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6 **IN THE UNITED STATES DISTRICT COURT**
7 **FOR THE DISTRICT OF ARIZONA**

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9 PCT International Inc.,

10 Plaintiff,

11 v.

12 Holland Electronics LLC,

13 Defendant.

No. CV-12-01797-PHX-JAT

ORDER

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15 On January 9, 2014, the Court conducted a *Markman* hearing pursuant to
16 *Markman v. Westview Instruments, Inc.*, 517 U.S. 370 (1996). Consistent with *Markman*,
17 the Court now construes the claims in the patent at issue, U.S. Patent No. 6,042,422 (filed
18 Oct. 8, 1998) (the “’422 Patent”).

19 **I. Legal Standard**

20 “The purpose of claim construction is to ‘determin[e] the meaning and scope of
21 the patent claims asserted to be infringed.’” *O2 Micro Int’l Ltd. v. Beyond Innovation*
22 *Tech. Co.*, 521 F.3d 1351, 1360 (Fed. Cir. 2008) (citation omitted). Claim construction is
23 a question of law exclusively within the province of the Court. *Markman*, 517 U.S. at
24 372. The Court need only construe claims, however, when the parties raise a dispute
25 about the proper scope of a claim. *O2 Micro*, 521 F.3d at 1362. Moreover, if a disputed
26 claim term has a plain and ordinary meaning such that it needs no clarification or
27 explanation, the Court need not adopt a construction beyond that plain meaning. *See U.S.*
28 *Surgical Corp. v. Ethicon, Inc.*, 103 F.3d 1554, 1568 (Fed. Cir. 1997).

1 In construing claims, the Court “look[s] to the words of the claims themselves,”
2 giving them “their ordinary and customary meaning” unless clearly stated otherwise.
3 *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996). “[T]he
4 ordinary and customary meaning of a claim term is the meaning that the term would have
5 to a person of ordinary skill in the art in question at the time of the invention.” *Phillips v.*
6 *AWH Corp.*, 415 F.3d 1303, 1313 (Fed. Cir. 2005) (en banc); *see also Texas Digital Sys.,*
7 *Inc. v. Telegenix, Inc.*, 308 F.3d 1193, 1202 (Fed. Cir. 2002) (“The terms used in the
8 claims bear a ‘heavy presumption’ that they mean what they say and have the ordinary
9 meaning that would be attributed to those words by persons skilled in the relevant art.”).

10 “[T]here is no magic formula or catechism for conducting claim construction.”
11 *Phillips*, 415 F.3d at 1324. The Court “looks to those sources available to the public that
12 show what a person of skill in the art would have understood disputed claim language to
13 mean.” *Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1116
14 (Fed. Cir. 2004). “Those sources include the words of the claims themselves, the
15 remainder of the specification, the prosecution history, and extrinsic evidence concerning
16 relevant scientific principles, the meaning of technical terms, and the state of the art.” *Id.*
17 The Court is not “required to analyze [these] sources in any specific sequence,” but may
18 not use extrinsic evidence to contradict “claim meaning that is unambiguous in light of
19 the intrinsic evidence.” *Phillips*, 415 F.3d at 1324 (refining the holding of *Vitronics*).

20 The specification “is the single best guide to the meaning of a disputed term.”
21 *Power Integrations, Inc. v. Fairchild Semiconductor Int’l, Inc.*, 711 F.3d 1348, 1361
22 (Fed. Cir. 2013) (quoting *Vitronics*, 90 F.3d at 1582). The patentee may “act as its own
23 lexicographer,” *Thorner v. Sony Computer Entm’t Am. LLC*, 669 F.3d 1362, 1365 (Fed.
24 Cir. 2012), by defining a claim term in the specification as having “a different meaning
25 than [it] would otherwise have to a person of ordinary skill in the art,” *Innova/Pure*
26 *Water*, 381 F.3d at 1116; *see also Vitronics*, 90 F.3d at 1582 (a specification “acts as a
27 dictionary when it expressly defines terms used in the claims or when it defines terms by
28 implication”). However, the Court will find the patentee to have acted as its own

1 lexicographer only if the patentee “clearly express[es] an intent to redefine the term.”
2 *Thorner*, 669 F.3d at 1365 (citation and internal quotation marks omitted).

3 Similarly, the specification may narrow the scope of a disputed claim term if the
4 patentee has “demonstrate[d] intent to deviate from the ordinary and accustomed
5 meaning of a claim term by including in the specification expressions of manifest
6 exclusion or restriction, representing a clear disavowal of claim scope.” *Thorner*, 669
7 F.3d at 1365 (quoting *Teleflex, Inc. v. Ficosa N. Am. Corp.*, 299 F.3d 1313, 1325 (Fed.
8 Cir. 2002)). In ascertaining whether the patentee has disavowed the full scope of a claim,
9 the Court must not read limitations from the specification into the claims. *Teleflex*, 299
10 F.3d at 1326 (citing *Comark Commc’ns, Inc. v. Harris Corp.*, 156 F.3d 1182, 1186 (Fed.
11 Cir. 1998)). In other words, the claims are not necessarily limited to the embodiments
12 disclosed in the specification. *See SRI Int’l v. Matsushita Elec. Corp. of Am.*, 775 F.2d
13 1107, 1121 n.14 (Fed. Cir. 1985) (en banc).

14 In addition to the specification, the Court considers “the patent’s prosecution
15 history, if it is in evidence.” *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 980
16 (Fed. Cir. 1995) (en banc), *aff’d*, 517 U.S. 370 (1996). “The purpose . . . is to ‘exclude
17 any interpretation that was disclaimed during prosecution.’” *Chimie v. PPG Indus., Inc.*,
18 402 F.3d 1371, 1384 (Fed. Cir. 2005) (citation omitted). The prosecution history may
19 reveal that the patentee “has unequivocally disavowed a certain meaning to obtain [its]
20 patent.” *Omega Eng’g, Inc. v. Raytek Corp.*, 334 F.3d 1314, 1324 (Fed. Cir. 2003). Thus,
21 the Court examines both the specification and prosecution history to ascertain whether
22 the patentee has disavowed the full scope of a claim term.

23 The Court may also consider extrinsic evidence to aid in its construction of
24 disputed claim terms. *Phillips*, 415 F.3d at 1317-18. For example, “[d]ictionaries are
25 always available to the court to aid in the task of determining meanings that would have
26 been attributed by those of skill in the relevant art to any disputed terms used by the
27 inventor in the claims.” *Texas Digital*, 308 F.3d at 1202 (citing *Vitronics*, 90 F.3d at 1584
28 n.6). Dictionaries are particularly helpful in claim construction because they “endeavor to

1 collect the accepted meanings of terms,” *Phillips*, 415 F.3d at 1318, but the Court should
 2 not elevate dictionaries to prominence over the specification and claim language, *see id.*
 3 at 1319-24. Other extrinsic evidence, such as expert testimony, is less helpful because it
 4 may suffer from bias, and the Court should “discount any expert testimony ‘that is clearly
 5 at odds with the claim construction mandated by the claims themselves, the written
 6 description, and the prosecution history, in other words, with the written record of the
 7 patent.’” *Id.* at 1318 (quoting *Key Pharm. v. Hercon Labs. Corp.*, 161 F.3d 709, 716
 8 (Fed. Cir. 1998)).

9 Finally, dependent claims must be construed to “incorporate by reference all the
 10 limitations of the claim[s] to which [they] refer[.]” 35 U.S.C. § 112(d).

11 **II. Construed Terms**

12 The following chart summarizes the disputed claim terms, each party’s proposed
 13 construction, and the Court’s construction.

