

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

FOIL BOARDING COMPANY, INC.,
Petitioner,

v.

MHL CUSTOM, INC.,
Patent Owner.

IPR2024-00085
Patent 9,586,659 B2

Before BART A. GERSTENBLITH, KEVIN W. CHERRY, and
MICHAEL L. WOODS, *Administrative Patent Judges*.

WOODS, *Administrative Patent Judge*.

DECISION
Granting Institution of *Inter Partes* Review
35 U.S.C. § 314

I. INTRODUCTION

Foil Boarding Company, Inc. (“Petitioner”) filed a Petition (Paper 2, “Pet.”) for *inter partes* review of claims 1, 2, 4, 5, 7–11, 13, and 15 (the “Challenged Claims”) of U.S. Patent No. 9,586,659 B2 (Ex. 1001, “the ’659 patent”). Pet. 1. MHL Custom, Inc. (“Patent Owner”) filed a Preliminary Response (Paper 6, “Prelim. Resp.”). With our authorization, Petitioner filed a Reply to the Preliminary Response (Paper 10, “Prelim. Reply”) and Patent Owner filed a Sur-reply (Paper 11, “Prelim. Sur-reply”).

Under 35 U.S.C. § 314 and 37 C.F.R. § 42.4(a), we have authority to institute an *inter partes* review if “the information presented in the petition . . . and any response . . . shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” 35 U.S.C. § 314(a). After considering the Petition, the Preliminary Response, the Preliminary Reply, the Preliminary Sur-reply, and the evidence of record, we determine the information presented shows a reasonable likelihood that Petitioner would prevail in establishing the unpatentability of at least one of the Challenged Claims of the ’659 patent. Accordingly, we institute an *inter partes* review of the Challenged Claims on the grounds asserted in the Petition.

II. BACKGROUND

A. Real Parties-in-Interest

Petitioner identifies itself, Foil Boarding Company, Inc., as the sole real party-in-interest. Pet. 5.

Patent Owner identifies itself as the sole real party-in-interest. *See* Paper 3, 2.

B. Related Matters

The parties identify the following court proceedings relating to the '659 patent: *MHL Custom, Inc. v. Foil Boarding Company, Inc., d/b/a Foil, f/k/a Get Foil*, No. 3:22-cv-21258 (N.D. Fla.) (“Related Litigation”), and *MHL Custom, Inc. v. Waydoo USA, Inc.*, No. 1:21-cv-00091 (D. Del.) (“Waydoo Case”). Pet. 5; Paper 3, 2.

Patent Owner also identifies U.S. Patent App. No. 90/015,269 (*ex parte* reexamination of the '659 patent) and IPR2024-00086 (Petitioner challenging related U.S. Patent No. 9,359,044 B2) as related matters. Paper 3, 2–3.

C. Overview of the '659 Patent

The '659 patent is titled “Powered Hydrofoil Board” (Ex. 1001, code (54)) and purports to describe a “passively stable personal hydrofoil watercraft that has a flotation device, wherein a user can ride in a prone, kneeling, or standing position” (*id.* at code (57)). We reproduce Figure 1 of the '659 patent, below:

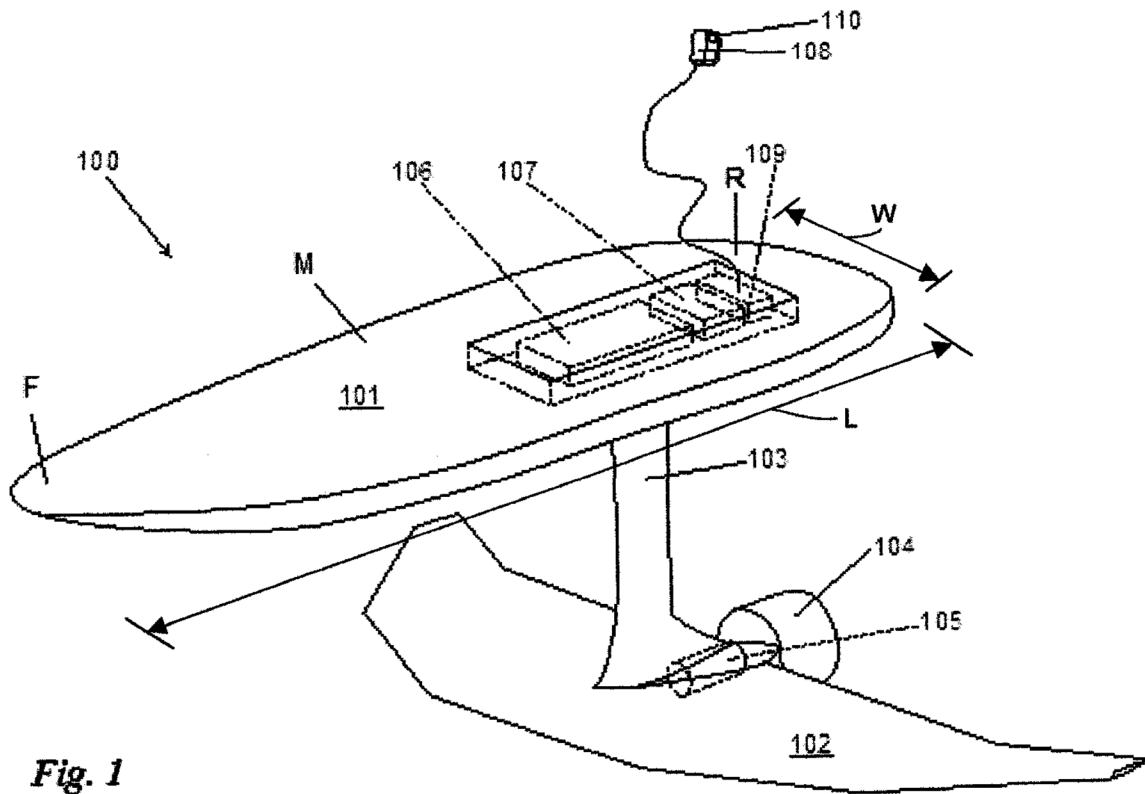


Fig. 1

Figure 1, reproduced above, “is a perspective view of a personal hydrofoil watercraft in accordance with” the invention of the ’659 patent. Ex. 1001, 2:44–45. In particular, Figure 1 depicts hydrofoil watercraft 100 including flotation board 101, hydrofoil 102 spaced below the flotation board, strut 103 connecting flotation board 101 to hydrofoil 102, propulsion system 104 with electric motor 105, battery 106, motor speed controller 107, throttle system 108, throttle interface 109, and spring-loaded trigger 110. *Id.* at 3:7–14. Flotation board 101 is similar to those used in surfing or sailboarding. *Id.* at 3:15–16. The flotation board has fore-aft length L that is greater than lateral width W. *Id.* at 3:16–18.

D. Challenged Claims

Petitioner challenges claims 1, 2, 4, 5, 7–11, 13, and 15 of the '659 patent (the “Challenged Claims”). Pet. 1. Of the Challenged Claims, claim 1 is the sole independent claim. *See* Ex. 1001, 7:36–8:67. We reproduce independent claim 1, below, with Petitioner’s annotations to the claim elements in brackets:

1. [1Preamble] A passively stable, weight-shift controlled personal hydrofoil watercraft, comprising:

[1A1] a flotation device that has a fore-aft length greater than a lateral width, the flotation device having a top surface and a bottom surface, [1A2] wherein a user can be disposed on the top surface of the flotation device in a prone, kneeling, or standing position, [1A3] the flotation device having a forward section, a middle section, and a rear section;

[1B] a strut having an upper end and a lower end, the upper end fixedly interconnected with the flotation device between the middle section and the rear section of the flotation device;

[1C] a hydrofoil fixedly interconnected with the lower end of the strut, the hydrofoil having no movable surface;

[1D] a propulsion system for propelling the watercraft in a body of water, wherein the propulsion system is connected to the hydrofoil; and

[1E] the watercraft having no movable steering system.

Id. at 7:36–54; *see also* Pet. 20–29 (addressing claim 1 with annotations to claim elements).

