

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

FITBIT, INC.,
Petitioner,

v.

ALIPHCOM, INC. D/B/A JAWBONE,
Patent Owner.

Case IPR2016-00607
Patent 8,529,811 B2

Before CHRISTOPHER L. CRUMBLEY, JON B. TORNQUIST, and
JEFFREY W. ABRAHAM, *Administrative Patent Judges*.

CRUMBLEY, *Administrative Patent Judge*.

FINAL WRITTEN DECISION
35 U.S.C. § 318 and 37 C.F.R. § 42.73

I. INTRODUCTION

In this *inter partes* review trial, instituted pursuant to 35 U.S.C. § 314, Petitioner Fitbit, Inc., challenges the patentability of claims 16–26 of U.S. Patent No. 8,529,811 B2 (Ex. 1001, “the ’811 patent”), owned by AliphCom, Inc. d/b/a Jawbone (“Jawbone”).

We have jurisdiction under 35 U.S.C. § 6(b). This Final Written Decision, issued pursuant to 35 U.S.C. § 318(a), addresses issues and arguments raised during trial. For the reasons discussed below, we determine that Fitbit has proven, by a preponderance of the evidence, that claims 16–26 of the ’811 patent are unpatentable.

A. Procedural History

On February 10, 2016, Fitbit requested an *inter partes* review of claims 1–26 of the ’811 patent. Paper 2, “Pet.” Jawbone filed a Patent Owner Preliminary Response. Paper 10, “Prelim. Resp.” In a Decision on Institution of *Inter Partes* Review (Paper 14, “Dec. on Inst.”), we instituted trial as to claims 16–26 on the following grounds of unpatentability:

1. Whether claims 16–19, 23, and 26 are unpatentable under 35 U.S.C. § 102(b) as having been anticipated by Lo;¹
2. Whether claims 20–22 are unpatentable under 35 U.S.C. § 103(a) as having been obvious over Lo and Huang;²

¹ U.S. Patent Application Publication No. 2006/0264756 A1 to Lo et al., published Nov. 23, 2006 (Ex. 1003).

² U.S. Patent Application Publication No. 2006/0110537 A1 to Huang et al., published May 25, 2006 (Ex. 1007).

3. Whether claim 24 is unpatentable under 35 U.S.C. § 103(a) as having been obvious over Lo and the Handbook of Thermoplastic Elastomers;³ and
4. Whether claim 25 is unpatentable under 35 U.S.C. § 103(a) as having been obvious over Lo and Toyoda.⁴

Dec. on Inst. 26.

Fitbit filed a Request for Rehearing of our decision denying institution of trial as to claims 1–15 (Paper 16), which we denied (Paper 18).

Jawbone filed a Patent Owner Response (Paper 21, “PO Resp.”), and Fitbit filed a Reply (Paper 29, “Pet. Reply”).

Fitbit supported its Petition with the Declaration of Dr. Darran Cairns. Ex. 1002. Jawbone noticed the deposition of Dr. Cairns (Paper 17), but did not submit the transcript of any deposition.

With its Response, Jawbone submitted the Declarations of Darrin J. Young, Ph.D. Ex. 2001. Fitbit cross-examined Dr. Young via deposition, and submitted the transcript. Ex. 1029.

Neither party filed Observations on Cross-Examination or Motions to Exclude Evidence.

Oral hearing was requested by Jawbone (Paper 31), and argument before the Board was held May 11, 2017. A transcript of the oral hearing is included in the record. Paper 36, “Tr.”

³ Jiri G. Drobny, Handbook of Thermoplastic Elastomers (1st ed. 2007) (Ex. 1006).

⁴ U.S. Patent Application Publication No. 2010/0178834 A1 to Toyoda et al., published July 15, 2010 (Ex. 1008).

B. The '811 Patent

The '811 patent, titled “Component Protective Overmolding Using Protective External Coatings,” issued September 10, 2013, from U.S. Patent Application No. 13/427,839, filed on March 22, 2012. Ex. 1001, (54), (45), (21), (22). The patent describes the formation of component protective overmoldings including a protective material and one or more moldings. *Id.* at (57). The moldings and protective material are applied over one or more elements, including a sensor, coupled to a framework, the framework configured to be wearable. *Id.* at 8:13–31. At least one inner molding is formed over the elements, protective material, and framework. *Id.* An outer molding is formed over the inner molding, the framework, the elements, and the protective material. *Id.* at 8:32–34. The coatings may be waterproof or water-resistant, and may have certain properties, such as a hydrophobic, an oleophobic, or an anti-bacterial property. *Id.* at 8:52–58. The molding may be made from a medical-grade thermoplastic elastomer. *Id.* at 8:46–51. The '811 patent also discloses a method of making the moldings, wherein if a molding is defective, it may be removed and re-applied. *Id.* at 10:19–38.

C. Illustrative Claim

Of the challenged claims, claim 16 is independent, and is reproduced below:

16. A method, comprising:
selectively applying at least one protective material substantially
over one or more of a plurality of elements coupled with a

framework for a wearable device configured to be worn by a user, the plurality of elements including at least a sensor;

forming one or more inner moldings substantially over a subset or all of the framework, the at least one protective material and the plurality of elements, after the selectively applying, at least one of the one or more inner moldings having a protective property; and

forming an outer molding of the wearable device that covers all or substantially all of the one or more inner moldings, the outer molding configured to be positioned in contact with the user.

Ex. 1001, 14:23–38.

II. ANALYSIS

A. *Claim Construction*

In an *inter partes* review, we construe claims by applying the broadest reasonable interpretation in light of the specification. 37 C.F.R. § 42.100(b); *see also In re Cuozzo Speed Techs., LLC*, 136 S. Ct. 2131 (2016). Under the broadest reasonable interpretation standard, and absent any special definitions, claim terms are given their ordinary and customary meaning, as would be understood by one of ordinary skill in the art in the context of the entire disclosure. *In re Translogic Tech. Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007). Any special definitions for claim terms or phrases must be set forth with reasonable clarity, deliberateness, and precision. *In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994).

In our Decision on Institution, we noted that neither party asked that we construe any term used in the challenged claims; upon reviewing the parties' contentions and the prior art, however, we determined that *covers all or substantially all* required interpretation. Dec. on Inst. 6–10. Because

neither party had proffered an explicit construction, but yet seemed to apply different understandings of the claim phrase, we were required to examine how each party analyzed the prior art and divine the implicit construction adopted by the parties at the institution stage.

As discussed in our Decision on Institution, Fitbit alleged in its Petition that layer 1490 of Lo's Figure 14C, highlighted blue below, covers all or substantially all of plastic housing 1474, highlighted red. Pet. 23.