Term No.	Disputed Claim Term	Relevant Claims	PCT’s Proposed Construction	Holland’s Proposed Construction	The Court’s Construction
1	“outer”	1, 11	“situated farther from the center”	“located on the outside”	The Court does not construe this term and instead construes “outer barrel” as defined below.
2	“bore”	1, 11	“the hollow of a barrel”	Uncontested.	“the hollow of a barrel”
3	“said collapsible band having an outer side facing away from the longitudinal axis of said outer barrel”	1, 11	No construction necessary. Alternatively, construe “collapsible” as “foldable” and “outer barrel” as “drum or cylindrical part situated farther from the center”	“This claim element defines the ‘outer side’ from which the obtuse angle is measured in claim element Ref No. 4 below. The ‘outer side’ must be facing away from the longitudinal axis of the connector.”	The Court does not construe this term.

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4	“said first portion of said outer side of said collapsible band and said second portion of said outer side of said collapsible band forming an obtuse angle therebetween”	1, 11	No construction necessary. Alternatively, “surfaces of first and second outer side portions that form an angle which can be measured as more than 90 and less than 180 degrees”	“The ‘outer side’ must have two different portions (as defined in the claim) which form an obtuse angle between those two portions of the ‘outer side’ as measured facing <i>away</i> from the longitudinal axis of the connector.”	“the surfaces of the first and second portions of the outer side of the collapsible band form between them an angle that can be measured, according to a circular arc that is centered at the vertex of the angle and radially farther from the longitudinal axis of the outer barrel than the vertex of the angle, as more than 90 and less than 180 degrees”
5	“said collapsible band having an inner side facing toward the longitudinal axis of said outer barrel”	1, 11	No construction necessary. Alternatively, construe “collapsible” as “foldable” and “outer barrel” as “drum or cylindrical part situated farther from the center.”	“This claim element defines the ‘inner side’ from which the obtuse angle is measured in claim element Ref No. 6 below. The ‘inner side’ must be facing <i>toward</i> the longitudinal axis of the connector.”	The Court does not construe this term.
6	“said first portion of said inner side of said collapsible band and said second portions of said inner side of said collapsible band forming an obtuse angle therebetween”	1, 11	No construction necessary. Alternatively, “surfaces of first and second inner side portions that form an angle which can be measured as more than 90 and less than 180 degrees”	“The ‘inner side’ must have two different portions (as defined in the claim) which form an obtuse angle between those two portions of the ‘inner side’ as measured facing <i>toward</i> the longitudinal axis of the connector.”	“the surfaces of the first and second portions of the inner side of the collapsible band form between them an angle that can be measured, according to a circular arc that is centered at the vertex of the angle and radially farther from the longitudinal axis of the outer barrel than the vertex of the angle, as more than 90 and less than 180 degrees”

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7	“said wall of said outer barrel having at least one collapsible band”	1, 11	No construction necessary. Alternatively, construe “outer barrel” as “drum or cylindrical part situated father from the center” and “collapsible” as “foldable.”	“The collapsible band must be part of the outer shell of the connector. The shell (<i>i.e.</i> barrel) has a length greater than its diameter. (The specification equates the terms ‘shell’ and ‘outer barrel.’ <i>See</i> ‘422 Patent, column 4, lines 5-6.)”	The Court does not construe this term and instead construes “outer barrel” as defined below.
8	“at least one collapsible band extending between a first non-collapsible wall portion and a second non-collapsible wall portion”	1, 11	No construction necessary. Alternatively, construe “collapsible” as “foldable” and both instances of “non-collapsible” as “non-foldable.”	“The collapsible band must extend between two non-collapsible wall portions. For purposes of this patent, ‘non-collapsible wall portions’ will not deform as the outer barrel is being compressed.”	The Court does not construe this term.
9	“extent”	11	Uncontested.	“length”	“length”
10	“essentially parallels”	11	No construction necessary. Alternatively, construe as “substantially or in essence, but not necessarily exactly, parallels.”	“parallel but for manufacturing tolerances”	“parallels but with some deviation”
	“outer barrel”	1, 11			“a barrel that is located immediately exterior to the outer insulation of the coaxial cable when the coaxial cable is inserted into the barrel and prior to compression of the barrel”

1 **III. Claim Construction**

2 **A. “said first portion of said inner side of said collapsible band and said**
3 **second portion of said inner side of said collapsible band forming an**
4 **obtuse angle therebetween” (Term No. 6)**

5 The parties’ dispute concerning the construction of this term stems from the phrase
6 “obtuse angle.” (Doc. 111 at 10; Doc. 113-1 at 6, 11). Holland argues that to qualify as
7 obtuse, the angle must be measured facing toward the longitudinal axis of the connector.
8 (Doc. 113-1 at 6-7). PCT argues that the claim terms do not require the angle to be
9 measured from a certain direction. (Doc. 111 at 10).

10 More specifically, Holland contends that PCT narrowed the scope of its claim
11 during prosecution to exclude a collapsible band having an angle measuring as obtuse
12 facing *away* from the longitudinal axis of the connector. (Doc. 111-3 at 9). Therefore,
13 according to Holland, PCT may not now define the scope of its claim as including such
14 an angle. (*Id.* at 8-10).

15 **1. Background**

16 Claim 1 in PCT’s original patent application claimed a collapsible band “such that
17 the outer side of said collapsible band is concave and the inner side of said collapsible
18 band is convex when said collapsible band is viewed in cross section.” (Doc. 115-2 at
19 21).¹ Claim 2 in PCT’s original patent application claimed: “The coaxial cable end
20 connector according to claim 1” having a collapsible band “having a shallow V-shaped
21 cross section such that the first portion of said collapsible band and the second portion of
22 said collapsible band form an obtuse angle on the outer side of said collapsible band
23 when said collapsible band is viewed in cross section, prior to compression of the outer
24 barrel.” (*Id.* at 22).

25 The PTO issued a non-final office action rejecting both claims, among others, as
26 unpatentable. (*Id.* at 45). PCT then discussed the prior art with the patent examiner,
27 including the “Down patent” (U.S. Patent No. 5,525,076).

28 PCT subsequently amended its claims to distinguish them from those of the Down

¹ The Court’s references to exhibit documents are to PDF page numbers.

1 patent. (*Id.* at 55). As PCT noted in its remarks to the examiner:

2 . . . the collapsible bands of Down have a flat inner surface
3 and a shallow V-shaped outer surface Claim 1 as
4 amended recites that the collapsible band of the present
5 invention has a bend in the middle such that both the inner
6 and outer surfaces of the collapsible band of the present
7 invention define obtuse angles prior to axial compression of
8 the collapsible band of the present invention.

9 (*Id.* at 65). PCT amended its claim 1 by replacing the language “such that the outer side
10 of said collapsible band is concave and the inner side of said collapsible band is convex
11 when said collapsible band is viewed in cross section” with the following:

12 . . . said outer side of said collapsible band having a first
13 portion extending between said bend and said first non-
14 collapsible wall portion, said outer side of said collapsible
15 band having a second portion extending between said bend
16 and said second non-collapsible wall portion, said first
17 portion of said outer side of said collapsible band and said
18 second portion of said outer side of said collapsible band
19 forming an obtuse angle therebetween, said inner side of said
20 collapsible band having a first portion extending between said
21 bend and said first non-collapsible wall portion, said inner
22 side of said collapsible band having a second portion
23 extending between said bend and said second non-collapsible
24 wall portion, said first portion of said inner side of said
25 collapsible band and said second portion of said inner side of
26 said collapsible band forming an obtuse angle therebetween,
27 such that said bend is positioned radially closer to the
28 longitudinal axis of said outer barrel than any other portion of
said collapsible band when said collapsible band is viewed in
cross section and prior to axial compression of said outer
barrel.

(*Id.* at 55-56). PCT cancelled its original claim 2 entirely. (*Id.* at 62). The examiner
allowed the amended claim 1 (as well as its dependent claims), stating that “[t]he instant
invention relates to a coaxial cable connector with an outer barrel having a V-shaped
collapsible band which is fixed to the cable by axial compression without cracking.”
(Doc. 111-6 at 4).