E. Asserted Grounds of Unpatentability and Declaration Evidence

Petitioner asserts that the Challenged Claims are unpatentable based on the following grounds (Pet. 9–12):

Ground	Claim(s) Challenged	35 U.S.C. § ¹	References/Basis
1	1, 2, 4, 5, 7–11, 13, 15	103	Evolu Report ² , Woolley ³
2	1, 4, 5, 7, 15	103	Evolu Videos ⁴ , Woolley
3	2, 9, 10	103	Evolu Videos, Woolley, Torquedo Manual ⁵
4	8	103	Evolu Videos, Woolley, Torquedo Manual, Gleason ⁶
5	11, 13	103	Evolu Videos, Woolley, Torquedo Manual, Gleason, Manning ⁷

Petitioner relies on the Declaration of Stefano Brizzolara, Ph.D. *See, e.g.*, Pet. 10 (citing Ex. 1002).

Patent Owner relies on the Declaration of Timothy Takahashi in support of its Preliminary Response. *See, e.g.*, Prelim. Resp. 12 (citing Ex. 2006).

III. DISCRETIONARY DENIAL

Under Section 314(a), the Director has discretion to deny institution. *See* 35 U.S.C. § 314(a) (stating, “[t]he Director may not authorize an *inter*

¹ The ’659 patent was filed after March 15, 2013, and the AIA version of 35 U.S.C. applies to this proceeding. *See* Ex. 1001, codes (22), (60), (63).

² “Evolu Report” or “EvoluReport” (Ex. 1003), published Apr. 23, 2009. Pet. 8.

partes review to be instituted unless the Director determines that the information presented in the petition . . . shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition”) (emphasis added); *SAS Inst. Inc. v. Iancu*, 138 S. Ct. 1348, 1356 (2018) (“[Section] 314(a) invests the Director with discretion on the question whether to institute review” (emphasis omitted)); *Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 2131, 2140 (2016) (“[T]he agency’s decision to deny a petition is a matter committed to the Patent Office’s discretion.”); *Harmonic Inc. v. Avid Tech, Inc.*, 815 F.3d 1356, 1367 (Fed. Cir. 2016) (“[T]he PTO is permitted, but never compelled, to institute an IPR proceeding.”).

Patent Owner references the Related Litigation and argues that we should exercise our discretion to deny the Petition under *Fintiv*. See Prelim. Resp. 3 (citing *Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 11 (PTAB Mar. 20, 2020) (precedential) (“*Fintiv*”)).

³ U.S. Pat. No. 6,443,786 B2, issued Sept. 3, 2002 (Ex. 1011, “Woolley”).

⁴ The Evolo Videos (or the “Videos” or “Evolovideos”) collectively comprise: (1) Ex. 1006 (“Evolovideo Prototype Run,” allegedly published May 5, 2009, https://www.youtube.com/watch?v=a-_OCN50aWohttps://www.youtube.com/watch?v=a-_OCN50aWo); (2) Ex. 1008 (“Evolovideo Movie,” allegedly published June 11, 2009, <https://www.youtube.com/watch?v=zL9fO8tF118><https://www.youtube.com/watch?v=zL9fO8tF118>); and (3) Ex. 1010 (“Torquedo Video,” allegedly published Apr. 29, 2009, <https://www.youtube.com/watch?v=fKOQ0JwQnjc><https://www.youtube.com/watch?v=fKOQ0JwQnjc>). See Pet. 8 (citing the same).

⁵ Operating Manual Cruise 2.0 (Ex. 1014, “Torquedo Manual”), allegedly published Feb. 2007. Pet. 9.

⁶ U.S. Pat. No. 4,020,782, issued May 3, 1977 (Ex. 1012, “Gleason”).

⁷ U.S. Pat. No. 8,290,636, issued Oct. 16, 2012 (Ex. 1013, “Manning”).

