser grafts' wherein one leg of the graft will have a skirt which cannot be expanded by a balloon catheter." '458 patent col.4 ll.41–48. As the specification is careful to explain, only the skirt "cannot be expanded by a balloon

catheter," as all of the rest of the graft is made of malleable wire that is normally expanded by a balloon catheter.

Edwards' prosecution history argument also does not alter our conclusion. Although, during prosecution, the inventors canceled claims requiring "malleable wires" and replaced them with claims requiring only "wires," they conducted the prosecution as if the wires were required to be malleable. As Appellees point out, in attempting to distinguish claims without an express malleable wire limitation over certain prior art, Edwards stated that the written description "expressly teaches that the wire forms are malleable, deformable, non-springy material" and that they are not "self-expanding." Thus, as with the "intraluminal" interpretation discussed in part 1 supra, the change in claim language does not affect the breadth of the claims because the inventors' statements indicated that the claims remained narrow. See Alloc, 342 F.3d at 1371–72. Edwards cannot now reclaim what it disclaimed during prosecution and throughout the specification, viz., resilient wires.

4. Malleable Wires and Resilient Wires Are Mutually Exclusive

Finally, Edwards argues that "malleable" wires, even if required, may still display some resilience. According to Edwards, the court erred by rejecting the plain meaning of "malleable" to hold that the inventors' alleged definition in the specification should apply. Edwards asserts that the inventor acting as his own lexicographer applies only to words the inventor actually used in the claims. Further, Edwards argues, the inventors gave their alleged definition only in the context of a preferred embodiment, so it does not limit the definition of "malleable" in all contexts in the specification. Finally,

according to Edwards, even under the alleged definition in the specification, a wire that exhibits some resilience but requires balloon expansion to expand fully is malleable.

Cook and Gore respond that, as used in the specification, "malleable" wires and resilient wires are mutually exclusive. According to Appellees, the inventors disclaimed the idea that resilient wires can also be "malleable." Appellees also argue that the inventors defined "malleable" wires in the specification as "not resilient to any substantial extent," and they criticized known self-expanding wires. According to Appellees, a court must follow a patentee's definition irrespective of where in the specification it appears. Further, Appellees argue that, during prosecution, the inventors told the Patent Office that malleable and self-expanding materials were mutually exclusive.

We agree with Appellees that, in the context of the specification, malleable wires and resilient wires are mutually exclusive. As the court correctly held, the specification defines "malleable" to exclude any substantial resilience, and that definition overrides any ordinary meaning of the word "malleable" that might allow for substantial resilience. The specification states that the wires "are maleable [sic] and may be bent into any desired shape, ie [sic] they are not resilient to any substantial extent so that they have to be physically expanded into contact with the aorta rather than expanding by virtue of their own resilience." '458 patent col.5 ll.32–36. The district court correctly reasoned that such a definition precluded any substantial resilience. See Order Granting Cook Summary Judgment, 2008 U.S. Dist. Lexis 21248, at *12–13; Order Granting Gore Summary Judgment, 2008 U.S. Dist. Lexis 70130, at *10–11. Contrary to Edwards' argument, the location within the specification in which the definition appears is

irrelevant. See Boss Control, Inc. v. Bombardier Inc., 410 F.3d 1372, 1378 (Fed. Cir. 2005) (following inventors' definition, even though it appeared in connection with the description of a preferred embodiment). As the court correctly reasoned, the specification's use of "i.e." signals an intent to define the word to which it refers, "malleable," and that definition was not limited to the embodiment being discussed. Furthermore, as discussed in part 3, supra, the inventors disclaimed the idea that resilient wires could be used.

As Edwards points out, we do not ordinarily construe words that are not in claims. See generally CCS Fitness, 288 F.3d at 1366 ("[T]he 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 either the specification or prosecution history." (emphases added)). However, in this case, the court correctly looked to the words used in the specification, including the word "malleable," to provide an initial construction. After the court provided that construction, the parties disputed the definition of the word "malleable" in the claim construction, but that definition was elucidated by the specification. Thus, the court was similarly correct to look to the specification to clarify its initial construction.