2. Legal Standard

There is a “heavy presumption that claim terms carry their full ordinary and
customary meaning . . . unless the patentee unequivocally . . . expressly relinquished
claim scope during prosecution.” *Omega Eng’g*, 334 F.3d at 1323. “[A]n applicant can

1 make a binding disavowal of claim scope in the course of prosecuting the patent, through
2 arguments made to distinguish prior art references.” *Cordis Corp. v. Medtronic Ave, Inc.*,
3 511 F.3d 1157, 1177 (Fed. Cir. 2008). “In order to constitute binding surrenders of claim
4 scope, the statements in question must be such that ‘a competitor would reasonably
5 believe that the applicant had surrendered the relevant subject matter.’” *Id.* (quoting
6 *Cybor Corp. v. FAS Techs., Inc.*, 138 F.3d 1448, 1457 (Fed. Cir. 1998) (en banc)).
7 Finally, a patentee’s surrender of claim scope “narrows the ordinary meaning of the claim
8 congruent with the scope of the surrender.” *Omega Eng’g*, 334 F.3d at 1324.

9 3. Analysis

10 Holland argues that the effect of the amendment of claim 1 and cancellation of
11 original claim 2 was to disclaim “the territory between (1) a connector having a
12 collapsible band in which the inner side is convex, and (2) a connector having a
13 collapsible band where the inner side facing toward the longitudinal axis has two portions
14 of the inner side forming an obtuse angle therebetween.” (Doc. 113-1 at 9; Doc. 115 at 3).
15 Holland contends that PCT, having disclaimed a collapsible band having a V-shaped
16 cross-section, instead claims only a “bow tie” shape in which (1) the first portion of the
17 inner side of the collapsible band and the second portion of the inner side of the
18 collapsible band form between them an obtuse angle as measured facing toward the
19 longitudinal axis and (2) the first portion of the outer side of the collapsible band and the
20 second portion of the outer side of the collapsible band form between them an obtuse
21 angle as measured facing away from the longitudinal axis. (Doc. 113-1 at 7; Doc. 115 at
22 8).

23 Holland’s argument fails because PCT did not clearly relinquish the V-shape of
24 the collapsible band during prosecution.² Rather, the prosecution history shows that
25 although PCT disclaimed a collapsible band having a convex inner surface, PCT retained

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27 ² Holland’s reliance upon *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*,
28 535 U.S. 722 (2002), (Doc. 113-1 at 9; Doc. 115 at 9), is inapposite because that case
addressed the doctrine of equivalents. *See Festo*, 535 U.S. at 740 (“ . . . we hold here that
the patentee should bear the burden of showing that the amendment does not surrender
the particular equivalent in question.”).

1 its claim to a V-shaped band of the type exemplified in Figure 4 of the specification. In
2 scrutinizing PCT's amendment to its original claim 1, Holland neglects the language that
3 PCT critically added for the first time in the amendment: ". . . such that said bend is
4 positioned radially closer to the longitudinal axis of said outer barrel than any other
5 portion of said collapsible band when said collapsible band is viewed in cross section and
6 prior to axial compression of said outer barrel . . ." (Doc. 115-2 at 56). Geometry requires
7 that if the bend in the collapsible band is radially closer to the longitudinal axis of the
8 outer barrel than any other portion of the band, then the angle between the first portion of
9 the inner side of the band and the second portion of the inner side of the band must be
10 obtuse as measured facing away from the longitudinal axis. Consequently, PCT cannot
11 have disclaimed the V-shape of the collapsible band. Because PCT's amendment
12 disclaimed a band with a convex inner side, the unmistakable purpose of adding the
13 limitation as to the radial position of the bend was to clarify from which direction the
14 obtuse angle should be measured.³

15 Holland is correct that PCT's original claim 2 claimed a V-shaped band and PCT
16 cancelled this claim. *See* (Doc. 115-2 at 62). But this cancellation did not disclaim the V-
17 shaped band because PCT *simultaneously added* language in its amended claim 1
18 specifying the radial position of the bend in the band such that the band must form a V-
19 shape. (*Id.* at 56). Therefore, the Court rejects Holland's contention that the cancellation

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21 ³ The Court notes that the term "obtuse angle" is by itself ambiguous as to from
22 which direction an obtuse angle should be measured. Although PCT correctly contends
23 that the plain and ordinary meaning of "obtuse angle" does not require measuring the
24 angle from a certain direction, (Doc. 111 at 11), the definition of an obtuse angle is
25 inherently incapable of prescribing how to measure such an angle. As PCT offers, one
26 dictionary definition is an angle "greater than 90 degrees and less than 180 degrees."
27 (Doc. 111-5 at 8). Any two surfaces that meet necessarily form two angles. Knowing that
28 one of those angles measures as obtuse does not clarify which angle that is.

25 For this reason, although Holland argues that the language in PCT's amended
26 claim 1 that the "inner and outer surfaces . . . define obtuse angles" confirms Holland's
27 proposed construction, (Doc. 113-1 at 10; Doc. 115 at 6), this language does not clarify
28 from which direction the angle is to be measured as obtuse. Similarly, Holland's
contention that PCT's proposed construction is inconsistent in measuring direction
between the inner and outer surfaces is without merit. (Doc. 113-1 at 11). Instead, as
stated above, the radial positioning of the bend clarifies that it is the angle facing away
from the longitudinal axis that is to be measured as obtuse.

1 of claim 2 disclaimed the V-shaped band.⁴

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3 ⁴ Holland also misinterprets the prosecution history in assuming that because
4 original claim 2 was initially rejected, the V-shape must be unpatentable. (Doc. 115 at 4-
5 5). Although the examiner's reasons for his rejection were that it "would have been
6 obvious . . . to use a V-shaped and/or convex-concave configuration for the collapsible
7 band," (Doc. 115-2 at 46), the original claims did not provide for crimping via axial
8 compression. (*Id.* at 55). The examiner rejected original claims 1 and 2 "as being
9 unpatentable over Szegda in view of Cull." (*Id.* at 46). PCT's remarks accompanying its
10 subsequent amendment noted that "neither the Szegda or Cull et al. references teach or
11 suggest the crimping of a cable end connector by axial compression." (*Id.* at 63-64). The
12 examiner's notice of allowability specified that "[t]he instant invention relates to a
13 coaxial cable connector with an outer barrel having a V-shaped collapsible band which is
14 fixed to the cable by axial compression without cracking." (Doc. 111-6 at 4).

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16 Second, PCT's amendment remarks also acknowledged that "the collapsible bands
17 of Down have a flat inner surface and a shallow V-shaped outer surface." (Doc. 115-2 at
18 64). PCT distinguished its amended claims on the grounds that "the present invention has
19 a bend in the middle such that both the inner and outer surfaces . . . define obtuse angles
20 prior to axial compression . . ." (*Id.* at 65). Holland implies from these statements that
21 PCT distinguished its claims on the basis of the V-shaped surface; thus, according to
22 Holland, because original claim 2 claimed a V-shaped band and that claim was cancelled,
23 PCT must have "expressly disclaimed coverage of a collapsible band other than one with
24 opposing obtuse angles on the inner and outer surfaces." (Doc. 115 at 5). This argument
25 fails because a more likely interpretation, in light of the entire prosecution history, is that
26 PCT distinguished the "flat inner surface" of Down from its invention's obtuse angles on
27 "both the inner and outer surfaces" (emphasis added). The ordinary meaning of PCT's
28 remarks is that the term V-shaped, because it immediately precedes the term "outer
surface," describes only the shape of the outer surface and not the shape of the entire
band. Indeed, Holland's interpretation of PCT's remarks is contradictory to its own
acknowledgement that the outer surface must be V-shaped. *See* (Doc. 113-1 at 5-6).

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19 Third, Holland points to column 3, lines 37-40 of the '422 Patent's specification to
20 argue that although the specification uses the phrase "shallow V-shaped cross section," it
21 does not define the shape of the inner side of the collapsible band. (Doc. 115 at 5).
22 Holland errs in claiming that PCT defined "shallow V-shaped cross section" "solely with
23 reference to the outer side." (*Id.* at 5). The specification defines the "V-shaped cross
24 section" with reference to "the collapsible band." '422 Patent col.3 ll.36-37. Both the
25 inner and outer sides of the band must have a V-shape for the band to present a V-shaped
26 cross-section. This is confirmed by the next sentence of the specification, which provides
27 that "the collapsible band will have an essentially constant thickness." *Id.* col.3 ll.41-42.
28 The band could not have an essentially constant thickness if the inner and outer sides
were in Holland's proposed "bow tie" shape.

