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**UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF CALIFORNIA**

ZEST IP HOLDINGS, LLC, a Delaware
limited liability company; et al.,

Plaintiffs,

vs.

IMPLANT DIRECT MFG., LLC, a Nevada
limited liability company; et al.,

Defendants.

CASE NO. 10cv0541-LAB (WVG)
**ORDER FOLLOWING *MARKMAN*
HEARING**

The Court held a *Markman* hearing in this case on April 10, 2012. The Court wants, first, to commend the parties on their respective presentations. The *Markman* briefs that the Court read were good, but the presentations were exemplary. They patiently walked the Court through the technology at issue, the law of claims construction, and the bases for the parties' proposed construction of the claim terms at issue. The Court never got the sense that the parties' arguments were insincere. Obviously, it's the name of the game here for Zest to construe the claim terms broadly to establish infringement later on, and for Implant Direct to construe the terms narrowly to avoid infringement later on. The Court senses that Zest and Implant Direct have played this game in very good faith. Now, onto what it means to swivel.

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1 **I. Claim Terms At Issue**

2 There are only four claim terms at issue, all of which contain the word swivel or some
3 form of it. They are:

4 the male member having an upper end comprising a swivel joint
5 for swivel engagement within a cap (219 Patent, Claim 1 at
6 13:35–38; Claim 21 at 15:24–25)

7 the swivel joint and cap cavity together comprising means for
8 permitting swiveling of the cap over the male member (219
9 Patent, Claim 1 at 13:55–58; Claim 21 at 15:37–39)

10 a swivel joint is provided between the cap and male retention
11 member permitting swiveling of the cap over the male retention
12 member (219 Patent, Claim 22 at 15:63–65)

13 the retention member comprising part of a swivel joint for swivel
14 engagement in a recess in a dental appliance (219 Patent,
15 Claim 23 at 16:15–17)

16 (Zest *Markman* Br. at 7; ID *Markman* Br. at 6, 16.) We'll call these claim terms the "swivel
17 terms."

18 **II. Proposed Constructions**

19 Zest proposes the following construction of the swivel terms

20 'Swivel joint' and 'swivel engagement' should be construed as:
21 'a rotational or hinging connection between the male member
22 and the cap, in which the rotational or hinging motion is around
23 one or more axis.'

24 'Swiveling' should be construed as 'any rotational movement or
25 hinging action between the male member and the cap, around
26 one or more axis.'

27 (Zest *Markman* Br. at 7; Zest Presentation at 45.) Implant Direct proposes this alternative
28 construction:

The male member must be able to rotate around more than one
axis within the cap, and there is relative motion between the cap
and the male member.

(ID *Markman* Br. at 6, 16; ID Presentation at 19.)

29 **III. Legal Standards of Claims Construction**

30 The Federal Circuit's decision in *Phillips v. AWH Corp.* is the go-to source for the law
31 of claims construction. 415 F.3d 1303 (Fed. Cir. 2005). Useful, supplemental principles may
32 appear in other cases, but in *Phillips* most courts can find all of the guidance they need.

1 **A. First Principles - *Phillips***

2 Claims construction has to begin with the language of the claim terms. *Id.* at 1312.
3 Those terms are to be given their ordinary and customary meaning, which is “the meaning
4 that the term[s] would have to a person of ordinary skill in the art in question at the time of
5 the invention.” *Id.* at 1312–13. This person “is deemed to read the claim term[s] not only
6 in the context of the particular claim[s] in which the disputed term appears, but in the context
7 of the entire patent, including the specification.” *Id.* at 1313.

8 In some cases there’s no need to look beyond the claim terms. Their ordinary
9 meaning may be apparent and “claim construction . . . involves little more than the
10 application of the widely accepted meaning of commonly understood words.” *Id.* at 1314.
11 When this isn’t the case, however, a court may have to turn to intrinsic or extrinsic evidence.
12 *Id.* There are three sources of intrinsic evidence: (1) the claims themselves; (2) the
13 remainder of the patent specification; and (3) the patent’s prosecution history. *Id.*

14 The claims themselves matter for a couple of reasons. First, “the context in which a
15 term is used in the asserted claim can be highly instructive.” *Id.* Second, “[b]ecause claim
16 terms are normally used consistently throughout the patent, the usage of a term in one claim
17 can often illuminate the meaning of the same term in other claims.” *Id.*

18 Next, the patent specification. Patent claims themselves, *Phillips* explains, are part
19 of a fully integrated document “consisting principally of a specification that concludes with
20 the claims.” *Id.* at 1315. The specification is simply a written description of the invention.¹
21 Here, that description consists of an Abstract, Background of the Invention, Summary of the

22

23 ¹ Section 112, paragraph 1 of the Patent Act sets forth the specification requirement:

24 The specification shall contain a written description of the
25 invention, and of the manner and process of making and using
26 it, in such full, clear, concise and exact terms as to enable any
27 person skilled in the art to which it pertains, or with which it is
 most nearly connected, to make and use the same, and shall set
 forth the best mode contemplated by the inventor of carrying out
 his invention.

28 35 U.S.C. § 112, ¶ 1. See also *Carnegie Mellon University v. Hoffman-La Roche Inc.*, 541
 F.3d 1115, 1121 (Fed. Cir. 2008).