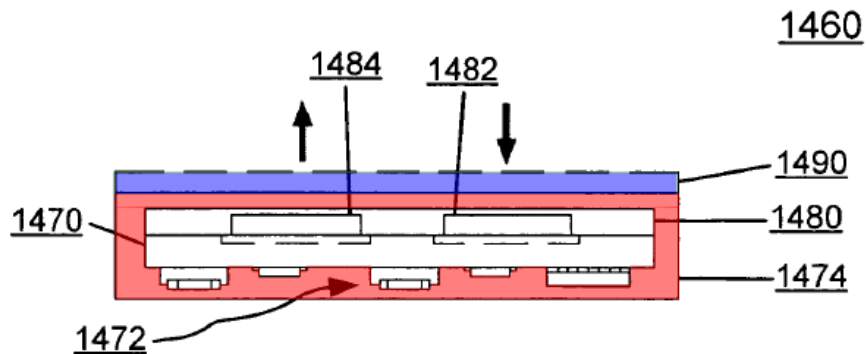


Figure 14C

Figure 14C of Lo depicts sealed ultrasonic monitor 1460 having printed circuit board 1470, plastic housing 1474, protective layer 1480, and transmission medium 1490. In response, Jawbone argued that “[i]t is not clear that a person of ordinary skill in the art would consider covering only one of six sides as ‘cover[ing] all or substantially all.’” Prelim. Resp. 7. From this, we determined that Jawbone’s claim construction position was that for this claim term to be met, the outer molding should cover all exposed sides of the inner molding. *See id.*

We then analyzed these claim constructions in view of the claim language, the specification, and the common usage of the term “cover.”

Dec. on Inst. 8–10. We noted that the written description of the ’811 patent does not use the phrase *covers all or substantially all*, but that various passages suggested that something less than complete encapsulation by the outer molding was consistent with the claim term. *Id.* We also reviewed dictionary definitions and found them to support both constructions. *Id.* Based on the lack of briefing from the parties on this issue, and the inconclusive nature of the record at the time, we concluded that there were two reasonable interpretations of the claim phrase, and adopted the broader of the two—Fitbit’s—under our broadest reasonable interpretation standard. *Id.* at 10. We noted, however, that this was a preliminary construction and encouraged further briefing by the parties on the issue of claim construction.

During the instituted trial, both parties accepted our invitation to further explore claim construction, and the merits briefing largely focused on the proper interpretation of *covers all or substantially all*. We summarize the parties’ positions below.

1. Fitbit’s Arguments

During trial, Fitbit adopted the preliminary construction set forth in our Decision on Institution, which interpreted “covers” to mean “on top of.” Pet. Reply 1. Fitbit, therefore, contends that an outer molding that covers all or substantially all of an inner molding is one that is “partially or entirely on top of” the inner molding. *Id.* at 2.

Fitbit’s claim construction analysis, however, spends little time discussing the meaning of “covers,” stating only that our preliminary construction of “on top of” is consistent with the phrase’s ordinary meaning. *Id.* at 4. Instead, Fitbit focuses heavily on the modifier “substantially” in the

claim phrase. *Id.* at 6 (“the key term in ‘covers all or substantially all’ is ‘substantially,’ not ‘covers’”). According to Fitbit, “regardless of the ordinary meaning of ‘cover,’ the claims expressly recite the disjunctive condition ‘or substantially all,’ and “thus encompass an outer molding that covers *less than all* of the inner moldings.” *Id.* at 5.

As a result of this position, Fitbit devotes most of its analysis to the meaning of “substantially” as used the claims. *Id.* at 2–6. Fitbit notes the specification’s use of “i.e., partially or entirely” after one recitation of the term “substantially,” and contends this is evidence the inventor defined “substantially” as meaning “partially or entirely.” *Id.* at 3. On this point, there does not appear to be much dispute, as Jawbone’s counsel conceded at oral argument that the term requires coverage of “basically” or “essentially all.” Tr. 15:19–25; *see also id.* at 16:14–17 (language was intended to cover an insubstantial difference in coverage). We, therefore, find Fitbit’s arguments that Jawbone—in construing “covers” as “encloses or encases”—has read “substantially all” out of the claim to be without merit. *See* Pet. Reply 7–9. Jawbone agrees that the claims permit less than complete encapsulation by the outer molding. Tr. 18:7–9.

At base, Fitbit’s contention is that, even if we agree with their opponent that “covers” means “encases,” the inclusion of “substantially all” means the claim encompasses a molding that encases only one side of the layer below it. *Id.* at 8 (COUNSEL: “Lo would teach [the claim limitation] because it would be *encasing one side of it*. So that would be a partial enclosure or a *partial encasement*.”) (emphasis added). We disagree. “Substantially,” as used in the claims, is a term of degree, and permits a

molding that covers *somewhat* less than all of the underlying layer to fall within the claim. But a term of degree cannot fundamentally change what it means to “cover,” or read the requirement out of the claim entirely. In other words, if “covers all” requires complete encasement, as Jawbone contends, then “covers substantially all” permits slightly less than complete encasement. But it still requires encasement. There is no evidence in the record, besides counsel’s unsupported statement at the hearing, that a person of ordinary skill in the art would understand a molding covering only one side of an inner layer to be encasement, even “partial encasement.”

For these reasons, despite Fitbit’s contentions, the construction of “substantially all” does not resolve the claim construction dispute before us. We must still address the broadest reasonable interpretation of “covers” in the context of the ’811 patent.

2. Jawbone’s Arguments

In its Patent Owner Response, Jawbone maintains a claim construction position consistent with the one implicitly expressed in its Preliminary Response, that an outer molding that covers all or substantially all of an inner molding is one that “enclos[es] or encas[es]” the inner molding. PO Resp. 8. As noted above, at oral argument Jawbone’s counsel conceded that “encloses or encases all or substantially all” would also be a reasonable construction. Tr. 18:7–9.

Jawbone begins by noting that the broadest reasonable interpretation of a claim term cannot be arrived at by simply choosing the broadest dictionary definition of that term. PO Resp. 5 (citing *PPC Broadband, Inc. v. Corning Optical Commc’ns RF, LLC*, 815 F.3d 747, 752 (Fed. Cir. 2016)

(“The fact that [a term] has multiple dictionary meanings does not mean that all of these meanings are reasonable interpretations in light of th[e] specification.”)). Rather, the Board must construe the terms in light of the context of the claims and specification, and only interpretations that are reasonable in that context may be adopted. *See PPC Broadband*, 815 F.3d at 755. Jawbone argues that “on top of,” the construction advanced by Fitbit, ignores the context of the ’811 patent and is therefore unreasonable. PO Resp. 8–13.