24
25 Finally, Holland conflates the prior art when it states that because PCT admitted
26 during prosecution that the Down patent suffered from cracking and the examiner had
27 previously found a V-shaped band to be obvious, the examiner must have allowed claim
28 1 solely because of the "purported absence of 'cracking.'" (Doc. 115 at 6 n.2). The
examiner initially rejected claims 1 and 2 because a V-shaped band was obvious in light
of the Szegda and Cull patents, neither of which taught axial compression, and PCT's
claims did not teach axial compression. Although Down taught axial compression, it did
not claim the V-shaped band. Thus, PCT distinguished its amended claims from those of
Down on the basis of the V-shaped band (which prevents cracking) and separately
distinguished its amended claims from those of Szegda and Cull on the basis of axial
compression.

1 Because PCT did not disclaim a V-shaped band, Holland’s proposed construction
2 (the “bow tie” shape) would improperly render claim 1 meaningless. The angle in
3 question could not be obtuse as measured facing toward the longitudinal axis if the bend
4 in the collapsible band is radially closer to the longitudinal axis than any other portion of
5 the band.⁵ Holland’s proposed construction is also inconsistent with claims 6 and 11,
6 which define an inner side of the collapsible band that “essentially parallels” the outer
7 side for a length that surrounds the bend. ‘422 Patent col.8 l.33, col.9 l.34. The inner and
8 outer surfaces cannot be essentially parallel under a “bow tie” construction.

9 Despite this intrinsic evidence showing that claim 1 encompasses a V-shaped
10 collapsible band, Holland argues that this construction is nothing more than an improper
11 rewriting of the claim language to “encompass an embodiment shown in the patent.”
12 (Doc. 113-1 at 8). Specifically, Holland contends that PCT disclaimed its preferred
13 embodiment as shown in Figure 4 of the specification and “cannot recapture it now
14 through claim construction.” (Doc. 113-1 at 8; Doc. 115 at 8). In support, Holland cites
15 *Rheox, Inc. v. Entact, Inc.*, 276 F.3d 1319 (Fed. Cir. 2002), in which the Court of Appeals
16 for the Federal Circuit (the “Federal Circuit”) held that a patentee had disclaimed its
17 preferred embodiment in order to obtain patentability. 276 F.3d at 1327. But as *Rheox*
18 recognized, “an interpretation excluding a preferred embodiment ‘is rarely, if ever,
19 correct and would require highly persuasive evidentiary support.’” *Id.* (quoting *Vitronics*,
20 90 F.3d at 1583-84). In *Rheox*, the court concluded that the patentee had disclaimed the
21 use of a particular chemical in its patented process, although that chemical was in its
22 preferred embodiment, when, after the examiner’s initial rejection, the patentee removed
23 all references to the chemical in its claims and cancelled a claim “specifically directed” to
24 that chemical. *Id.* at 1326-27.

25 No such highly persuasive evidence exists in this case that PCT disclaimed a V-
26 shaped band. To the contrary, claim 1’s limitation that the bend is radially positioned

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28 ⁵ The Court finds unpersuasive Holland’s argument at the hearing that the
limitation on the direction of the obtuse angle and the limitation on the radial position of
the bend are either separate limitations or a drafting error.

1 closer to the longitudinal axis of the outer barrel than any other portion of the band is
2 highly persuasive evidence that PCT retained the V-shape of the band within the scope of
3 its claims. Figure 4's teachings are consistent with, but not a basis for, the scope of claim
4 1. PCT's proposed construction does not rewrite the claim language to import its
5 preferred embodiment.⁶

6 To support its "bow tie" construction, Holland points to the deposition testimony
7 of the patentee, Timothy L. Youtsey. (Doc. 113-1 at 7). Youtsey testified that the patent
8 would cover Holland's "bow tie" construction, although he also testified that he did not
9 know whether a "design that's not flat on the inner diameter" would be covered. (Doc.
10 112-3 at 4-5). Inventor testimony is extrinsic evidence that is "less significant than the
11 intrinsic record in determining the legally operative meaning of claim language."
12 *Phillips*, 415 F.3d at 1317 (citation and internal quotation marks omitted). Moreover, it is
13 "improper to rely on extrinsic evidence" when "an analysis of the intrinsic evidence alone
14 will resolve any ambiguity in a disputed claim term." *Vitronics*, 90 F.3d at 1583.
15 Holland's reliance upon Youtsey's testimony is misplaced.

16 The Court construes the claim term "said first portion of said inner side of said
17 collapsible band and said second portion of said inner side of said collapsible band
18 forming an obtuse angle therebetween" as meaning "the surfaces of the first and second
19 portions of the inner side of the collapsible band form between them an angle that can be
20 measured, according to a circular arc that is centered at the vertex of the angle and
21 radially farther from the longitudinal axis of the outer barrel than the vertex of the angle,
22

23
24 ⁶ Holland argued at the hearing that its interpretation would not exclude every
25 embodiment because Figure 2 appears to show the bend with a straight inner surface and
26 V-shaped outer wall. But the patent has only one preferred embodiment and the Court
agrees with PCT that Figures 2 and 4 are two illustrations of the same embodiment.
Holland's argument, although it may highlight the difficulties of technical drawing, is
without merit.

27 Moreover, although Holland asserts the embodiment depicted in Figure 4 "does
28 not have an obtuse angle formed on the inner side of the collapsible band," (Doc. 113-1 at
8), this begs the question and in light of the Court's construction of the claim, is without
merit.

1 as more than 90 and less than 180 degrees.”⁷

2 **B. “said first portion of said outer side of said collapsible band and said**
3 **second portion of said outer side of said collapsible band forming an**
4 **obtuse angle therebetween” (Term No. 4)**

5 This disputed term differs from disputed claim term 6, discussed in the preceding
6 section, only in the use of the words “inner” instead of “outer,” and the parties devote the
7 same or substantially similar arguments to each. *See* (Doc. 111 at 10; Doc. 111-3 at 5;
8 Doc. 114 at 5; Doc. 115 at 3). For the reasons previously discussed, the Court construes
9 this claim term as meaning “the surfaces of the first and second portions of the outer side
10 of the collapsible band form between them an angle that can be measured, according to a
11 circular arc that is centered at the vertex of the angle and radially farther from the
12 longitudinal axis of the outer barrel than the vertex of the angle, as more than 90 and less
13 than 180 degrees.”

14 **C. “outer” (Term No. 1) and “said wall of said outer barrel having at least**
15 **one collapsible band” (Term No. 7)**

16 With respect to disputed terms 1 and 7, the parties disagree both as to the meaning
17 of “outer” as well as whether “outer” is to be construed independently in the abstract or
18 whether it must be construed as part of the phrase “outer barrel.” *See* (Doc. 111 at 5; Doc.
19 115 at 9-10).

20 **1. Background**

21 Claim 1 of the ‘422 Patent specifies a “coaxial cable end connector comprising . . .
22 an *outer barrel* having a bore, a longitudinal axis, and a wall, said wall of *said outer*
23 *barrel* having” ‘422 Patent col.6 ll.31-34. (emphasis added). The claim language
24 also references an “outer barrel” in describing the position of the bend in the collapsible
25 band (described in the Court’s earlier discussion concerning disputed term 6), as well as
26 in the following context:

27 ⁷ The Court does not use the parties’ phrases “facing away” and “facing toward” to
28 define the disputed claim term because those phrases, although well-understood by the
parties in the context of the *Markman* hearing, are themselves ambiguous. Instead, the
Court mathematically and precisely defines the direction from which the angle is to be
measured (which corresponds to the phrase “facing away”).