1 Invention, Description of the Preferred Embodiments, and numerous drawings. That is the
2 material in the 219 Patent that precedes the actual patent claims. Not only must claims be
3 read in view of the specification, but the specification is the best guide to the meaning of a
4 disputed term. *Id.* at 1315. “It is therefore entirely appropriate for a court, when conducting
5 claim construction, to rely heavily on the written description for guidance as to the meaning
6 of the claims.” *Id.* at 1317. A note of caution: The specification can only alter the plain and
7 ordinary meaning of a claim term if it reveals a special definition “that differs from the
8 meaning it would otherwise possess” or if it reveals “an intentional disclaimer, or disavowal,
9 of claim scope by the inventor.” *Id.* at 1316.

10 A patent’s prosecution history “consists of the complete record of the proceedings
11 before the PTO and includes the prior art cited during the examination of the patent.” *Id.* at
12 1317. It matters because, like the specification, it “provides evidence of how the PTO and
13 inventor understood the patent” and “was created by the patentee in attempting to explain
14 and obtain the patent.” *Id.* At the same time, a patent’s prosecution history “represents an
15 ongoing negotiation between the PTO and the applicant, rather than the final product of that
16 negotiation,” and as a result it is less useful than the specification for claims construction
17 purposes.² *Id.*

18 Extrinsic evidence, which includes expert and inventor testimony, dictionaries, and
19 learned treatises, is less significant than intrinsic evidence.³ *Id.* The Federal Circuit in
20 *Phillips* identified five reasons for this. First, extrinsic evidence isn’t part of the patent and
21 “does not have the specification’s virtue of being created at the time of patent prosecution

22
23 ² As with the patent specification, the patent prosecution history can only limit or alter
24 the meaning of a claim term “by making a clear and unmistakable disavowal of scope during
prosecution.” *Purdue Pharma L.P. v. Endo Pharms. Inc.*, 438 F.3d 1123, 1136 (Fed. Cir.
2006).

25 ³ Not only is extrinsic evidence inferior to intrinsic evidence, but “[w]hen the intrinsic
26 evidence is unambiguous, it is improper for the court to rely on extrinsic evidence.” *Bell &
27 Howell Document Mgmt. Prods. Co. v. Altek Sys.*, 132 F.3d 701, 706 (Fed. Cir. 1997). This
28 is because the intrinsic evidence constitutes the record of the patent on which the public is
entitled to rely. “In other words, competitors are entitled to review the public record, apply
the established rules of claim construction, ascertain the scope of the patentee’s claimed
invention and, thus, design around the claimed invention.” *Vitronics Corp. v. Conceptoronic,
Inc.*, 90 F.3d 1576, 1583 (Fed. Cir. 1996).

1 for the purpose of explaining the patent’s scope and meaning.” *Id.* at 1318. Second,
2 extrinsic publications may not have been written by someone of ordinary skill in the art. *Id.*
3 Third, extrinsic evidence consisting of expert reports and testimony is often generated for the
4 purposes of litigation “and thus can suffer from bias that is not present in intrinsic evidence.”
5 *Id.* Fourth, given the “virtually unbounded universe of potential extrinsic evidence,” a court
6 may be overwhelmed with it and face the “considerable task of filtering the useful extrinsic
7 evidence from the fluff.” *Id.* Finally, undue reliance on extrinsic evidence vis-a-vis intrinsic
8 evidence could “undermin[e] the public notice function of patents.” *Id.* at 1319.
9 Consideration of extrinsic evidence is left to the Court’s discretion, and it should only be
10 considered in the context of the intrinsic evidence. *Id.*

11 **B. Supplemental Principle**

12 During the *Markman* hearing (and in the parties’ briefs) a dispute arose regarding
13 claims construction standards that it’s prudent to single out and address here. This issue
14 does not appear to be squarely addressed in *Phillips*.

15 The dispute is whether the manner in which an invention actually functions should
16 inform the claims construction analysis. Zest has taken the position that it shouldn’t. It’s the
17 *claims* of the 219 Patent, after all, that Zest accuses Implant Direct of infringing, not any
18 particular device that Zest manufactures and sells. See *Innova/Pure Water, Inc. v. Safari*
19 *Water Filtration Systems, Inc.*, 381 F.3d 1111, 1115 (Fed. Cir. 2004) (“It is a bedrock
20 principle of patent law that the claims of a patent define the invention to which the patentee
21 is entitled the right to exclude.”); *SRI Int’l v. Matsushita Elec. Corp. of Am.*, 775 F.2d 1107,
22 1121 (Fed. Cir. 1985) (en banc) (“Infringement . . . is determined by comparing an accused
23 product not with a preferred embodiment described in the specification, or with a
24 commercialized embodiment of the patentee, but with the properly and previously construed
25 claims in suit.”).

26 Federal Circuit precedent isn’t on Zest’s side. In *Medrad, Inc. v. MRI Devices Corp.*,
27 the Federal Circuit held in no uncertain terms that the functioning of an invention is an
28 appropriate consideration at the claims construction phase:

1 Medrad argues that a court may not look to how an invention
2 functions in determining the meaning of claim terms. Yet
3 nothing in *Ecolab* or any other precedent of this court supports
4 such a proposition, which is as unsound as it is sweeping. As
5 we stated in *Renishaw PLC v. Marposs Societa' per Azioni*, 158
6 F.3d 1243, 1250 (Fed Cir. 1998), 'ultimately, the interpretation
7 to be given a term can only be determined and confirmed with
8 a full understanding of what the inventors actually invented and
9 intended to envelop with the claim.' It is therefore entirely proper
10 to consider the functions of an invention in seeking to determine
11 the meaning of particular claim language.