Jawbone asserts that construing “covers all or substantially all” in isolation would be in error, and the Board must look to the longer phrase “forming an outer molding of the wearable device that covers all or substantially all of the one or more inner moldings,” in order to take into account the context of moldings and a wearable electronic device. *Id.* at 8–9. Relying on the testimony of Dr. Young, Jawbone asserts that a person of ordinary skill in the art would understand that the components of a wearable electronic device would benefit from the protective aspects of an encasing molding. *Id.* (citing Ex. 2001 ¶ 26). This concept—that the outer molding provides *protection* to the inner moldings and components—is fundamental to the testimony of Dr. Young, and all of Jawbone’s claim construction arguments. For example, when advocating against Fitbit’s proffered construction, Dr. Young states that “a person of ordinary skill would understand that if the outer molding was merely positioned on top of one side of the underlying layer, then the outer molding would fail to fulfill its protective purpose as described in the specification.” Ex. 2001 ¶ 34.

Counsel for Jawbone confirmed the link between this alleged protective property and its construction at oral argument:

JUDGE CRUMBLEY: Is it your position that the outer molding of claim 16 has to impart some sort of protective property?

MR. BROWN: I believe that's the purpose of the outer molding. So that is why the construction of encase or enclose would necessarily provide some sort of protection. But that is the stated purpose throughout the specification.

Tr. 17:18–24.

The problem with Dr. Young's testimony—and, in turn, Jawbone's position—is that it rests on a flawed premise. Contrary to Dr. Young's statements, the '811 patent does not state conclusively that the purpose of the outer molding recited in claim 16 is protection of the inner molding. The specification states that the outer molding “*may also* be configured to completely enclose or encase an underlying item in order to protect the inner molding, the protective layer, and any elements from damage.” Ex. 1001, 7:29–32 (emphasis added). But the specification also states that the outer molding may be used to provide “surface ornamentation” to an object. *Id.* at 6:6–8. Furthermore, the specification acknowledges that “protective” is used in two contexts in the patent: providing protection to the structure to which it is applied, but also “a protective property may be a characteristic of a coating that, when applied, protects a *wearer or users*” (for example, an anti-bacterial property). *Id.* at 12:36–51 (emphasis added). Neither Jawbone nor Dr. Young address why, if the purpose of the outer molding is to protect a user, it would be necessary to fully enclose the inner moldings instead of merely covering the surface that is to be in contact with a user.

Dr. Young also cites, as evidence of the protective nature of the outer molding, several dependent claims which recite that the outer molding has protective features such as “protect[ing] against ultraviolet radiation” (claim 4) or a “waterproof seal” (claim 6). Ex. 2001 ¶ 51. The flaw in this argument is that these dependent claims depend from claim 1, *not claim 16*. While they may signal that the outer molding of claim 1 has a protective purpose, they are not relevant to claim 16. By contrast, claim 16 recites that at least one of the *inner moldings* has a protective property, and the dependent claims further specify protective properties for that inner molding, such as waterproofing, oleophobicity (fingerprint resistance), or antibacterial. Dr. Young hypothesized that there might be a reason to make an inner molding antibacterial, even if it is completely enclosed (Ex. 1029 61:4–13), but was unable to provide a single example of a product with a fully encased, antibacterial inner molding (*id.* at 62:24–63:7). The fact that claim 16’s inner molding has a protective property, therefore, diminishes the credibility of Dr. Young’s testimony that the outer molding must fully encase and protect the inner molding.

In sum, we disagree with Dr. Young’s conclusion that the outer molding of claim 16 must have a protective property, and that in that context the only reasonable construction of “covers all or substantially all” is a molding that encases or encloses the inner molding.⁵ Jawbone’s remaining

⁵ Even if we were to accept Dr. Young’s testimony, and hold that the outer molding must have a protective purpose, we note that the specification suggests that a molding may have a protective property even if it incompletely surrounds an object. *See* Ex. 1001, 5:30–34 (“inner molding 208 forms a protective layer around framework 102, elements 104–106,

arguments relying on the specification of the '811 patent (PO Resp. 9–13) are more persuasive, but not conclusive. We address these below.

3. Further Analysis

Although we find each parties' claim construction analysis flawed, we must still arrive at a construction of the disputed claim term. *See Homeland Housewares, LLC v. Whirlpool Corp.*, No. 2016-1511, 2017 WL 3318764, at *2 (Fed. Cir. Aug. 4, 2017) (“Just as district courts must, ‘[w]hen the parties raise an actual dispute regarding the proper scope of claims, resolve that dispute,’ the Board also must resolve such disputes in the context of IPRs.”) (citation and ellipses omitted). We review the entirety of the intrinsic and extrinsic evidence record below.

a. Intrinsic Evidence – Claim Language

As we did in the Decision on Institution, we begin with the language of the claims themselves. *See Interactive Gift Express, Inc. v. Compuserve Inc.*, 256 F.3d 1323, 1331 (Fed. Cir. 2001) (“In construing claims, the analytical focus must begin and remain centered on the language of the claims themselves.”). We first note that the first two steps of claim 16—pertaining to applying a protective material and forming at least one inner molding, respectively—use slightly different terminology than the outer molding step. The first two steps recite “selectively applying at least one protective material *substantially over* one or more of a plurality of elements”

covering 108, protective coating 208, providing a layer of additional protective material (e.g., inner molding 312), which may completely or incompletely surround an object (e.g., framework 102).”).

and “forming one or more inner moldings *substantially over* a subset or all of the framework.” By contrast, the final step recites “forming an outer molding of the wearable device that *covers all or substantially all* of the one or more inner moldings.” Jawbone suggests that the difference between “over” and “cover” signals that the first two steps permit partial coverage (“selectively” applying and a “subset” of the framework, respectively), while the outer molding requires full coverage. Tr. 15:5–12. This argument has some appeal, but only raises the further question of *what* must be partially or fully covered—one surface of the inner molding, or all sides.

Before leaving the claim language, we also note that, as discussed above, claim 16 recites that the inner molding has a protective property, and its dependent claims provide specific examples of protective properties (oleophobic, antibacterial). Both of these facts suggest that the outer molding need not cover the inner molding entirely, because it makes little sense to provide an antibacterial coating to an inner molding that is not exposed to the elements or a user.