1 . . . said collapsible band forming an annular rib projecting
2 inward toward said inner tube when said *outer barrel* is
3 axially compressed, to thereby fixedly grip the outer
4 conductor and the outer insulation of the coaxial cable
5 between said *outer barrel* and said inner tube, and
6 simultaneously frictionally fix said inner tube to the coaxial
7 cable and relative to said *outer barrel*, such that the central
8 conductor and the inner insulation are inserted into said inner
9 tube and the outer conductor and the outer insulation are
10 positioned intermediate said *outer barrel* and said inner tube,
11 prior to compression of said *outer barrel*.

12 ‘422 Patent col.7 ll.1-13 (emphasis added). Separately from the term “outer barrel,” the
13 term “outer” appears within the claims “outer conductor,” “outer insulation,” and “outer
14 side.” *See, e.g., id.* col.6 ll.30-31, 39.

15 2. Legal Standard

16 Words and phrases in a claim are given their ordinary and customary meaning to
17 one of ordinary skill in the art, *Dow Chem. Co. v. Sumitomo Chem. Co.*, 257 F.3d 1364,
18 1372 (Fed. Cir. 2001), but if a phrase “as a whole lacks a common meaning,” the Court
19 should not necessarily “disregard the established meanings of the individual words”
20 comprising that phrase. *See Altiris, Inc. v. Symantec Corp.*, 318 F.3d 1363, 1372 (Fed.
21 Cir. 2003). Rather, the phrase may consist of a term having a “common meaning in the
22 art” that is descriptively modified by the other terms in the phrase. *See id.* at 1372-73
23 (holding that although “boot selection flag” had no common meaning, “boot” and
24 “selection” were descriptive modifiers of “flag” and so the phrase had an ordinary and
25 customary meaning); *see also K-2 Corp. v. Salomon S.A.*, 191 F.3d 1356, 1363 (Fed. Cir.
26 1999) (determining the meaning of “permanently affixed” by first determining the
27 meaning of “permanently” and then applying this meaning as it modified that of
28 “affixed”).

29 3. Analysis

30 The parties disagree as to the appropriate scope of claim construction concerning
31 the terms “outer” and “outer barrel.” PCT argues that the only term to be interpreted is
32 “outer.” (Doc. 111 at 4). Under PCT’s proposed construction, the Court would define
33 “outer” as meaning “situated farther from the center,” and this meaning would attach to

1 every instance of the word “outer” in the claims, including “outer barrel.” Holland,
2 however, asks the Court to construe only the term “outer barrel.”⁸ (Doc. 113-1 at 12-13).
3 As part of Holland’s proposed construction of “outer barrel,” Holland offers a different
4 definition for the word “outer” within that phrase than the definition PCT offers in its
5 definition of “outer” as an independent adjective. Holland also offers a particular
6 construction of the term “barrel,” limiting the “barrel” to a tubular shell whose length is
7 greater than its diameter. (Doc. 113-1 at 13).

8 Because the parties differ in the scope of the terms to be construed, logic dictates a
9 particular sequence of analysis. First, the Court will determine the meaning of the term
10 “outer” as an adjective (as PCT proposes). This meaning will apply to all occurrences of
11 “outer” in the claims except when “outer” is used as part of the phrase “outer barrel.”
12 This meaning *may* also apply to “outer” as part of the phrase “outer barrel,” depending
13 upon the outcome of the Court’s next inquiry. Specifically, the Court next will consider
14 whether in the phrase “outer barrel” the term “outer” acts as a mere descriptive modifier
15 to the term “barrel.” *See Altiris*, 318 F.3d at 1372-73. If so, then the Court determines the
16 meaning of “outer barrel” by applying that meaning of “outer” as an independent
17 adjective describing the term “barrel.”⁹

25 ⁸ Although the Joint Claim Construction Statement indicates that Holland proposes
26 “located on the outside” as a construction for the term “outer,” (Doc. 107 at 2), Holland’s
27 briefs and oral arguments clearly restrict the scope of Holland’s proposed construction to
28 that of the term “outer barrel.” Thus, the Court addresses Holland’s arguments in its
analysis of the latter.

⁹ This necessarily requires the Court to consider Holland’s arguments concerning
the characteristics of a “barrel.”

1 But if the Court concludes that in the phrase “outer barrel” the term “outer” does
2 not act as a mere descriptive modifier to the term “barrel,” instead concluding that the
3 phrase “outer barrel” as a whole has an ordinary and customary meaning distinct from the
4 combined meanings of its two component words,¹⁰ then the Court must determine this
5 meaning of “outer barrel.”

6 **a. Outer**

7 PCT argues that “outer” means “situated farther from the center” because this is a
8 dictionary definition of the word “outer” and consistent with this definition, the patent
9 uses “outer” to describe the spatial relationship between structures. (Doc. 111 at 5). One
10 of PCT’s dictionaries defines “outer” as “situated farther out;” the other defines it as
11 “[f]arther than another from the center or middle.” (Doc. 111-4 at 9; Doc. 111-5 at 8).
12 Although claim construction should not begin with a dictionary definition, *Phillips*, 415
13 F.3d at 1321, PCT’s proposed construction of “outer” is consistent with use of “outer” in
14 the claims because each structure described in the claims as “outer” is also described
15 spatially with respect to a corresponding structure. Claim 1 describes each collapsible
16 band as having both an outer side and inner side, ‘422 Patent col.6 ll.37-40, describes “an
17 inner tube positioned at least in part within the bore of said outer barrel,” *id.* col.6 ll.65-
18 66, and describes an “outer conductor” and “outer insulation” as positioned between an
19 “inner tube” and the “outer barrel,” *id.* col.7 ll.4-13.

20 However, it does not follow that because PCT’s proposed construction is
21 consistent with the use of “outer” in the claims, the term “outer” needs construction. To
22 the contrary, each use of “outer” is in the context of the name of a particular structure in a
23 coaxial cable or connector and is described such that the ordinary meaning is readily
24 apparent to one of ordinary skill in the art. Therefore, the Court declines to construe the
25 term “outer” in its use as an adjective.¹¹ *See U.S. Surgical Corp.*, 103 F.3d at 1568

26 ¹⁰ As Holland clarified at the hearing, it contends that “outer barrel” is a name for
27 a particular structure and not a combination of “outer” plus “barrel.”

28 ¹¹ Although Holland confines its proposed construction of “outer” as “located on
the outside” to the specific context of the phrase “outer barrel,” (Doc. 111-3 at 12), the

1 (holding that claim construction “is not an obligatory exercise in redundancy”).

2 **b. Outer Barrel**

3 The Court now will determine whether the phrase “outer barrel” means the
4 adjective “outer” applied to the word “barrel” or has a particular meaning as a unified
5 phrase. PCT argues that the language of claim 1 requires “outer barrel” to be construed as
6 a barrel situated farther from the center than the “inner tube.” (Doc. 111 at 5). In support,
7 PCT points to the following language: “. . . said inner tube being coaxial with said outer
8 barrel, said collapsible band forming an annular rib projecting inward toward said inner
9 tube when said outer barrel is axially compressed.”¹² ‘422 Patent col.6 ll.66-67, col.7 ll.1-
10 3. PCT’s proposed construction of “outer,” when applied as a descriptive modifier to the
11 term “barrel,” is consistent with the usage of “outer barrel” in the claims.

12 However, Holland’s proposed construction of “outer barrel,” with respect to the
13 spatial position of the barrel, is also consistent with the language of the claims. Claim 1 is
14 fully consistent with the “outer barrel” being located on the exterior of the cable because
15 it positions the outer barrel as exterior to all other described structures. Furthermore, the
16 two dictionaries upon which PCT relies also each provide a definition of “outer”
17 supporting Holland’s contention that “outer barrel” means a barrel located on the outside.
18 *See* (Doc. 111-4 at 9 (“situated or belonging on the outside”); Doc. 111-5 at 8 (“Located
19 on the outside; external.”)). Holland’s proposed construction imports these definitions in
20 defining “outer barrel” as a particular, named external structure of a coaxial cable. (Doc.
21 113-1 at 12-13).