12 401 F.3d 1313, 1319 (Fed. Cir. 2005). None of this is to say that the manner in which an
13 invention functions is dispositive for claims construction purposes, or that courts *have* to
14 consider it. Presumably, it falls into the category of extrinsic evidence that may—or may
15 not—be useful in the construction of claim terms depending on how clear the intrinsic
16 evidence is.

17 It's this latter point that Implant Direct, in the Court's judgment, gets wrong. It may be
18 appropriate as a general matter, in construing claim terms, to look at how an invention
19 functions. But that doesn't mean that a party surrenders or waives a certain claim
20 construction just because of how a finished product embodying its patent comes together.
21 In other words, Implant Direct can't simply hold up Zest's LOCATOR attachment system and
22 argue that it trumps the construction of a claim term that would seem an incomplete
23 description of the device. That would make the *invention* self-defining in some sense, and
24 *that* would violate that bedrock principle of patent law that "the claims of a patent define the
25 invention." *Innova*, 381 F.3d at 1115. It is also, transparently, an ends-driven method of
26 construing claims. See *Vita-Mix Corp. v. Basic Holding, Inc.*, 581 F.3d 1317, 1324 (Fed. Cir.
27 2009) ("Claims are properly construed without the objective of capturing or excluding the
28 accused device.").

29 Here is another way to make that point. Zest's LOCATOR "is one embodiment of the
30 patented system" (Zest *Markman* Br. at 1.) The Federal Circuit has held that "it is
31 improper to read limitations from a preferred embodiment described in the
32 specification—even if it is the only embodiment—into the claims absent a clear indication in
33 the intrinsic record that the patentee intended the claims to be so limited." *Liebel-Flarsheim*

1 *Co. v. Medrad*, 358 F.3d 898, 913 (Fed. Cir. 2004). See also *Trading Techs. Int'l, Inc. v.*
2 *eSpeed, Inc.*, 595 F.3d 1340, 1352 (Fed. Cir. 2010) (“When consulting the specification to
3 clarify the meaning of claim terms, courts must not import limitations into the claims from the
4 specification. Therefore, when the specification uses a single embodiment to enable the
5 claims, courts should not limit the broader claim language to that embodiment.”). The result
6 of this is that a patent claim may cover embodiments that only partially implement that claim.
7 See *Dealertrack, Inc. v. Huber*, 674 F.3d 1315, 1327 (Fed. Cir. 2012) (“Moreover, the
8 language of the claims using the term ‘selectively forwarding’ clearly indicates that the
9 patentee intended some claims to cover embodiments that implement only one of the
10 disclosed routing schemes, as opposed to limiting every claim to the preferred embodiment
11 that offers all three.”).

12 **IV. Discussion**

13 The Court will consider Implant Direct’s proposed construction of the swivel terms
14 first. It has, by the Court’s count, two core arguments. The first is a purpose-based
15 argument. The second is a prosecution history-based argument.

16 **A. Implant Direct’s Purpose-Based Argument**

17 Implant Direct’s main argument for construing the swivel terms to require that the cap
18 rotate around more than one axis over the retention member derives from its understanding
19 of the purpose of the 219 Patent. What’s that purpose? Easy alignment between the male
20 retention member and the abutment. Here’s how Implant Direct puts it:

21 In order to achieve the goal of having the male member align
22 with the abutment, the male member must be able to rotate
23 within the cap around more than one axis. In other words, the
24 cap must be able to move in different directions. If the cap is not
25 free to move in more than one direction, then the male member
26 would not be able to properly align with the abutment.
27 Abutments that are misaligned can point in any direction. The
28 male member must therefore be able to move in any direction in
order to match up with the abutment.

26 (ID *Markman* Br. at 8.) There is some support for this understanding of the 219 Patent in the
27 specification, which explains that “[t]he pivoting of the nylon or resilient male in the metal
28

1 denture cap allows minor corrections for non-parallel abutments”⁴ (219 Patent at
2 5:29–31). This description also finds some support in two of the specification’s drawings,
3 both of which depict the metal cap as being able to move forward and backward, and side
4 to side, over the male retention member. (219 Patent at Figures 4, 11.) It also finds support
5 in extrinsic evidence submitted by Implant Direct. In particular, Zest’s website contains an
6 animated video of its LOCATOR attachment system in which it’s obvious that the metal cap
7 can rotate around the retention member on multiple axes. Implant Direct played this video
8 during its *Markman* presentation (and, to be honest, the Court found it independently while
9 preparing for the *Markman* hearing, just to better understand the background technology).
10 (ID *Markman* Presentation at 28.)

11 There seem to be two kinds of alignment at issue here. The first, which Implant Direct
12 seizes on, concerns the alignment of the overdenture *as a whole* over the gumline. This
13 alignment is enabled by each abutment “lining up,” as it were, with its companion retention
14 member. And Implant Direct is absolutely right. If abutments aren’t perfectly in line with the
15 retention members in the overdenture, it’s beneficial that the retention members can pivot
16 multi-directionally—around more than one axis, that is—within the metal cap. Let’s call this
17 *macro* alignment.