Both parties’ positions, therefore, find some support in the claim language. The remainder of the intrinsic record is similarly ambiguous.

b. Intrinsic Evidence – Written Description and Figures

Jawbone is correct to note that the examples provided in the specification all show an outer molding that completely surrounds the inner molding. For example, Figure 4 of the ’811 patent illustrates the application of an outer molding:

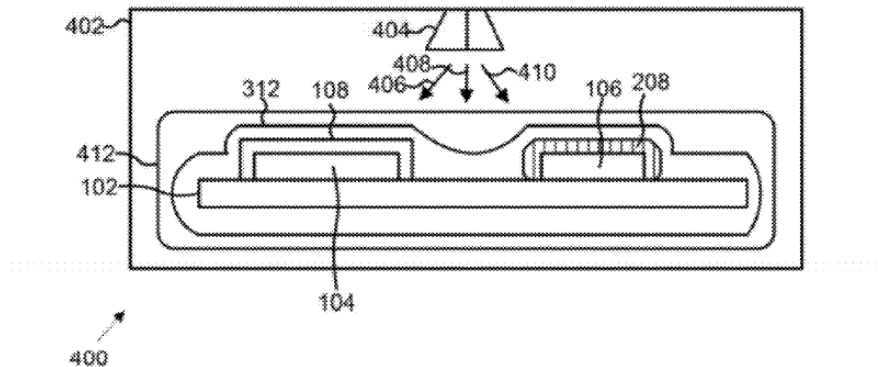


FIG. 4

Figure 4 of the '811 patent shows a process for forming an outer molding 412 over inner molding 312, protective coating 208, and elements 104–106. Ex. 1001, 5:47–53. Dr. Young testifies that “[t]here are no ‘examples’ in the '811 patent specification [] describing an outer molding as merely including a layer covering only one top surface of another layer.” Ex. 2001 ¶ 29. This is true, but the '811 patent also states, in the context of Figure 4, that “device 400 and the above-described elements may be varied in function, structure, configuration, implementation, or other aspects and are not limited to those provided.” Ex. 1001, 6:37–40. We do not agree with Dr. Young that the '811 patent's examples evidence an intent to exclude outer moldings that do not surround the inner molding.

The parties also focus on a passage in the specification that reads, in its entirety:

In some examples, the protective layer, inner molding, and outer molding may be selectively, partially, or completely applied to a given item. As described here, an outer molding may also be configured to completely enclose or encase an underlying item in order to protect the inner molding, the protective layer, and any elements from damage.

Ex. 1001, 7:27–32. Jawbone characterizes the first sentence as “an introductory sentence addressing not just the outer molding but different layers/moldings collectively,” and therefore focuses on the second sentence. PO Resp. 9–10. Though we agree the sentence is introductory, we see no reason to disregard the fact that it includes the outer molding as a layer that may be “selectively, partially, or completely applied.” Furthermore, the next sentence’s phrasing that the “outer molding may *also* be configured to completely enclose or encase” suggests that this is an option *in addition to* the partial application recited in the preceding sentence. Jawbone’s characterization that “[t]he ’811 patent specification describes the outer molding as enclosing or encasing the inner molding” (*id.* at 9) overstates the disclosure, ignoring the words “may also.”

Finally, we note that the phrase “covers all or substantially all” does not appear in the written description of the ’811 patent, and was introduced to the claims by amendment during prosecution. *See* Ex. 1019, 168. The specification primarily uses “cover” in the context of a “covering,” another name for the protective coating applied directly over the electronic elements before the first inner molding is formed. *See, e.g.,* Ex. 1001, 3:62–63 (“element 104 is covered by covering 108 and element 106 is uncovered”), 6:44–46 (“a protective layer may refer to protective material, layers, or covers such as protective material 108”). A decorative outer molding is described, in the context of Figure 9, as “another molding or *covering layer*” that “may also be configured to receive surface designs, raised textures, or patterns.” *Id.* at 11:44–46. None of these uses of “cover” in the written

description of the '811 patent evidence any particular definition that would support the claim construction advanced by either party.

c. Intrinsic Evidence – Prosecution History

The Federal Circuit has also advised that, in post-grant proceedings, the Office “should also consult the patent’s prosecution history” when considering the broadest reasonable interpretation of the claims. *Microsoft Corp. v. Proxyconn, Inc.*, 789 F.3d 1292, 1298 (Fed. Cir. 2015); *see also Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996) (a “court may also consider the prosecution history of the patent, *if in evidence*”) (emphasis added)). Here, although the prosecution history of the '811 patent was entered into evidence by Fitbit (Ex. 1019), neither party briefed the question of whether the prosecution history should inform our claim construction analysis. *See* Pet. 15 (citing prosecution history only to establish continuity of applications). Nevertheless, we have consulted the prosecution history of the '811 patent that was made of record, and determined that it does not further inform the construction of “covers all or substantially all.”

As noted above, the phrase “covers all or substantially all” was added to claim 16 during prosecution to overcome an anticipation rejection. Ex. 1019, 168, 171. Applicants provided no argument accompanying the amendment regarding the proper interpretation of the new claim language, or how it was intended to overcome the rejection. *Id.* at 171. In the next Office Action, the Examiner withdrew all prior art rejections in favor of obviousness-type double patenting rejections, but provided no statement why the amendment overcame the prior art. *Id.* at 185–87. The Examiner

merely stated that “Applicant’s arguments . . . have been considered but are moot because the arguments do not apply to any of the references being used in the current rejection.” *Id.* at 187.

In sum, neither party briefed the prosecution history or the relevance of the amendment to claim 16; any argument that the prosecution history affects the scope of the claim has been waived. *See Google Inc. v. SimpleAir, Inc.*, 682 F. App’x 900, 903 (Fed. Cir. 2017) (nonprecedential) (quoting *Conoco, Inc. v. Energy & Envtl. Int’l, L.C.*, 460 F.3d 1349, 1358–59 (Fed. Cir. 2006) and *In re Baxter Int’l, Inc.*, 678 F.3d 1357, 1362 (Fed. Cir. 2012)). Nevertheless, we have reviewed the prosecution history made of record and determined that, given the lack of explicit statements pertaining to the amendment, it does not aid in resolving the ambiguity of “covers all or substantially all.”

d. Extrinsic Evidence of Record

We have also reviewed the extrinsic evidence of record, given the ambiguity of the intrinsic evidence. Though generally considered less reliable than the patent and its prosecution history, the Federal Circuit has held that extrinsic evidence may be useful

to provide background on the technology at issue, to explain how an invention works, to ensure that the court’s understanding of the technical aspects of the patent is consistent with that of a person of skill in the art, or to establish that a particular term in the patent or the prior art has a particular meaning in the pertinent field.