In Petitioner’s Reply, Petitioner provides a stipulation in accordance with *Sotera Wireless, Inc. v. Masimo Corp.*, IPR2020-01019, Paper 12 at 19 (PTAB Dec. 1, 2020) (precedential as to § II.A). *See* Prelim. Reply 3–4. In particular,

Petitioner stipulates that, if the Board institutes this IPR, it will not pursue in the parallel proceeding the specific grounds raised in this IPR or any other ground that reasonable [sic] could have been raised in this IPR. This obviates any concerns about potential overlap and heavily favors institution.

Id. (citing *Sotera*, IPR2020-01019, Paper 12 at 18–19).

Patent Owner responds, “Although Petitioner has offered a *Sotera* stipulation in their reply . . . , this does not obviate potential inefficiencies.” Prelim. Sur-reply 3 (citing Prelim. Reply 3). Patent Owner contends that a “holistic evaluation of the *Fintiv* factors demonstrates that the efficiency and integrity of the system are best served by denying institution of the Petition.”

Id. at 5.

We disagree with Patent Owner.

Our analysis under *Fintiv* is guided by the USPTO Director’s Memorandum issued on June 21, 2022, titled “Interim Procedure for Discretionary Denials in AIA Post Grant Proceedings with Parallel District Court Litigation.”⁸ The Director’s Memorandum explains that, when a petitioner makes a *Sotera*-type stipulation, “it mitigates concerns of potentially conflicting decisions and duplicative efforts between the district court and the PTAB” and “[w]ith such a stipulation, if an IPR or PGR is instituted, the grounds the PTAB resolves will differ from those present in

⁸ https://www.uspto.gov/sites/default/files/documents/interim_proc_discretionary_denials_aia_parallel_district_court_litigation_memo_20220621_.pdf (“Director’s Memorandum”).

the parallel district court litigation.” Director’s Memorandum 7 (citing *Sotera*, IPR2020-01019, Paper 12 at 18–19). Pursuant to the Director’s Memorandum, we “will not discretionarily deny institution of an IPR or PGR in view of parallel district court litigation where a petitioner stipulates not to pursue in a parallel district court proceeding the same grounds as in the petition or any grounds that could have reasonably been raised in the petition.” *Id.*

Because Petitioner provides a *Sotera*-type stipulation, we do not exercise our discretion to deny institution under *Fintiv*.

IV. ANALYSIS

A. Level of Ordinary Skill in the Art

Petitioner submits that a person of ordinary skill in the art at the time of the invention (“POSITA”) “would have had a masters’s [sic] degree in Aerospace or Naval Engineering, or equivalent experience, and one to two years of experience in the field of watercraft design and construction.” Pet. 20 (citing Ex. 1002 ¶ 18).

Patent Owner, on the other hand, submits that a POSITA would have had

at least a Bachelor’s degree in engineering or physics with experience in fluid dynamics and experience with watercraft, aircraft, or hydrofoil craft, or at least a Bachelor’s degree in the field of engineering specializing in naval architecture and substantial experience with naval architecture including some experience with watercraft, aircraft, or hydrofoil craft.

Prelim. Resp. 19 (citing Ex. 2006 ¶ 23).

Upon review of the prior art of record and the parties’ arguments, we adopt Patent Owner’s definition of the person of ordinary skill in the art for purposes of this Decision as it appears consistent with the prior art of record.

See Okajima v. Bourdeau, 261 F.3d 1350, 1355 (Fed. Cir. 2001) (holding that the prior art itself can reflect the appropriate level of ordinary skill in the art). Petitioner’s proposed definition appears overly restrictive, as it requires a graduate degree in a narrow field of engineering or equivalent experience. We find that a bachelor’s degree with the accompanying experience proposed by Patent Owner more closely aligns with the prior art of record and the ’659 patent. We note, however, there is some overlap in the proposed levels of ordinary skill in the art because Patent Owner’s proposal includes “at least” a bachelor’s degree, which would encompass Petitioner’s master’s degree as well. Prelim. Resp. 19. Nonetheless, our determination herein would be the same under either party’s definition.

B. Claim Construction

In this *inter partes* review, we apply the same claim construction standard that would be used in a civil action under 35 U.S.C. § 282(b). 37 C.F.R. § 42.100(b). In applying this standard, we generally give claim terms their ordinary and customary meaning as would be understood by a person of ordinary skill in the art at the time of the invention and in the context of the entire patent disclosure. *See id.*; *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–14 (Fed. Cir. 2005) (en banc).