18 The second kind of alignment, which Zest says is really the patent’s achievement,
19 concerns the manner in which an individual retention member comes into contact with and
20 snaps onto the abutment. Here, the focus isn’t necessarily on seating the overdenture as
21 a whole properly, but rather on getting the retention members to snap onto the abutments
22 with minimal difficulty. Let’s call this *micro* alignment. It finds some expression in the
23 Background of the Invention section of the patent specification:

24 It has been found that, in use, it is sometimes difficult for the
25 wearer to properly locate the female socket, so that the mating,
26 retentive end or head of the male part may hit the edge of the
27 female part when the wearer inserts the denture. Repeated
28 impacts of this type may damage the retentive head of the male,

⁴ Implant Direct explains in its *Markman* brief that the position of abutments can shift over time because the dental implants in which they’re housed are themselves drilled into living bone tissue “which can change and move over time.” (ID *Markman* Br. at 7.)

1 reducing or losing the retention force required for proper
2 operation of the attachment.

3 Other prior art attachments . . . do not always avoid the risk of
4 damage to the retentive head of the male due to improper
5 alignment with the female when re-inserting the denture or
6 appliance.

7 (219 Patent at 1:17–31.) It also finds some expression in the Abstract section of the
8 specification:

9 A skirt projects from the upper end of the male retention member
10 and engages an outer locating surface of the abutment member
11 as the members are secured together, acting to align the male
12 member with the abutment members.

13 Implant Direct blurs macro and micro alignment. In fact, in its *Markman* presentation
14 it identified twenty-four appearances of “align” (or some form of the word) in the 219 Patent
15 and *every appearance* concerns micro alignment. For example:

16 On re-insertion, for example, the user may fail to align head co-
17 axially with socket. In this case, the lower end of skirt will
18 contact one side of the locating surface before the head reaches
19 the socket. Further downward movement . . . urges the male
20 element to one side . . . to align head properly with the socket.
21 Thus, the locator surface portion of the female element together
22 with the inner locating surface of skirt act to urge the head into
23 proper alignment with the socket prior to snap insertion in the
24 socket. (219 Patent at 5:35–46.)

25 As in the previous embodiments, when a patient attempts to re-
26 attach a male element to female element, the lower end of the
27 skirt will first contact locator surface, and will be urged into a
28 centrally aligned position as the patient continues to urge the
element downwardly. Thus, the retention head will be properly
aligned for snap engagement in the socket. (219 Patent at
7:27–34.)

In each of the embodiments, the male or snap-on element has
a skirt which contacts an initially outwardly tapering surface on
the female or locator element to provide a self-alignment of the
parts. (219 Patent at 13:9–12.)

(ID *Markman* Presentation at 25.) It’s clear that the misalignment the patent aims to correct
isn’t the result of divergent abutments as much as the simple difficulty to the user of seating
the overdenture so that the retention members come into correct contact with even well-
positioned abutments. Perhaps the assembly of an IKEA bookshelf is a useful analogy.
Inevitably, there’s a maddening step at which one piece with multiple, protruding pegs must

1 be fit to another piece with multiple holes to receive those pegs. The step is maddening not
2 because the pegs and holes don't line up, but simply because they're small and hard to see
3 (and the two pieces are cumbersome). Same with seating an overdenture, presumably. The
4 retention members in the overdenture may be spatially or geometrically aligned with the
5 abutments just fine, but it may still be hard to "find" that alignment. That's the problem the
6 patent addresses. Zest explains it this way:

7 This 'location' and alignment feature has nothing to do with any
8 divergence of the implants, which is made clear in the
9 specification. Rather, it allows the patient to easily 'locate' the
 abutment and place the denture in the mouth without damaging
 it through repeated attempts.

10 (Zest Responsive *Markman* Br. at 2.)

11 There are other reasons to reject Implant Direct's purpose-driven construction of the
12 swivel terms. One, the narration of the animated video of the LOCATOR makes it clear that
13 the misalignment the patent corrects is the result of the simple difficulty of lining up small
14 parts, *not* the result of non-parallel abutments:

15 For over forty years, Zest Anchors has been a global leader in
16 the design and manufacturing of overdenture attachments,
17 pioneering self-aligning attachments that make it virtually
 impossible to improperly seat an overdenture

18 During seating, while the LOCATOR male pivots inside the
19 denture cap, the system's self-aligning design centers the male
20 on the attachment before engagement. These two actions in
21 concert allow the LOCATOR to self-align into place, enabling
22 patients to easily seat their overdenture without the need for
23 accurate alignment, and without causing damage to the
24 attachment components

25 First, the rounded surface of the LOCATOR attachment allows
26 the male to center on the attachment before engagement, so it
27 can easily locate its proper position, while the LOCATOR male
28 pivots inside the denture cap. These two actions in concert
 allow the LOCATOR to easily self-align into place.

29 In fact, the narration explains that the point of the retention member pivoting within the metal
30 cap isn't to correct for non-parallel abutments during seating but rather to allow for the
31 overdenture to stay in place during chewing, in much the same way that the shocks of a
32 Jeep keep the chassis stable and level on rugged terrain.

33 The LOCATOR's innovative ability to pivot increases the

1 attachment's resiliency and tolerance for the high mastication
2 forces an attachment must withstand

3 As the patient chews, the denture cap gently pivots over the
4 male in any direction, to accommodate the natural movements
during occlusion, and the pliancy of the soft tissue supporting
the overdenture.

5 There is, to be fair, *one* reference in the video to the pivoting accommodating divergent
6 implants:

7 The LOCATOR's innovative ability to pivot . . . allows it to
8 compensate for the path of insertion, even with up to 40 degrees
of divergence between implants.