Phillips v. AWH Corp., 415 F.3d 1303, 1318 (Fed. Cir. 2005). Included “among the many tools that can assist the court in determining the meaning of particular terminology to those of skill in the art of the invention” are

dictionaries, which may be considered “if the court deems it helpful in determining ‘the true meaning of language used in the patent claims.’” *Id.* (quoting *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 980 (Fed. Cir. 1995)). We have since been cautioned, however, that “[t]he fact that [a term] has multiple dictionary meanings does not mean that all of these meanings are reasonable interpretations in light of th[e] specification.” *PPC Broadband*, 815 F.3d at 752. When consulting dictionaries, we must consider definitions that are reasonable in light of the specification of the ’811 patent.

Following oral argument in this case, the Federal Circuit issued a nonprecedential decision in *Home Semiconductor Corp. v. Samsung Electronics Co.*, No. 2016-2215, 2017 WL 3142331 (Fed. Cir. July 25, 2017), an appeal that “primarily involves the meaning of the word ‘over.’” *Id.* at *1. Jawbone contacted the Board to direct our attention to this case, characterizing it as “construing ‘over’ in terms of ‘covering’ rather than ‘above.’” As the decision makes clear, however, the meaning of “over” was decided “in the context of the claims, written description, and figures” of the patent at issue there. *Id.* As the Federal Circuit has emphasized repeatedly, the broadest reasonable interpretation of a claim term must be reasonable in light of the specification at issue. *PPC Broadband*, 815 F.3d at 755. How a similar term is construed in the context of a completely unrelated specification is of little import here. We do note, however, that *Home Semiconductor* cautions against “inject[ing] ambiguity into [a] claim construction by replacing the claim term” with a dictionary definition, “and

then resolv[ing] that ambiguity by erring on the side of a broader understanding of the word.” 2017 WL 3142331 at *4.

Turning to dictionary definitions does little to resolve the ambiguity of the claim term here, as we discussed in our Decision on Institution. We noted that one general-purpose online dictionary provided several definitions of “cover,” including “extend over,” “rest on the surface of,” “place something over or upon,” or “provide with a covering or top.” Ex. 3001. Another general-purpose dictionary we cited (Ex. 3002) was also submitted by Jawbone (Ex. 2003), and includes definitions such as “to put something over [or] on top of,” “to be spread over or on top of,” or “to be over much or all of the surface of.” Some of these definitions support Fitbit’s preferred claim construction of “on top of,” while others support Jawbone’s interpretation of “encloses or encases.” Jawbone contends that only some of the dictionary definitions, such as “to be over much or all of the surface of,” make sense in the context of the ’811 patent. PO Resp. 14–16. This contention is based, however, on Dr. Young’s testimony that certain definitions “would not make sense in the context of a molding in a wearable device providing protection of electronic and hardware components.” Ex. 2001 ¶ 36. As discussed above, we do not find this testimony credible, as it is based on the unsupported assumption that the outer molding must provide protection. *See Phillips*, 415 F.3d at 1318 (Fed. Cir. 2005) (“conclusory, unsupported assertions by experts as to the definition of a claim term are not useful to a court”).

We are thus left with an extrinsic record containing a number of dictionary definitions and no credible testimony⁶ as to which definitions a person of ordinary skill in the art of wearable electronic devices would have found most pertinent. No other extrinsic evidence, other than the expert testimony we have already discussed, has been made of record.

4. Conclusion

In sum, the complete record places us in a position similar to that in our Decision on Institution, where evidence supports both readings of the claim term. Jawbone is correct that all depictions of the outer molding in the '811 patent's figures show enclosure or encasing, and that the shift in terminology between the first two clauses of claim 16 ("over") and the last ("covers") suggests a difference in meaning. Portions of the specification also support that complete encapsulation by the outer molding is an option, though it is not required. *See* Ex. 1001, 7:29–32. Meanwhile, Fitbit is correct that the protective property of the inner molding of claim 16, and the particular protective qualities specified in the dependent claims, suggest that the outer molding does not encapsulate the inner molding. Furthermore, the specification states numerous times that the outer molding may be configured in manners other than those depicted explicitly in the patent (*id.* at 6:64–40, 12:1–5), states that the outer molding may be partially applied (*id.* at 7:27–29), and defines "substantially" as "partially or entirely" (*id.* at 8:65). Based on our review of the entire record, we can only conclude that it

⁶ We have not addressed the testimony of Fitbit's expert Dr. Cairns because, as Fitbit acknowledged, he provided no explicit testimony as to the proper interpretation of "covers all or substantially all." Tr. 5:24–6:10.

is equally reasonable to interpret “covers all or substantially all” as “formed substantially across a side of”⁷ and “substantially encloses or encases.”

The broadest reasonable interpretation standard is intended to address just such situations, to encourage patentees to resolve ambiguities in claim language and encourage precision in claim drafting. *See Cuozzo*, 136 S. Ct. at 2145 (“use of the broadest reasonable construction standard . . . encourages the applicant to draft narrowly. This helps ensure precision while avoiding overly broad claims.”). Therefore, when faced with a claim term which has multiple reasonable interpretations in light of the specification, we must choose the broadest that is still reasonable. Here, that is the interpretation that encompasses a molding formed substantially across a side of the inner molding. We note, however, that we do not read the term as broadly as Fitbit implies, such that “substantially” would permit a small amount of coverage of that single side. We agree with Jawbone that this term of degree was intended to capture insubstantial differences in coverage, such as that depicted in Figure 9 (wherein the outer molding does not cover plug 904 and button 906). Accordingly, an outer molding that is formed substantially across a single side of an inner molding, would “cover all or

⁷ In our Decision on Institution, we phrased this interpretation as “on top of,” but did not intend to introduce a directional component (such as “above”) to the claim term that is unsupported by the ’811 patent. As Dr. Young understood, “the ‘top’ of the inner molding is the surface of the inner molding, not just the side that happens to point up as the ‘top’ when viewed in a cross-sectional image.” Ex. 2001 ¶ 47. To remove any potential confusion, we have rephrased the interpretation as “across a side of.”

substantially all” of that inner molding within the broadest reasonable interpretation in light of the ’811 patent specification.

B. Anticipation by Lo

Fitbit contends that claims 16–19, 23, and 26 are unpatentable under 35 U.S.C. § 102(b), as anticipated by Lo. Pet. 19–28. “A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631 (Fed. Cir. 1987). Though it is not an *ipsissimis verbis* test, the elements must be arranged in the prior art as they are in the claim. *In re Bond*, 910 F.2d 831 (Fed. Cir. 1990).