22 As the Federal Circuit has noted, “[t]he construction that stays true to the claim
23 language and most naturally aligns with the patent’s description of the invention will be,
24

25 Court notes that this construction would be inconsistent with the usage of “outer” as used
26 in, for example, “outer conductor,” because claim 1 describes “the outer conductor and
27 the outer insulation are positioned intermediate said outer barrel and said inner tube.”
‘422 Patent col.7 ll.11-12. Thus, the outer conductor cannot be located on the outside of
the cable after it has been inserted into the connector.

28 ¹² The collapsible band is part of the wall of the outer barrel. ‘422 Patent col.6
ll.34-35.

1 in the end, the correct construction.” *Renishaw PLC v. Marposs Societa’ per Azioni*, 158
2 F.3d 1243, 1250 (Fed. Cir. 1998). The Court turns to the specification to determine
3 whether the patentee used the term “outer barrel” in a manner inconsistent with either of
4 these definitions. *See Texas Digital*, 308 F.3d at 1203; *Vitronics*, 90 F.3d at 1582.

5 The specification explains that “[t]he coaxial cable connectors in common use
6 employ radial compression crimping which does not apply compressive force evenly to
7 the *outer tubular jacket of the connector*, thus leaving channels for the infiltration of
8 moisture into the coaxial cable connection.” ‘422 Patent col.1 ll.16-21 (emphasis added).
9 It distinguishes the ‘422 Patent from the prior art on the grounds that “none of the [prior]
10 inventions and patents show the shallow V-shaped cross section of the collapsible
11 portions of the outer barrel of the connector of the present invention.” *Id.* col.1 ll.48-51.

12 The preferred embodiment teaches that “the finally assembled connector will have
13 a smooth outer surface on the outer barrel, thus eliminating any notches or depressions
14 where the connector can catch on other objects as the cable is routed through tight
15 quarters.” *Id.* col.4 ll.23-27. In the preferred embodiment, the coaxial cable is inserted
16 into the outer barrel such that the outer barrel is immediately exterior to the outer
17 insulation of the coaxial cable. *Id.* col.5 ll.57-61, fig.3. This is necessary for the
18 collapsible bands of the outer barrel to form annular ribs when the outer barrel is axially
19 compressed such that the ribs “fixedly grip the outer conductor and the outer insulation
20 between the outer barrel and the inner tube, thus fixing the connector to the coaxial
21 cable.” *Id.* col.6 ll.2-5. The language describing this gripping of the outer conductor and
22 outer insulation parallels the language of claim 1. *See id.* col.7 ll.1-6.

23 PCT makes two arguments regarding the relationship between the specification
24 and the claims. First, PCT argues that Holland’s proposed construction of “outer barrel”
25 is inconsistent with the specification. Second, PCT argues that even if Holland’s
26 interpretation of the specification were correct, Holland’s proposed construction
27 improperly imports limitations from the specification into the claims. (Doc. 111 at 7;
28 Doc. 114 at 2-3).

1 PCT argues that Holland’s proposed construction of “outer barrel” is inconsistent
2 with the specification because none of the structures described in the specification using
3 the word “outer” are located on the exterior of the cable assembly.¹³ (Doc. 111 at 7; Doc.
4 114 at 3). But PCT confuses the scope of Holland’s proposed construction; unlike PCT,
5 Holland proposes a construction of only the term “outer barrel.” Thus to the extent that
6 PCT’s argument is predicated upon structures in the specification involving the word
7 “outer” but not the “outer barrel,” it is without merit. PCT also points out that in the
8 preferred embodiment the outer barrel is not “located entirely” on the exterior of the
9 “assembled connector.” (Doc. 111 at 7). But PCT assumes that, under Holland’s
10 proposed construction, the structure to which the outer barrel must be “outside” or
11 “exterior” is the entire assembled connector. No such assumption is evident from the
12 language of the specification.

13 PCT additionally argues, (Doc. 111 at 6; Doc. 114 at 3-4), that Holland’s proposed
14 construction violates the canon that “the same terms appearing in different portions of the
15 claims should be given the same meaning unless it is clear from the specification and
16 prosecution history that the terms have different meanings at different portions of the
17 claims.” *Fin Control Sys. Pty, Ltd. v. OAM, Inc.*, 265 F.3d 1311, 1318 (Fed. Cir. 2010).
18 Specifically, PCT asserts that Holland applies the term “outer” inconsistently because the
19 patent consistently uses “outer” to describe structures situated farther from the center but
20 Holland’s proposed construction of “outer barrel” positions the outer barrel on the
21 exterior of the cable. (Doc. 111 at 6; Doc. 114 at 4). PCT’s argument fails for two
22 reasons; first, it assumes that the Court adopts PCT’s proposed construction of “outer,”
23 which the Court declines to do. Second, to the extent that Holland’s proposed
24 construction of “outer barrel” defines “outer” in a general sense as “located on the
25 outside,” PCT has acknowledged that such a construction of “outer” “simply amounts to
26 a less clear phrasing of PCT’s proposed construction.” (Doc. 111 at 8). Any structure

27
28 ¹³ The Court uses the term “cable assembly” to reflect an assembled cable and
connector where the connector has been affixed to the cable.

1 situated farther from the center can also be described as being exterior to another
2 structure. Holland’s proposed construction of “outer barrel” is not inconsistent with the
3 specification.

4 The closer question is whether, as PCT contends, Holland’s proposed construction
5 improperly imports limitations from the specification into the claims. “To avoid
6 importing limitations from the specification into the claims, it is important to keep in
7 mind that the purposes of the specification are to teach and enable those of skill in the art
8 to make and use the invention and to provide a best mode for doing so.” *Phillips*, 415
9 F.3d at 1323.

10 One of the best ways to teach a person of ordinary skill in the
11 art how to make and use the invention is to provide an
12 example of how to practice the invention in a particular case.
13 Much of the time, upon reading the specification in that
14 context, it will become clear whether the patentee is setting
15 out specific examples of the invention to accomplish those
16 goals, or whether the patentee instead intends for the claims
17 and the embodiments in the specification to be strictly
18 coextensive. The manner in which the patentee uses a term
19 within the specification and claims usually will make the
20 distinction apparent.

21 *Id.* (internal citations omitted).

22 In this case, the claims and the preferred embodiment are coextensive as to the
23 position of the outer barrel vis-à-vis the outer conductor of the cable. As the specification
24 teaches, the advantage of the invention is that it prevents the infiltration of moisture
25 through the “outer tubular jacket of the connector.” ‘422 Patent col.1 ll.18-19. The
26 language of both claim 1 and the specification regarding the mechanism by which the
27 collapsible bands grip the outer barrel to the outer conductor and outer insulation requires
28 the outer barrel to be immediately exterior to the outer insulation of the coaxial cable.
This is not a limitation of the specification but rather an essential factual predicate for the
intended operation of the invention.

The Court rejects, however, Holland’s contention that because the specification
depicts the outer barrel as the “outside or external shell of the connector” the outer barrel

1 must be the outermost structure on the cable assembly.¹⁴ See (Doc. 113-1 at 14). By
2 focusing solely on depictions in the specification, Holland improperly seeks to construe
3 the claims as limited to the single embodiment. See *Phillips*, 415 F.3d at 1323. Similarly,
4 Holland errs in emphasizing the specification’s teaching that the “finally assembled
5 connector will have a smooth outer surface on the outer barrel” so as not to “catch on
6 other objects as the cable is routed through tight quarters.” ‘422 Patent col.4 ll.23-27;
7 (Doc. 113-1 at 13-14). Unlike the function of the collapsible bands to grip the outer
8 conductor of the cable when the outer barrel is axially compressed, the claims do not
9 contain a snag-free connector within their scope. The Court concludes that this teaching
10 is therefore an example of the benefits of the preferred embodiment and not a limitation
11 upon the claims.