9 But there's a critical point here. *Divergent* implants aren't necessarily *misaligned*—and
10 Implant Direct's construction of the swivel terms assumes that the purpose of the patent is
11 to correct for *misaligned* abutments. (See ID *Markman* Br. at 10 (“The express purpose of
12 the swivel joint is to permit the male member to properly mate with a misaligned abutment.”);
13 Responsive *Markman* Br. at 1 (“The ‘swivel’ motion of the male member has a particular
14 purpose in the ‘219 Patent. It is necessary to permit the retention member to be oriented
15 properly with abutments that may be misaligned.”).) Moreover, the statement that the
16 pivoting allows the patent “to compensate for the path of insertion” reaffirms that the
17 alignment at issue is simply what the Court has been calling micro alignment—bringing the
18 retention members into proper contact with their companion abutments.

19 There is a final reason to reject Implant Direct's claim that the patent's chief purpose
20 in pivoting multi-directionally is to correct for misaligned abutments: The patent specification
21 specifically provides for “an angle correction . . . due to a divergent implant.” (219 Patent at
22 6:28–31; 219 Patent at Figure 6.)

23 For the reasons given above, the Court rejects Implant Direct's argument that the
24 swivel terms must be construed multi-dimensionally because the purpose of the patent is to
25 correct for misaligned abutments. As the Court reads the specification, the misalignment the
26 patent aims to correct is the *user's* own misalignment in seating the denture. Implant Direct
27 is certainly right that the LOCATOR attachment system contains a metal cap that *can* rotate
28 around the retention member on multiple axes, and that this would correct for abutments that

1 aren't perfectly aligned with retention members in the overdenture. Indeed, the extrinsic
2 video evidence shows that, some of the specification drawings show that, and language in
3 the specification to the effect that the pivoting of the retention member in the cap "allows
4 minor corrections for non-parallel abutments" suggests that. But it's the claims that define
5 the invention, and not the other way around. The fact that an invention functions in a certain
6 manner doesn't mean its claims must be limited to that manner of functioning. *See Ecolab,*
7 *Inc. v. Envirochem, Inc.*, 264 F.3d 1358, 1367 (Fed. Cir. 2001) ("Where the function is not
8 recited in the claim itself by the patentee, we do not import such a limitation."); *Toro Co. v.*
9 *White Consol. Indus., Inc.*, 266 F.3d 1367, 1371 (Fed. Cir. 2001) ("This court's claim
10 construction, however, did not and could not import into the claim a function from the
11 specification, particularly when the claim recites only purely structural limitations.").

12 **B. Implant Direct's Prosecution History-Based Argument**

13 The prosecution history of a patent "limits the interpretation of claim terms so as to
14 exclude any interpretation that was disclaimed during prosecution." *Southwall Tech., Inc.*
15 *v. Cardinal IG Co.*, 54 F.3d 1570, 1576 (Fed. Cir. 1995). Implant Direct invokes that principle
16 and argues that Zest's proposed construction of the swivel terms was effectively disclaimed
17 in the prior prosecution of the patent.

18 Zest's original application for the 219 Patent was rejected, or at least all of the claims
19 were rejected. (Dugger Decl., Ex. 4.) The examiner found that certain claims were
20 anticipated by a patent—the 367 Patent—held by Sulc. Specifically:

21 Sulc shows a dental attachment assembly for attachment to an
22 adjacent tooth comprising . . . a cap 16 for securing in a recess
23 in a dental appliance 26, the cap having a cavity for containing
said swivel joint (upper end of male member 14) and allowing
swivelling of the cap 16 over the male member 14.

24 (Dugger Decl., Ex. 4 at ¶ 4.) The examiner also commented that the 219 Patent "appears
25 to be directed to curved easily replaceable cap member and the releasable engagement of
26 the cap member with the male member. However, these functions have not been claimed."

27 (Dugger Decl., Ex. 4 at ¶ 10.) Zest then amended the 219 Patent to incorporate this critique
28 as follows (with the amendment in bold)

1 a male member for attachment to the abutment member, the
2 male member having an upper end comprising a swivel joint for
3 swivel engagement within a cap in a recess in a dental
4 appliance, and a skirt projecting from the upper end of the male
5 [retention] member for engagement over the outer locating
6 surface of the abutment member, **the skirt having a rounded,
7 convex outer surface.**

8 a cap for securing in a recess in a dental appliance, the cap
9 having a cavity for containing said swivel joint, **the cavity having
10 a rounded, concave inner surface for releasable snap
11 engagement over the rounded outer surface of the skirt,** the
12 swivel joint and cap cavity together comprising means for
13 permitting swivelling of the cap over the male member relative
14 to the dental appliance.

15 (Dugger Decl., Ex. 5 at 2.) Zest's amendment also acknowledged the examiner's comment,
16 and explained these amendments in light of that comment:

17 In paragraph 10 of the Office Action, the Examiner has noted
18 features of the invention which have not been claimed,
19 specifically the curved, easily replaceable cap member and the
20 releasable engagement of the cap member with the male
21 member, which features are not present in Sulc, where the male
22 member 14 engages with the cap 16 via grooves and ridges.
23 Amended claims 1 and 30 now define the cap as having a
24 rounded, concave inner surface and the skirt of the male
25 member as having a rounded, convex outer surface for
26 releasable snap engagement in the rounded inner surface of the
27 cap, which also permits swiveling of the cap over the male
28 member. Such an engagement is not provided in Sulc. The
skirt of the male member in Sulc does not have a rounded,
convex outer surface, but is generally cylindrical. The inner
surface of the cap 16 is of similar cylindrical shape and is also
not rounded. Since these features are lacking from Sulc, it is
submitted that amended claims 1 and 30 are not anticipated by
Sulc, and reconsideration and reversal of the rejection of these
claims is respectfully requested.