Lo is directed to a wearable device that is in contact with the user so as to determine the user’s pulse. Ex. 1003 ¶ 6. The wearable device of Lo contains sensors that are encapsulated on a substrate, which is further encapsulated by a molding, and fitted with a transmission medium that is overmolded on the last-formed molding. *Id.* ¶¶ 123, 125, 126.

One embodiment of Lo’s device is set forth in Figure 14C, reproduced below:

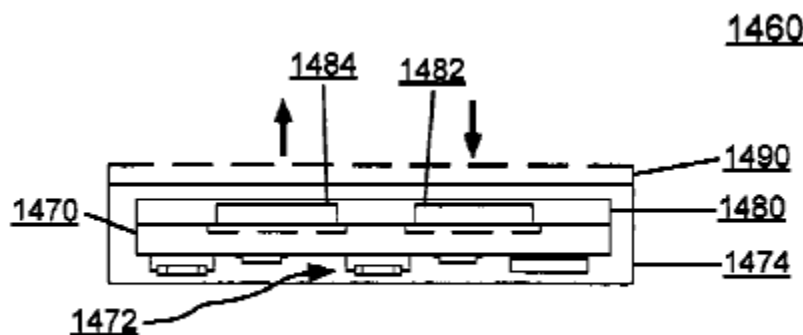


Figure 14C

Figure 14C depicts sealed ultrasonic monitor 1460 having printed circuit board 1470, plastic housing 1474, protective layer 1480, and transmission medium 1490. *Id.* ¶ 125. According to Lo, plastic housing 1474 “encapsulates the entire ultrasonic monitor, including protective layer 1480.” *Id.*

A further illustration of the device of Lo is provided in Figure 15A, reproduced below:

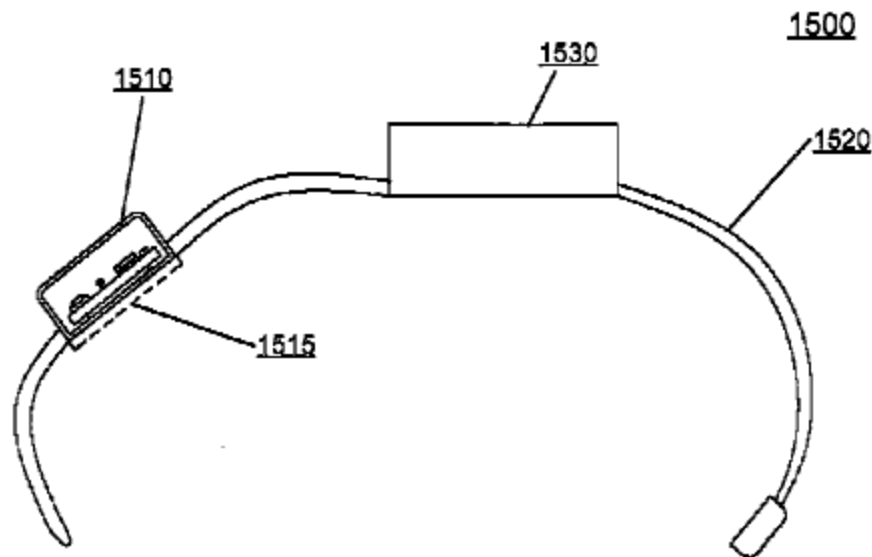


Figure 15A

Figure 15A of Lo depicts monitor 1500 including ultrasonic monitor module 1510 having transmission medium 1515 attached. *Id.* ¶ 126.

Referring to Figures 14C and 15A, Fitbit contends that Lo meets all elements of claim 16. Fitbit sets forth that Lo discloses a method in which a protective material (protective layer 1480) is selectively applied over a plurality of elements (1482, 1484) coupled to a framework (1470) for a wearable device (as shown in Lo Figure 15A) configured to be worn by a

user, the plurality of elements (1482, 1484) including at least one sensor. Pet. 20–22. Fitbit also states that one or more inner moldings (plastic housing 1474) are formed substantially over a subset or all of the framework (1470), the at least one protective material (1480), and the plurality of elements (1482, 1484). *Id.* at 22–24. After application, the inner molding (1474) allegedly has a protective property. *Id.* Fitbit argues that the outer molding (transmission medium 1490) of the wearable device covers all or substantially all of the inner molding (1474) and the outer molding (1490) is configured to be positioned in contact with the user. *Id.* at 22–24. Fitbit cites Lo’s specification, which states that the “transmission medium can be . . . *over-molded* onto . . . the plastic housing.” *Id.* at 23 (quoting Ex. 1003 ¶ 114). As shown in Lo Figures 14C and 15A, the transmission medium is formed on top of the inner molding (1474)/housing (1510). Fitbit then argues that the “’811 patent similarly describes forming layers, including an outer molding, by ‘overmolding.’” *Id.* at 23.

Jawbone contests two aspects of Fitbit’s anticipation case. First, Jawbone focuses on the outer molding limitation, arguing that the transmission medium of Lo is not an outer molding as claimed. PO Resp. 17–23. Jawbone argues that Lo’s transmission medium covers, “at best, one of six sides” of the inner molding, and therefore cannot be said to cover all or substantially all of the layer below it. *Id.* 17–18. This argument, however, is based on Fitbit’s construction of “covers all or substantially all” as requiring enclosure or encasing, which we considered at length above and ultimately did not find to be the broadest reasonable interpretation. The transmission medium of Lo, by Jawbone’s own admission, is across one side

of the inner molding, and therefore satisfies the claim interpretation we have adopted here.

Jawbone also argues that even if we were to adopt Fitbit's construction of "on top of," Lo does not satisfy this construction. *Id.* at 20. This argument rests on Dr. Young's testimony that:

a comprehensive analysis of the '811 patent must address the entirety of the surface presented by the underlying layer rather than just one portion (or side) of the underlying layer. In other words, in the context of the '811 patent, if an underlying layer encapsulates an object so as to present multiple sides, the top of that underlying layer should include all surfaces and sides—not just one of the sides.

Ex. 2001 ¶ 46. Dr. Young presents no reason for drawing this conclusion, which is essentially an alternative construction not advanced by either party. To the extent it is grounded in Dr. Young's belief that the outer molding must protect the inner molding and, therefore, must cover all sides presented by the inner molding, we have rejected this reasoning above.