12 Holland’s proposed construction of “outer barrel” improperly imports limitations
13 from the specification into the claims because Holland’s construction requires the outer
14 barrel to be the outermost structure of the entire cable assembly. But nothing in the
15 claims limits the placement of the outer barrel to the outermost structure; the only
16 limitation is the practical requirement that the outer barrel be immediately exterior to the
17 outer insulation so that the collapsible bands can grip the outer insulation and outer
18 conductor when the outer barrel is axially compressed.

19 For these reasons, focusing on the “meaning of claim terms within the context of
20 the patent,” *Phillips*, 415 F.3d at 1321, the Court concludes that the “outer barrel” is
21 located immediately exterior to the outer insulation of the cable when the cable is inserted
22 into the connector.¹⁵

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24

25 ¹⁴ PCT points out that the outer barrel is not located entirely on the exterior of the
26 connector because it is located partially inside the “female receptacle” and an o-ring.
(Doc. 114 at 3). This distinction is irrelevant to the Court’s analysis.

27 ¹⁵ Because the Court rejects Holland’s proposed construction and instead
28 concludes that the outer barrel is not necessarily located on the outside of the cable
assembly, the Court need not address PCT’s argument that Holland’s proposed
construction improperly equates “outer” with “outside.” See (Doc. 114 at 4).

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c. Shape of the Barrel

As part of Holland’s proposed construction of “outer barrel,” Holland argues that the outer barrel must have a length that is greater than its diameter. (Doc. 113-1 at 13; Doc. 115 at 9). Holland notes that the preferred embodiment “consistently depicts [the outer barrel] as being ‘tubular,’ with a length greater than its diameter.” (Doc. 113-1 at 14). But the language of the claims does not limit the relative dimensions of the outer barrel’s length and diameter. Nor does the written description of the preferred embodiment specify the relative dimensions of the length and diameter of the outer barrel. Although Holland is correct that figures 1 through 4 of the specification depict an outer barrel greater in its length than its diameter, it is improper to derive a claim limitation from these depictions. *See Phillips*, 415 F.3d at 1323.

Holland quotes a dictionary definition of “barrel” as a “round vessel of ‘greater length than breadth.’” (Doc. 115 at 9). But Holland fails to recite the entire definition, which describes the kind of barrel that one might use to store wine: “a round bulging vessel of greater length than breadth that is usu. made of staves bound with hoops and has flat ends of equal diameter.” (Doc. 111-4 at 4). The ‘422 Patent does not concern staved vessels, and the Court rejects Holland’s proposed construction.

Because the Court declines to construe “barrel” as having particular relative dimensions, PCT’s proposed construction as “drum or cylindrical part” is unnecessary. *See* (Doc. 111 at 13-14). Accordingly, the Court rejects that construction as well and concludes that the term “outer barrel” does not need construction with respect to the relative dimensions of the length and diameter of the barrel.

d. Conclusion

The parties jointly proposed that the Court construe the entire phrase “said wall of said outer barrel having at least one collapsible band” despite the dispute centering on the meaning of “outer barrel.” *See* (Doc. 107 at 4-5). The remainder of the claim term needs no construction. The Court construes only the term “outer barrel.” “Outer barrel” means “a barrel that is located immediately exterior to the outer insulation of the coaxial cable

1 when the coaxial cable is inserted into the barrel and prior to compression of the barrel.”

2 **D. “said collapsible band having an outer side facing away from the**
3 **longitudinal axis of said outer barrel” (Term No. 3) and “said**
4 **collapsible band having an inner side facing toward the longitudinal**
5 **axis of said outer barrel” (Term No. 5)**

6 Holland’s proposed constructions for these claim terms are dependent upon the
7 construction of disputed terms 4 and 6 because Holland seeks to construe these terms as
8 explicitly defining the direction from which the obtuse angles in terms 4 and 6 are
9 measured. (Doc. 107 at 4). Because the Court construes term 6 as requiring the obtuse
10 angle to be measured facing away from the longitudinal axis of the outer barrel and term
11 4 as requiring the obtuse angle to be measured facing away from the longitudinal axis of
12 the outer barrel, the Court declines to adopt Holland’s proposed constructions. Moreover,
13 because terms 3 and 5 clearly define the basic structure of the collapsible band (namely
14 that it has two sides, with the inner side radially closer to the longitudinal axis of the
15 outer barrel than the outer side is to the same axis), the Court finds that these terms do not
16 need construction. *See U.S. Surgical Corp.*, 103 F.3d at 1568 (holding that claim
17 construction “is not an obligatory exercise in redundancy”).

18 **E. “at least one collapsible band extending between a first non-collapsible**
19 **wall portion and a second non-collapsible wall portion” (Term No. 8)**

20 Holland argues that the specification provides an implied definition of “non-
21 collapsible” as non-deformable; thus, the proper construction of this term is that the “non-
22 collapsible wall portion[s]” do not deform as the outer barrel is axially compressed.¹⁶
23 (Doc. 113-1 at 15; Doc. 115 at 10). The specification teaches that “[t]he collapsible band
24 extends between a first non-collapsible wall portion and a second non-collapsible wall
25 portion. As the name implies, the non-collapsible wall portions are made relatively thick
26 such that they will not deform as the outer barrel is being compressed.” ‘422 Patent col.3
27 ll.10-15.

28 ¹⁶ Holland initially argues in its brief that the specification “expressly defines” the
term “non-collapsible” but then argues that the specification defines the term “by
implication.” (Doc. 113-1 at 14-15). Because the specification does not use language
such as “means,” “is defined as,” or the like, it cannot expressly define the term. The
Court construes Holland’s argument as concerning an implied definition.

1 But the specification does not *clearly* define “non-collapsible” in a manner
2 inconsistent with its “plain and ordinary meaning.” *See Thorner*, 669 F.3d at 1365. “It is
3 not enough for a patentee to simply disclose a single embodiment or use a word in the
4 same manner in all embodiments[;] the patentee must ‘clearly express an intent’ to
5 redefine the term.” *Id.* (quoting *Helmsderfer v. Bobrick Washroom Equip., Inc.*, 527 F.3d
6 1379, 1381 (Fed. Cir. 2008)).

7 The specification’s language does not rise to the level of clearly defining “non-
8 collapsible” as non-deformable because it does not purport to equate “non-collapsible”
9 with “non-deformable;” instead, it states that the term “non-collapsible” implies a
10 particular *characteristic* of the wall portions: that they are “made relatively thick such
11 that they will not deform as the outer barrel is being compressed.” ‘422 Patent col.3 ll.12-
12 15. Thus, the Court rejects Holland’s contention that the specification acts as a dictionary
13 with respect to the term “non-collapsible.” *See* (Doc. 115 at 10).

14 PCT argues only alternatively for a construction of “non-collapsible” as “non-
15 foldable” (and “collapsible” as “foldable”). (Doc. 111 at 14; Doc. 114 at 13). The Court
16 concludes that the ordinary and customary meaning of “non-collapsible” and
17 “collapsible” to one of ordinary skill in the art is obvious, and declines to construe these
18 terms.¹⁷ *See U.S. Surgical Corp.*, 103 F.3d at 1568.

19 **F. “essentially parallels” (Term No. 10)**

20 Claim 11 of the ‘422 Patent states that “. . . said inner side of said collapsible band
21 essentially parallels said outer side of said collapsible band. . . .” ‘422 Patent col.9 ll.35-
22 36. The parties do not dispute the meaning of the word “parallels.” (Doc. 113-1 at 15;
23 Doc. 111 at 16). Rather, Holland proposes the Court construe this term as meaning
24 “parallel but for manufacturing tolerances, contending that the specification defines
25 “essentially” as “permitting error tolerances inherent in the fabrication of any part, but as
26 otherwise leaving the modified term with its ordinary meaning.” (Doc. 113-1 at 16).

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28 ¹⁷ Accordingly, the Court need not address PCT’s arguments that the plain meaning of “collapsible” is “foldable” and of “non-collapsible” is “non-foldable.” *See* (Doc. 111 at 14; Doc. 114 at 13-14).