21 (Dugger Decl., Ex. 5 at 7–8.) Implant Direct takes the position that because Zest amended
22 its claim to surrender a cylindrical cap that rotates horizontally around a cylindrical retention
23 member, it surrendered simple horizontal rotation altogether—and is committed to a
24 construction of the swivel terms that requires rotation around multiple axes. As Implant
25 Direct puts it, “Zest surrendered any claim to a cylindrical male member and cap in favor of
26 a rounded connection between the male member and cap. The structure disclosed in Sulc
27 was only capable of rotation, not swiveling.” (ID *Markman* Br. at 12.)

28 //

1 The Court certainly understands Implant Direct’s argument, but it again appears to
2 be importing a kind of functional description of Zest’s invention into the construction of the
3 claim terms. In other words, it is arguing that because the metal cap can move around the
4 retention member on multiple axes, the swivel terms cannot encompass rotation around just
5 a single axis. In context, however, Zest amended the 219 Patent application to articulate the
6 snap connection between the retention member and the metal cap, not to elaborate on the
7 rotational relationship between those two parts. Its amendments, in fact, left the swivel
8 terms absolutely alone. As Zest pointed out in its *Markman* presentation, the examiner didn’t
9 even discuss rotational axes or imply that Zest’s invention would have to embody multiple
10 axes in order to overcome the Sulc patent. (*Zest Markman Presentation* at 60.) When Zest
11 explained that Sulc’s retention member and cap were cylindrical, this wasn’t to make a point
12 about their rotational relationship but rather the manner in which they connect to one
13 another. The Sulc patent contemplates a cap with ridges and grooves that physically
14 retrains the retention member. (*Dugger Decl., Ex. 3, 367 Patent* at 8:60–62.) The 219
15 Patent, on the other hand, contemplates a concave cap that snaps over a convex retention
16 member.

17 There’s one final point that’s important to make here, and which Zest makes in its
18 pleadings. Implant Direct says in its *Markman* brief that “[t]he structure disclosed in Sulc was
19 only capable of rotation, not swiveling,” the implication being that swiveling is a more
20 complex form of movement. (*ID Markman Br.* at 12.) Sulc, according to Implant Direct,
21 “teaches a joint where the cap rotates only in a flat manner around the male members.” (*ID*
22 *Markman Br.* at 11.) That obviously serves its argument here that the swivel terms must be
23 construed to require rotation around more than one axis. But in the examiner’s own
24 description of the Sulc patent, he uses the word “swivel” to describe simple one-dimensional
25 rotational movement of the metal cap over the retention member. (*Dugger Decl., Ex. 4 at*
26 ¶ 4; *ID Markman Br.* at 10.) The examiner therefore recognized that movement around a
27 single axis *is* a swiveling movement. That lends substantial credibility to Zest’s proposed
28 construction of the swivel terms and it undermines Implant Direct’s alternative construction,

1 considering that a patent examiner may be considered a person of ordinary skill in the art
2 for claims construction purposes. *In re Sang Su Lee*, 277 F.3d 1338, 1345 (Fed. Cir. 2002).

3 For the reasons given above, the Court doesn't find that the prosecution history of the
4 219 Patent favors Implant Direct's construction of the swivel terms over that of Zest.

5 C. Zest's Arguments

6 Just because the Court disagrees with Implant Direct doesn't mean that it necessarily
7 agrees with Zest. Here, however, it does. As Zest points out, *nowhere* does the patent
8 specification use the phrase "multiple axes" or "more than one axis," and *nowhere* does it
9 define the swivel terms to only encompass rotation around at least two axes. (See Zest
10 *Markman* Presentation at 48; Zest *Markman* Br. at 9.)

11 Zest also places great emphasis on the following language from the specification,
12 speaking of one embodiment of the patent.

13 The outer surface of skirt is convex or rounded, for snap-fit,
14 swiveling engagement in a cavity of corresponding shape in the
15 cap . . . **This provides a swiveling, rotational movement or
16 hinging action at the cap**, where the attachment is secured to
17 the denture or appliance, reducing wear, in a similar manner to
18 that described in U.S. Pat. No. 5,417,570 referred to above.

19 (219 Patent at 5:23–29.) The Court isn't sure that this language is as clear as Zest wants
20 it to be. On one reading, "swiveling, rotational movement" is one kind of movement and
21 "hinging action" is another—and the patent is capable of both. This is consistent with
22 common usage. Think of a desk chair. It swivels, meaning you can spin around in it. It also
23 hinges, meaning that you can lean back in it. It's odd, though, to read "hinging" into
24 "swiveling"; we typically don't think of leaning back in a desk chair as swiveling.⁵ Zest wants
25 the Court to construe "rotational" and "hinging" differently, which seems sensible, but it also

26
27 ⁵ In its *Markman* presentation, Zest cited a dictionary definition of "swivel" according
28 to which one object turns in a horizontal plane with respect to another. (Zest *Markman*
Presentation at 46.) This is what the Court has in mind when it considers a swiveling desk
chair.