Similarly, we find unconvincing Jawbone's argument that the transmission medium of Lo would not be considered an "outer molding" as used in the '811 patent. PO Resp. 22–23. This is again based on Dr. Young's testimony that the outer molding must have protective and ornamental features, whereas the transmission medium of Lo is a means for transmitting ultrasonic signals. Ex. 2001 ¶ 51, 52. We see nothing in the patent that requires the outer molding to have a particular purpose; statements that it may have protective or ornamental features does not permit us to read those features into the claims. *See Phillips*, 415 F.3d at 1320 (Fed. Cir. 2005) ("[O]ne of the cardinal sins of patent law [is] reading a

limitation from the written description into the claims.”) (quoting *SciMed Life Sys., Inc. v. Advanced Cardiovascular Sys., Inc.*, 242 F.3d 1337, 1340 (Fed. Cir. 2001)).

Jawbone also argues that Fitbit’s anticipation case rests on a reading of Lo that improperly combines multiple embodiments. PO Resp. 23–26. Specifically, Jawbone characterizes the embodiments shown in Figures 14A, 14C, and 15A of Lo as “disparate embodiments” that may not be combined in an anticipation ground. *Id.*

As an example, in the Petition Fitbit analyzes the second step of claim 16 (forming the inner molding) by referring first to the written description accompanying Figure 14C, as disclosing a plastic housing that surrounds the protective layer and electronics. Pet. 22. The Petition subsequently refers to the description accompanying Figure 14A, which states that the plastic housing can be applied as a mold, and may use ABS plastic. *Id.* Jawbone contends that this is an inappropriate combination of the two embodiments. PO Resp. 24–25. We disagree. Fitbit is not advocating combining parts of two embodiments into an embodiment not disclosed anywhere in Lo. Rather, Fitbit relies on the embodiment of Figure 14C⁸ as anticipatory, and informs that understanding with the description accompanying the similar embodiment 14A. We see no error in using the description of 14A’s embodiment as having a “plastic housing” that may be molded from ABS

⁸ Fitbit’s Reply states that its anticipation challenge relies on a single embodiment illustrated by “Figure 15C.” Pet. Reply 21. This appears to be a typographical error, as there is no Figure 15C in Lo and the cited pages of the Petition cite Figure 14C. Pet. 21–24.

(Ex. 1003 ¶ 123) to inform the understanding of 14C's embodiment that also recites a "plastic housing" (*id.* ¶ 125). Having stated once that a plastic housing has certain properties, it is reasonable that the inventors of Lo did not feel the need to again recite those properties for a similar plastic housing, described two paragraphs later in the same written description.

Similarly, we find no merit to Jawbone's argument that Figures 14C and 15A depict different modules. PO Resp. 25–26. Jawbone provides no reasoning to support this conclusion, other than it is "apparent from the cross sections" in the figures. *Id.* We disagree. As we stated in our Decision on Institution, the Petition relies on Figure 15A for the proposition that the transmission medium of Figure 14C is configured to be positioned in contact with the user. Pet. 23–24. Reliance on Figure 15A for this inference is reasonable, and does not result in an inappropriate combination of embodiments. Furthermore, we note that Jawbone does not dispute that the transmission medium of Figure 14C is configured to be positioned in contact with the user.

Reviewing Fitbit's assertions regarding the written description and figures of Lo, we find that the reference discloses in a single embodiment all limitations of claim 16. Jawbone does not challenge the Petition as to the first two steps of claim 16, and we find that Lo discloses both applying a protective material substantially over one or more of a plurality of elements, and forming a protective inner molding substantially over that protective material. Furthermore, for the reasons discussed above, we find that Lo's transmission medium is an outer molding that covers all or substantially all of the inner molding.

With respect to dependent claims 17–19, 23, and 26, we find that Lo discloses the additional elements of these claims as set forth by Fitbit in its Petition. Pet. 24–28. For example, claim 18 requires that the protective property of the inner molding is waterproofing, and claim 19 recites water-resistance. We find that Lo discloses that its plastic housing provides water resistant properties. Ex. 1003, Abstract, ¶ 121. Jawbone does not contest any of these additional claim limitations or argue separately the patentability of the dependent claims apart from independent claim 16. Instead, Jawbone relies on its argument that there is no outer molding as recited in claim 16 (PO Resp. 23), and that Fitbit improperly combined embodiments (*id.* at 26), arguments we discussed and rejected above.

For these reasons, and based on a review of the complete record, we find claims 16–19, 23, and 26 are anticipated by Lo.

C. Obviousness over Lo and Huang

Claims 20–22 depend from claim 16, and require the protective property of the inner molding to be hydrophobic (claim 20), oleophobic (claim 21), or anti-bacterial (claim 22). Huang, directed to an anti-fingerprint coating which can be used in consumer electronics such as cell phones, personal computers, and notebooks, discloses a coating that has hydrophobic, oleophobic, or anti-bacterial properties. Ex. 1007 ¶¶ 2, 8, 14. Fitbit argues that the use of hydrophobic, oleophobic, and anti-bacterial coatings was understood by those of skill in the art, and that these coatings were commercially available from vendors. Pet. 28–33. Fitbit also contends that moldings were inherently hydrophobic (*id.* at 29), and that the oleophobic coating would be particularly useful considering that an oil, such

as baby oil or mineral oil, may be applied between the user's skin and the Lo monitor (*id.* at 32). Fitbit also contends that the use of an anti-bacterial coating would prevent bacteria build-up on Lo's device, which may be used while exercising. *Id.* at 33.

Jawbone first contends that claims 20–22 are not obvious for the same reasons claim 16 is not anticipated. PO Resp. 26–27. For the reasons discussed above, we have found claim 16 anticipated.

Jawbone also contends that Fitbit has not established that a person of ordinary skill in the art would have combined the disclosures of Lo and Huang. *Id.* at 28–29. According to Jawbone, Lo teaches that it is “critical” that the materials used in its monitor be suitable for transmitting ultrasonic waves, but Fitbit never addresses whether its coating would retain the ultrasonic transmission qualities required by Lo. *Id.* at 29.

Fitbit responds by arguing that, even if Lo requires ultrasonic transmission, a person of skill in the art “would have naturally selected a coating that does not render the Lo heart monitor useless.” Pet. Reply 23. While this is true, it also admits the premise of Jawbone's argument. In other words, if the coatings of Huang render Lo's monitor useless, a person of ordinary skill would not have combined Huang with Lo.