We therefore agree with the district court that the "graft" terms must include wires that are malleable, and that the term "malleable" in the context of the patents in suit precludes the use of only substantially resilient wires.

B. Infringement

Edwards asserts that, even under the court's claim construction, the court erred in granting summary judgment of noninfringement in favor of Cook and Gore. Edwards

argues that, even if the claims all required at least one malleable wire that can physically expand "into contact with the aorta," a reasonable jury could find infringement. According to Edwards, Appellees' wires are deformed under pressure inside their sheath and can be bent during use. Further, Edwards argues, Appellees' devices are expanded with a balloon into contact with the aorta. Thus, Edwards contends that it presented sufficient evidence of infringement to preclude summary judgment.

Edwards also asserts that, at a minimum, fact issues exist with respect to infringement under the doctrine of equivalents. According to Edwards, whether a wire is self-expanding or balloon expandable is not relevant to whether it performs the fundamental function of the claims, which is allowing two separate parts of a graft to be overlapped. Further, Edwards argues that the accused devices satisfy the rest of the function-way-result test because the two parts of the accused grafts overlap in the same way, by expanding, to achieve the same result of a seal between graft portions.

Appellees respond that Edwards has admitted that the accused products self-expand and therefore do not have "malleable" wires. Appellees argue that the use of a molding balloon, after the devices have self-expanded, does not change the fact that the devices are resilient and therefore not malleable. Indeed, according to Appellees, a molding balloon is used in a different way from an expansion balloon. Gore further asserts that Edwards merely speculates and offers no proof that the molding balloon causes further expansion after the devices have self-expanded. Gore argues that it has shown that the wires are oversized and thus will always touch the vessel wall after self-expansion, before the use of the molding balloon. Gore also responds that Edwards

cannot rely on the doctrine of equivalents because the inventors defined "malleable wires" as functionally the opposite of resilient wires and because Edwards cannot recapture by the doctrine of equivalents what the inventors disclaimed.

We agree with Appellees that the court did not err in granting summary judgment of noninfringement. We review de novo the court's grant of summary judgment, drawing all reasonable inferences in favor of the nonnmovant. Anderson v. Liberty Lobby, Inc., 477 U.S. 242, 255 (1986). The court correctly held that, "[e]ven taking the evidence regarding the use of the molding balloon in the light most favorable to Edwards, . . . it demonstrates only that once the accused devices have been placed within a vessel and the wires have expanded on their own, the molding balloon may be used to finish a seal or straighten out the fabric body of a graft." Order Granting Cook Summary Judgment, 2008 U.S. Dist. Lexis 21248, at *18–19; see Order Granting Gore Summary Judgment, 2008 U.S. Dist. Lexis 70130, at *12–13. In other words, even if a molding balloon is used to smooth out the device after it has self-expanded, the self-expanding wires are primarily resilient, and therefore not malleable as required by the court's claim construction. The use of a balloon to alter the shape of the wires does not change their primary characteristic of resilience, and the court was correct to conclude that no reasonable jury could find literal infringement by either Cook or Gore.

The court was also correct to grant summary judgment of noninfringement under the doctrine of equivalents. As we have discussed supra, the inventors disclaimed resilient wires and cannot use the doctrine of equivalents to recapture the disclaimed scope. See Honeywell, 452 F.3d at 1321 (rejecting patentee's reliance on equivalency to allow claims to encompass carbon fibers when "such fibers were disavowed"). We

therefore agree with the district court that no reasonable jury could find infringement under the doctrine of equivalents.

We have considered Edwards' remaining arguments and do not find them persuasive.

CONCLUSION

Accordingly, the judgment of the district court is affirmed.

AFFIRMED