1 wants the Court to construe “swiveling” to include both.⁶ That’s not consistent with this first
2 reading of the bolded language above, in which “swiveling” is more or less synonymous with
3 “rotational” but distinct from “hinging.” Implant Direct seems to have the better reading: the
4 swivel terms speak to rotational movement only.⁷

5 An alternative reading would read a comma into the bolded language in such a way
6 that swiveling does encompass both rotational and hinging movements. Here’s what that
7 would look like: “This provides a swiveling, rotational movement or hinging action, at the cap
8” Yet another reading would understand swivelling to include both rotational and hinging
9 movements, but wouldn’t understand those movements to be distinct from one another.
10 Rather, it would understand “rotational movement” and “hinging action” to be roughly
11 synonymous and, in context, to work together to explain a particular type of motion. When
12 there’s no perfect word, sometimes it helps to use two, and saying the cap “hinges” over the
13 retention member could just be another way of saying it “rotates” over the retention member.

14
15 ⁶ For example, one of Zest’s *Markman* presentation slides, referencing this language,
16 contained the point, “The specification describes the ‘swivel’ connection between the male
17 member and cap as rotational or hinging.” (*Zest Markman* Presentation at 47.) Zest also
18 insists these are distinct kinds of motion: “The contested phrases . . . are clearly and
expressly defined by the inventors in the specification of the Patents-in-Suit to include
several different and distinct types of movement—rotational or hinging—and each separate
type of movement is encompassed by the claim term.” (*Zest Markman* Br. at 8.)

19 ⁷ Implant Direct, to recall, reads hinging entirely out of its construction of the swivel
20 terms: “The male member must be able to rotate around more than one axis within the cap,
21 and there is relative motion between the cap and male member.” (*ID Markman Presentation*
22 at 19.) The Court is actually uncertain if Implant Direct means to *equate* “rotational
23 movement” and “hinging action,” such that “hinging action” is surplus language that doesn’t
24 add anything, or if Implant Direct means to equate swivelling only with “rotational motion” and
25 regard “hinging action” as something altogether different.

26 Implant Direct later suggests, however, that rotational movement is a kind of
27 hinging:

28 The motion of the cap is described in the specification as a
“swiveling, rotational movement or hinging action at the cap.”
The hinging action is therefore seen as having two distinct
components: swiveling and rotational. These two components
should be included in the construction adopted by the Court.

(*ID Responsive Markman* Br. at 2.) This seems very wrong. However many plausible
readings of the words “swiveling, rotational movement or hinging action” there are, this is not
one of them. It’s not even consistent with Implant Direct’s own proposed construction of the
swivel terms, according to which swiveling *is* rotational movement, not distinct from it.

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Ultimately, the Court agrees with Zest that “rotational movement” and “hinging action” refer to separate types of movement. Common usage supports that, and the usage in the excerpt above—**This provides a swiveling, rotational movement or hinging action at the cap**—supports that. The Court also agrees with Zest that there is no minimum axis requirement for the rotational movement. Nowhere in the specification is such a limitation to be found. Finally, in spite of the confusions highlighted above inherent in the phrase “swiveling, rotational movement or hinging action,” “swiveling” encompasses both “rotational movement” and “hinging action.” The patent specification consistently uses some form of the word swivel to describe the manner in which the cap and retention member engage. The terms to be construed don’t say “swivel *and hinging*” joint,” or “swivel *and hinging* engagement,” or “permitting swiveling *and hinging* of the cap over the male.” They simply say “swiveling” and leave *that* as the catchall term for the engagement. The specification goes on to make clear that this engagement is defined by “rotational movement or hinging action.”⁸

⁸ Zest also points out that the 219 Patent incorporates the 570 Patent, and the 570 Patent “uses the term ‘swivel engagement’ to describe a joint or engagement that allows rotation or hinging movement and is *not* limited to multiple axes.” (Zest Suppl. *Markman* Br. at 5; 570 Patent at 1:30–44.) That’s an imprecise reading of the 570 Patent, which states:

According to the present invention, an anchor assembly is provided which comprises a female socket member for attachment to a tooth root or implant, the socket member having a first socket, a male stud having a head at a first end shaped for releasable snap engagement in the socket and a swivel joint at the opposite end, a cap for connection to a dental appliance, the cap having a second socket, the swivel joint being adapted for engagement in the second socket in the cap, and allowing hinge motion of the stud relative to the cap.

Preferably, some rotational movement is also permitted between the first end of the stud and the first socket, so that movement is provided at both ends of the attachment, both where it attaches to the tooth root or implant, and where it attaches to the cap.

The precise reading of this is that *hinging* defines the swivel engagement between the male stud (or the retention member) and the cap, whereas “rotational movement” defines the engagement between the male stud and the female socket (or the abutment). Moreover, the

1 So Zest is right. “Swivel joint” and “swivel engagement” should be construed as “a
2 rotational or hinging connection between the male member and the cap, in which the
3 rotational or hinging motion is around one or more axis.” Likewise, “swiveling” should be
4 construed as “any rotational movement or hinging action between the male member and the
5 cap, around one or more axis.” (Zest *Markman* Presentation at 45.)⁹

6 **D. Severability of Rotational Movement and Hinging Action**

7 There is one important matter that has to be cleared up in order for the above claim
8 construction to be useful at trial. That is Implant Direct’s potential construction of *the Court’s*
9 *own construction of the claims* in a manner that achieves its proposed construction after all.
10 Here’s what Implant Direct could argue: *If a “swivel joint” or “swivel engagement” means “a*
11 *rotational or hinging connection between the male member and the cap,” the cap must be*
12 *able to rotate around **and** hinge over the male member. And that means it must be able to*
13 *move on at least two axes.*

14 _____
15 phrase “some rotational movement is also permitted” in the second paragraph may be read
16 to imply that “rotational movement” and “hinge motion” are roughly synonymous. The “also”
17 does the work there; if it’s “also” permitted at the abutment-end of the male stud, the
implication is that it’s originally permitted somewhere else, namely where the male stud
engages with the cap. So, the 570 Patent isn’t as helpful as Zest wants it to be.