As reflected above, claim 1 recites, “A passively stable, weight-shift controlled personal hydrofoil watercraft, comprising: a flotation device . . . the flotation device having a top surface . . . wherein a user can be disposed on the top surface of the flotation device in a prone, kneeling, or standing position.” Ex. 1001, 7:36–42.

Patent Owner and Petitioner propose different definitions for the claim terms “wherein a user can be disposed on the top surface of the

flotation device in a prone, kneeling, or standing position” (*compare* Pet. 12, *with* Prelim. Resp. 19–21) and “a passively stable, weight shift controlled personal hydrofoil watercraft” (*compare* Pet. 12–13, *with* Prelim. Resp. 21–22). We address these limitations, below.

1. “*wherein a user can be disposed on the top surface of the flotation device in a prone, kneeling, or standing position*”

Petitioner submits that the terms “prone, kneeling, or standing” are *alternatives*, and the claim only requires one to satisfy the limitation. *See* Pet. 12.

Patent Owner, on the other hand, proposes that the term means “wherein a user can be disposed on the top surface of the flotation device in each of the following positions: prone; kneeling; or standing.” Prelim. Resp. 19. Patent Owner asserts that the intrinsic evidence supports its interpretation that the flotation device “allows a user to be disposed in each of the three positions.” *Id.* (emphasis omitted). Patent Owner cites to the Specification and submits that the Specification “expressly contemplates that a user can be disposed in multiple positions on the flotation device at different times.” *Id.* at 19–20 (citing Ex. 1001, 4:43–46). Patent Owner argues that “the Specification teaches that a user can begin in a prone position and then can transition to a kneeling or standing position, which supports the interpretation that the top surface of the flotation device or board allows a user to be disposed in each of the three positions.” *Id.* at 20. Patent Owner contends that the “Specification further explains that from the kneeling and standing positions, the user can then control the altitude of the flotation device or board by ‘leaning back (to go up) and forward (to go down)’ and ‘steer left or right by leaning in the appropriate direction.’” *Id.* (citing Ex. 1001, 4:48–51).

In its response to Petitioner’s application of the prior art, Patent Owner further argues that unless the top surface is a “substantially flat surface,” a user would be incapable of standing or lying in a prone position. *See* Prelim. Resp. 29–30 (arguing that a raised portion on the watercraft disclosed in the Evolo Report would prevent a user from standing or lying in the prone position) (citing in part Ex. 2006 ¶ 75).

We disagree with Patent Owner’s claim construction.

By using the word “or,” the plain and ordinary meaning of “prone, kneeling, or standing” is that only one must be satisfied to meet the claim. *See, e.g., SkinMedica, Inc. v. Histogen Inc.*, 727 F.3d 1187, 1199 (Fed. Cir. 2013) (“The disjunctive ‘or’ plainly designates that a series describes alternatives.”).

Furthermore, and although claims are read in light of the specification, limitations in a specification are not read into a claim. *In re van Geuns*, 988 F.2d 1181, 1184 (Fed. Cir. 1993). Even if the Specification describes embodiments in which the user can begin in a prone position and then transition to a kneeling or standing position, as Patent Owner points out (*see* Prelim. Resp. 20), the claim does not recite the term “transitioning,” and we do not read the terms “each of” or “substantially flat surface” into this claim limitation. For example, the claim does not recite a “substantially flat” top surface and Patent Owner’s attempt to infer this structure into the claim is not supported under the law. *See id.* at 29–30.

For purposes of this Decision, we agree with Petitioner and construe “prone, kneeling, or standing” in accordance with its plain and ordinary meaning as alternatives, and the prior art need only show one to satisfy this aspect of the claim.