1 The specification states that the preferred embodiment has a collapsible band
2 having “an essentially constant thickness.” It continues:

3 The terms “essentially constant” as used herein is [sic]
4 intended to allow for slight thickening of the collapsible band
5 at the bend and at the fillets at the attachment of the
6 collapsible band to the non-collapsible wall portions. These
7 terms also take into account the error tolerances inherent in
8 the fabrication of any part.

9 ‘422 Patent col.3 ll.41-48. The specification also uses the term “essentially” in teaching
10 that a particular surface has “an essentially constant radius of curvature” and explains that
11 “[a]s before, the terms ‘essentially constant radius of curvature’ are intended to take into
12 account variations due to the error tolerances inherent in the fabrication of any part.” *Id.*
13 col.4 ll.45, 48-51.

14 From this language, Holland argues that the specification expressly defines
15 “essentially constant” and therefore defines by implication the term “essentially.” *See*
16 (Doc. 113-1 at 15-16; Doc. 115 at 11). Holland’s argument fails because the
17 specification’s definition of “essentially constant” is not limited to the variation caused
18 by manufacturing tolerances. The specification defines “essentially constant” as
19 “allow[ing] for slight thickening of the collapsible band” and states that “[t]hese terms
20 *also take into account* the error tolerances inherent in the fabrication of any part.” ‘422
21 Patent col.3 ll.43-44, 46-48 (emphasis added). The use of “also” in the definition clearly
22 specifies that manufacturing tolerances are one cause, but not the sole cause, of variation
23 in the thickness.

24 Similarly, the second instance of “essentially constant” in the specification (in the
25 context of “essentially constant radius of curvature”) does not define manufacturing
26 tolerances as the sole cause of variation in the radius of curvature; instead, the
27 specification states that “essentially constant radius of curvature” is “intended to take into
28 account” manufacturing tolerances. Unlike the first instance of “essentially constant,” this
language omits the word “also.” Thus, the specification does not explicitly define
whether manufacturing tolerances are the sole cause of variation in the “essentially

1 constant radius” or whether they are merely one of several causes “take[n] into account.”
2 But under either interpretation, there is no *clear* definition of “essentially constant” as
3 having manufacturing tolerances as the sole cause of variation.¹⁸ Consequently, the
4 specification does not define the term “essentially” as only permitting variation due to
5 manufacturing tolerances.

6 Because PCT did not clearly express an intent to redefine the term “essentially” as
7 limited to variation due to manufacturing tolerances, *see Thorner*, 669 F.3d at 1365, the
8 Court determines the term’s ordinary and customary meaning as it is used in the claim.
9 PCT argues that the plain and ordinary meaning of essentially is “in essence, but not
10 necessarily exactly.” (Doc. 111 at 16). This definition comports with the Federal Circuit’s
11 conclusion that “words of approximation, such as ‘generally’ and ‘substantially,’ are
12 descriptive terms ‘commonly used in patent claims to avoid a strict numerical boundary
13 to the specified parameter.’” *Anchor Wall Sys., Inc. v. Rockwood Retaining Walls, Inc.*,
14 340 F.3d 1298, 1310-11 (Fed. Cir. 2003). In *Anchor Wall*, the court construed the phrase
15 “generally parallel” as “envision[ing] some amount of deviation from exactly parallel”
16 because “the claim language itself expressly ties the adverb ‘generally’ to the adjective
17 ‘parallel.’” *Id.* at 1311 (“It is the claim limitation, as a whole, that must be considered in
18 claim construction.”).

19 Similarly to the claim at issue in *Anchor Wall*, the language of claim 11 in the
20 ‘422 Patent expressly ties an adverb to the verb “parallels.” Holland contends, however,
21 that “essentially” differs in meaning from “substantially” because “essentially” describes
22 the necessity of a feature of the claimed invention whereas “substantially” describes a
23 deviation from parallelism. *See* (Doc. 115 at 11). Holland defines “essentially” as

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25 ¹⁸ PCT argues that the phrase “[a]s before” links the second instance of
26 “essentially constant” to the first such that the specification clearly defines “essentially
27 constant” as including causes of variation other than manufacturing tolerances. (Doc. 114
28 at 17). Because it is ambiguous whether “as before” refers to both the “slight thickening”
and the manufacturing tolerances described in the first instance of “essentially constant”
or whether “as before” merely refers to the “tak[ing] into account” of manufacturing
tolerances described in the first instance, the words “as before” do not aid the Court in its
analysis.

1 meaning that “parallelism is a basic, indispensable, and necessary feature of the claimed
2 invention.” (*Id.*) The Court rejects Holland’s definition because it would render the word
3 “essentially” superfluous; the word “parallels” alone is sufficient to require parallelism as
4 a necessary feature of the claimed invention. The term “essentially parallels” must have a
5 different meaning than that of the term “parallels.” *See Anchor Wall Sys.*, 340 F.3d at
6 1310 (rejecting the district court’s interpretation of “generally parallel” as “limited to the
7 ordinary meaning of ‘parallel’”).

8 Although the specification does not define “essentially” as limited to variations
9 due to only manufacturing tolerances, it clarifies which of the several ordinary meanings
10 of “essentially” is most consistent with its use in the claim. One definition of
11 “essentially” is “of, relating to, or constituting essence.” (Doc. 111-4 at 7). In this regard,
12 the adverb “essentially” requires that the subject be parallel at its essence. One definition
13 of “essence” is “the properties or attributes by means of which something can be placed
14 in its proper class or identified as being what it is.” (*Id.*) Thus, something that “essentially
15 parallels” is at its core parallel to another structure and varies from that ideal form of
16 parallelism, but does not vary sufficiently such that it is no longer identifiable as parallel.
17 In this regard, “essentially parallels” is a synonym of “substantially parallels” and
18 “generally parallels.” The Federal Circuit has construed “generally parallel” as
19 “envision[ing] some amount of deviation from exactly parallel.” *See Anchor Wall Sys.*,
20 340 F.3d at 1311; *see also Liquid Dynamics Corp. v. Vaughan Co.*, 355 F.3d 1361, 1368
21 (Fed. Cir. 2004). (“The term ‘substantial’ is a meaningful modifier implying
22 ‘approximate,’ rather than ‘perfect’”); *cf. Playtex Products, Inc. v. Procter & Gamble*
23 *Co.*, 400 F.3d 901, 908 (Fed. Cir. 2005) (reasoning that “substantially flattened surfaces”
24 could not mean “flat within a geometric manufacturing tolerance”).

25 Accordingly, the Court construes “essentially parallels” as “parallels but with
26 some deviation.”

27 **G. “bore” (Term No. 2) and “extent” (Term No. 9)**

28 Both parties agree to constructions of “bore” as “the hollow of a barrel” and

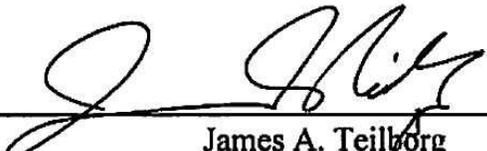
1 “extent” as “length,” respectively. (Doc. 107 at 1, 6). Because claim construction is a
2 question of law, the Court is not bound by the parties’ agreed-upon construction and has
3 an independent duty to construe these terms. *See Markman*, 517 U.S. at 372. Having
4 considered the claim language, the specification, the prosecution history, and extrinsic
5 evidence, the Court concludes that the parties’ proposed constructions are correct. The
6 Court construes “bore” as meaning “the hollow of a barrel” and construes “extent” as
7 meaning “length.”

8 **IV. Conclusion**

9 For the foregoing reasons,

10 **IT IS ORDERED** that the claims are construed under *Markman v. Westview*
11 *Instruments, Inc.*, 517 U.S. 370 (1996) as specified above.

12 Dated this 21st day of February, 2014.

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17 _____
18 James A. Teilborg
19 Senior United States District Judge
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