18 ⁹ The Court wants to address one argument Implant Direct makes for its dual-axis
19 theory of interpretation that doesn’t fit neatly in the structure of this Order. It is this: Implant
Direct seizes on the following language in the specification of the 219 Patent:

20 Other prior art attachments utilize a male head which is in
21 releasable snap engagement with a female socket, but do not
provide a double hinging action since the male part is secured
in a denture cap with no freedom of movement.

22 (219 Patent at 1:24–26.) Presumably, Implant Direct wants to suggest that “double hinging
23 action” suggests movement of the cap around at least two axes with respect to the retention
24 member. (See ID *Markman* Presentation at 16.) This isn’t right. The “double-hinging” action
25 here refers to the fact that the male member can move with respect to the cap and also with
respect to the abutment; that is, there is movement at both the cap and abutment ends of
the retention member. (See Zest *Markman* Br. at 10–11.) The specification is clear on this:

26 In each of the above embodiments, a male or snap-on
27 attachment is provided which is secured at one end to a cap and
28 at the other end to a female or locator element, with both ends
of the male having some freedom of movement relative to the
part to which it is secured.

(219 Patent at 12:59–63.)

1 The Court won't allow that construction. First, it ignores the distinction, present in the
2 specification, between "rotational movement" and "hinging action." Indeed, Implant Direct's
3 proposed construction either equates swiveling strictly with "rotational movement," or
4 equates "rotational movement" with "hinging action," and either way runs afoul of the Court's
5 conclusions that "swiveling" includes both "rotational movement" and "hinging action" *and*
6 that these are distinctive. Second, as Zest argues, nowhere in the specification or other
7 intrinsic evidence is there any requirement that the cap *both* rotate around and hinge over
8 the retention member. It's true that the 219 Patent is capable of both rotation and hinging,
9 but Implant Direct cites no authority for the proposition that the functionality of the 219 Patent
10 is severable such that its own device need only do half of what the 219 Patent can do in
11 order to avoid infringement. So, to be clear, the Court construes the swivel terms as
12 describing a cap that rotates around a retention member, and also a cap that hinges over
13 a retention member. The 219 Patent, in effect, just happens to allow both.

14 **E. Location of the Swivel Joint or Engagement**

15 At the *Markman* hearing, the Court suggested that the heart of this case seemed not
16 to turn on the nature of the swiveling action but rather on *where* in the dental attachment
17 system the swiveling takes place. In other words, the Court was concerned that the claims
18 it was being asked to construe wouldn't impact, ultimately, the question of infringement. So,
19 to be clear, the Court construes the swivel terms as pertaining *only* to the swiveling of the
20 cap in relation to the retention member. Not only is that explicit in the claim terms at issue,
21 but Zest's own proposed construction, which the Court adopts, reflects that: "'Swivel joint'
22 and 'swivel engagement' should be construed as: 'a rotational or hinging connection
23 **between the male member and the cap**, in which the rotational or hinging motion is around
24 one or more axis.'" (Zest *Markman* Presentation at 45 (emphasis added).)

25 The Court makes this clarification because Zest seems to reach farther in its original
26 *Markman* brief and ask for a construction of the swivel terms that also includes swiveling of
27 the retention member in relation to the abutment:

28 In the end, the "swiveling" action is designed to permit
 movement between the male retention member and the cap (or

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recess) *as well as* between the male retention member and the female element. As a result, to the extent construction is required, the phrases at issue should be defined as “any rotational movement or hinging action that allows for relative motion between the cap and the male member and/or between the male member and the abutment.”

(Zest *Markman* Br. at 11.) The 219 Patent may *elsewhere* claim a swiveling motion, or some kind of motion, between the retention member and the abutment, but not in the claims the Court has been asked to construe. As far as the Court is concerned, the fact that Implant Direct’s accused device appears not to allow the cap and retention member to move in relation to one another, and instead allows only for the retention member to move in relation to the abutment, is more critical to the infringement question than the above claims construction. The Court was clear about that during the *Markman* hearing, and it is worth bearing in mind going forward. (See ID Suppl. *Markman* Br., Ex. 1.)

V. Conclusion

The Court adopts Zest’s proposed construction of the swivel terms, as explained above. “Swivel joint” and “swivel engagement” will be construed as “a rotational or hinging connection between the male member and the cap, in which the rotational or hinging motion is around one or more axis.” Likewise, “swiveling” should be construed as “any rotational movement or hinging action between the male member and the cap, around one or more axis.” (Zest *Markman* Presentation at 45.) The 219 Patent encompasses “rotational movement” and “hinging action” independently, too; it does not require both. Finally, the swivel terms only apply to the physical connection between the cap and the retention member. Zest’s motion to exclude the testimony of Dr. Niznick is **DENIED** as moot. The

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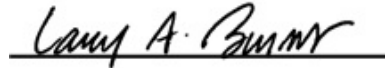
1 Court found some of his testimony helpful to gaining a background understanding of
2 overdenture attachment systems, but his testimony didn't serve Implant Direct's cause
3 beyond that.

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5 **IT IS SO ORDERED.**

6 DATED: May 15, 2012

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HONORABLE LARRY ALAN BURNS
United States District Judge

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