Nevertheless, we do not agree with Jawbone's characterization of Lo as describing ultrasonic transmission of the monitor as “critical.” The portion of Lo cited by Jawbone describes prior art devices, and states that “[p]rior ultrasonic monitors require applying water or an aqueous gel *between the transducer module and the living subject* to eliminate any air gap.” Ex. 1003 ¶ 17 (emphasis added). There is no statement that the

plastic housing of the module—the “inner molding” of claim 16 that must have the protective properties supplied by Huang—must be ultrasonically transmissive. Indeed, it is the transmission medium of Lo that is explicitly described as having ultrasonic transmission properties, and Lo’s transmission medium addresses this deficiency in prior art devices. *Id.* at 58–59. Lo does not state whether its plastic housing is suitable for ultrasonic transmission, and there is no basis for concluding that the addition of Huang’s coatings—whether or not they disrupt ultrasonic transmission—would result in a non-functional device.

We find that Fitbit, relying on the testimony of Dr. Cairns, has articulated a reason with rational underpinning for combining the coatings of Huang with the device of Lo. Pet. 29–30 (stating that it would have been obvious to “utilize the well understood application of hydrophobic materials, such as in *Huang*, to have imparted protective properties to the plastic housing in *Lo*”); Ex. 1002 ¶¶ 64–66. This combination would have been within the level of ordinary skill in the art, on which the experts largely agree.⁹ Jawbone’s arguments do not convince us otherwise. Furthermore, we find that the combination of Lo and Huang in this manner teaches all limitations of claims 20–22 for the reasons given by Fitbit, assertions that

⁹ Compare Ex. 1002 ¶ 19 (Cairns: person of ordinary skill “would have been familiar with a wide range of methods for applying protective, decorative, and structural moldings and coatings to form consumer electronic devices used in a variety of product applications”) with Ex. 2001 ¶ 15 (Young: “would have had experience working with electrical and electronic hardware . . . familiarity would include knowledge of component protective overmolding”).

Jawbone does not contest. Pet. 28–33. Finally, we note that Jawbone does not assert the presence of any objective indicia of nonobviousness. For these reasons, we conclude that the subject matter of claims 20–22 would have been obvious over the combination of Lo and Huang.

D. Obviousness over Lo and the Handbook

Claim 24 depends from claim 16 and requires that the “at least one of the one or more inner moldings comprises a medical-grade thermoplastic elastomer.” Fitbit contends that Lo discloses that the materials contacting the user’s skin should be medical grade, and that the Handbook of Thermoplastic Elastomers (“the Handbook”), an industry handbook, discloses a number of medical-grade thermoplastic elastomers for use in medical devices. Pet. 33–34. Again, Jawbone argues that Fitbit has failed to establish whether the materials identified in the Handbook retain the good ultrasonic transmission properties required by Lo. PO Resp. 30.

For the same reasons just discussed, we are not persuaded by Jawbone’s argument. The substitute proposed by Fitbit is for the materials of the inner moldings, and Lo does not state that its plastic housing (the inner molding of claim 16) needs to be ultrasonically transmissive. Fitbit’s contention, supported by Dr. Cairns and the explicit disclosure of Lo, is that a person of ordinary skill in the art would have recognized the benefit of forming Lo’s housing from a medical-grade material, given its intended use. Pet. 33–34; Ex. 1002 ¶ 67; Ex. 1003 ¶¶ 109–110. We find this to be a sufficient reason to combine the disclosures of the references, and the

substitution would have been within the level of skill in the art.¹⁰ We also find that the proposed modified process would meet the limitations of claim 24, as set forth by Fitbit, and Jawbone does not contend otherwise. As noted above, Jawbone does not assert the presence of any objective indicia of nonobviousness. For these reasons, we conclude that the subject matter of claim 24 would have been obvious over the combination of Lo and the Handbook.

E. Obviousness Over Lo and Toyoda

Claim 25 depends from claim 16 and requires “removing and re-applying at least one of the one or more inner moldings after an inspection of the one or more inner moldings.” Fitbit contends that inspecting a product for defects is a standard and fundamental step in the manufacturing process that was well understood before the priority date of the ’811 patent. Pet. 35. As an example, Fitbit cites to Toyoda, which is directed to forming resin layers on electronic devices and inspecting the resin layer for defects, and if found, removing the defective resin layer and re-applying a new resin layer. *Id.* at 35–37. Fitbit argues that it was known before the priority date of the ’811 patent that a defective molding left the designer with two options: (1) discard the device, or (2) remove and re-apply the molding, the choice of which was generally dictated by the cost of the device’s constituent components. *Id.* at 36–37. Fitbit argues that the use of Toyoda’s inspection steps in the Lo manufacturing process would involve the

¹⁰ As above, Jawbone raises no argument that the combination of the references would have been outside the level of ordinary skill.

application of known techniques to improve the reliability of Lo's moldings in the same way as in Toyoda. *Id.* at 37.

As it did in its Preliminary Response, Jawbone again argues that Fitbit merely alleges that the limitations of claim 25 were independently known, which is insufficient to support the legal conclusion of obviousness. PO Resp. 31. Having evaluated the full record, including Dr. Cairns' testimony, we disagree. Fitbit's contention that Toyoda discloses "fundamental manufacturing inspection steps" which a person of ordinary skill in the art would apply to the manufacturing process of Lo is supported by the testimony of Dr. Cairns. Ex. 1002 ¶ 68. Furthermore, Dr. Cairns identifies advantages that would be achieved by combining Toyoda with Lo, namely quality control over the plastic housing given the importance of water-resistance to Lo's internal circuitry. *Id.* This is not simply "alleg[ing] that the limitations of claim 25 were independently known in the prior art," as Jawbone contends. PO Resp. 31.

We find that Fitbit's articulated reason, supported by the testimony of Dr. Cairns, provides a reasonable basis for the combination of Lo with Toyoda. We also find that the process resulting from this combination would teach all limitations of claim 25; Jawbone provides no argument or evidence to the contrary. Given these findings, and the fact that Jawbone does not assert the presence of any objective indicia of nonobviousness, we conclude that the subject matter of claim 25 would have been obvious over the combination of Lo and Toyoda.

III. CONCLUSION

For the foregoing reasons, based on a review of the complete record developed during trial, we conclude that Fitbit has proven, by a preponderance of the evidence, that claims 16–26 are unpatentable.

IV. ORDER

Accordingly, it is:

ORDERED that claims 16–26 of U.S. Patent No. 8,529,811 are *unpatentable*;

FURTHER ORDERED that, pursuant to 35 U.S.C. § 318(b), upon expiration of the time for appeal of this decision, or the termination of any such appeal, a certificate shall issue canceling claims 16–26 of U.S. Patent No. 8,529,811; and

FURTHER ORDERED that, because this is a Final Written Decision, parties to the proceeding seeking judicial review of the decision must comply with the notice and service requirements of 37 C.F.R. § 90.2.

IPR2016-00607
Patent 8,529,811 B2

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