2. “*a passively stable, weight-shift controlled personal hydrofoil watercraft*”

The preamble of claim 1 recites, “[a] passively stable, weight-shift controlled personal hydrofoil watercraft.” Ex. 1001, 7:36–37. Petitioner and Patent Owner each proposes a construction for this term. *See* Pet. 12–13; *see also* Prelim. Resp. 21–22. Neither party expressly addresses whether the preamble is limiting, but each appears to assume that it is. *See* Pet. 12–13; Prelim. Resp. 21–22.

Petitioner construes the claim language under its plain and ordinary meaning, referring the district court’s claim construction order in the *Waydoo* Case. *See* Pet. 21–22. In the *Waydoo* Case, on June 30, 2022, the court first determined that this limitation should be interpreted under its plain and ordinary meaning without elaborating on what that meaning is. Ex. 1023, 2.

Patent Owner proposes that we adopt the court’s *subsequent* claim construction in the *Waydoo* Case. *See* Prelim. Resp. 21–22 (citing Ex. 2025, 7). Specifically, on February 2, 2023, the court construed “[a] passively stable, weight-shift controlled personal hydrofoil watercraft” to mean ‘a weight-shift controlled personal watercraft having a hydrofoil that does not have any moveable components and which, when disturbed, (1) has an initial tendency to return to its original condition and (2) eventually returns to its original condition.’” Ex. 2025, 7.

At this stage of the proceeding, we need not construe the preamble expressly because doing so does not resolve the present controversy before us. *See Realtime Data, LLC v. Iancu*, 912 F.3d 1368, 1375 (Fed. Cir. 2019) (“The Board is required to construe ‘only those terms . . . that are in controversy, and only to the extent necessary to resolve the controversy.’”)

(quoting *Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999)). Put succinctly, the present record does not reflect a difference of opinion between the parties as to the meaning of the preamble.

Furthermore, whether the preamble is limiting need not be resolved at this stage because, regardless of whether the preamble is limiting, Petitioner shows sufficiently, on the present record, that the prior art satisfies the recitation in the preamble.

If the parties believe that there is a difference of opinion regarding the meaning of the preamble, they should express their positions clearly in the briefing that follows institution.

3. Other Claim Terms

We need not and do not formally construe any other claim term. *See Realtime Data*, 912 F.3d at 1375.

C. Principles of Law

Petitioner's challenge is based on obviousness. *See* Pet. 12.

A patent claim is unpatentable as obvious if the differences between the claimed invention and the prior art are such that the claimed invention as a whole would have been obvious before the effective filing date of the claimed invention to a person having ordinary skill in the art to which the claimed invention pertains. *See KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). The question of obviousness is resolved on the basis of underlying factual determinations including: (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of ordinary skill in the art; and, when presented, (4) objective evidence of nonobviousness. *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

We analyze the asserted grounds of unpatentability in accordance with these principles.

D. Ground 1: Alleged Obviousness over the Evolo Report and Woolley

Petitioner submits that claims 1, 2, 4, 5, 7–11, 13, and 15 are unpatentable over the Evolo Report and Woolley. Pet. 20.

1. Evolo Report (Ex. 1003)

According to Petitioner, the

EvoloReport is a design document describing the work conducted by a Master’s Level course on Marine Design/Lightweight Design taught at Kungliga Tekniska högskolan (“KTH”) in Stockholm, Sweden. EvoloReport was authored by the instructors and students in the class and describes their work in designing a battery-powered electric-motor-driven hydrofoil watercraft.

Pet. 13 (citing Ex. 1003).

Petitioner relies on the declaration of Jakob Kutteneuler, a professor in the Department of Technical Mechanics at Kungliga Tekniska högskolan (“KTH”). Ex. 1018 ¶ 1. Dr. Kutteneuler⁹ testifies that he “instructed and supervised” a team of 15 students from KTH from August 2008 to June 2009 to design and build a personal hydrofoil watercraft. *See id.* ¶¶ 4–6.

Dr. Kutteneuler further testifies,

At the end of the semester (in or around June 2009), the Evolo team finalized a written report and submitted a copy to me. The final Evolo report was written in Swedish.

⁹ Patent Owner refers to Jakob Kutteneuler as Dr. Kutteneuler while Petitioner does not. *Compare* Prelim. Resp. 9, *with* Pet. 13, 16. Although the record does not reflect that Jakob Kutteneuler has a doctorate-level education (*see* Ex. 1018), we will refer to him as Dr. Kutteneuler.

In 2009, shortly after receiving the final report, I published a PDF of it on the website for the Marine Design and Lightweight Design courses. The final report is available at this web address: http://flygmac7.flyg.kth.se/cdio/old_projects/evolo/Evolo_slutrapport.pdf.

Id. ¶¶ 17–18. Dr. Kutteneuler also testifies, “To the best of my knowledge, the final Evolo report has been available for download by people in the United States since I added it to the Marine Design and Lightweight Design course website in 2009, just as it has been available to people in Sweden (and elsewhere in the world) since 2009.” *Id.* ¶ 19.

We reproduce Figure 1 of the Evolo Report, below:



Figure 1 Evolo's final design

Figure 1 depicts, “Evolo’s final design.” Ex. 1003, 3. The Evolo Report provides the following summary:

Evolo is a new type of watercraft that travels on a hydrofoil and is intended for one person. It is powered by an electric motor and is connected only by means of center of gravity movement. This report presents a brief summary of the results from the project with detailed analysis in appendices.

Id.

2. *Woolley (Ex. 1011)*

Woolley is a U.S. patent titled, “Flying Ski.” Ex. 1011, code (54). Woolley discloses an “improved flying ski . . . designed to be towed behind a conventional powered watercraft utilizing a standard ski tow rope or similar device having a handle that can be held by a human rider.” *Id.* at code (57). We reproduce Figure 1 of Woolley, below:

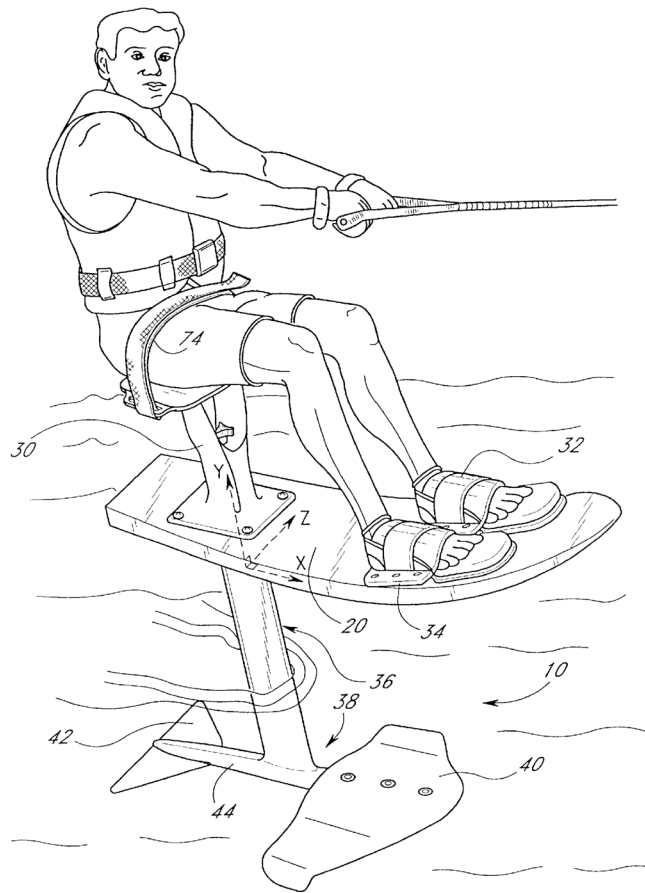


FIG. 1

Woolley's Figure 1 is a perspective view of "an improved flying ski in accordance with a preferred embodiment of" Woolley's invention.

Ex. 1011, 4:41–43. Flying ski 10 is desirably towed behind a conventional powered watercraft utilizing a standard ski tow rope that can be held by a human rider. *See id.* at 6:44–47. Figure 1 further depicts flying ski 10 with elongate board 20. *Id.* at 6:10–11. Seat 30 extends perpendicularly from the upper face of board 20 to support a rider. *Id.* at 6:13–15. Elongate strut 36 extends perpendicularly from the lower face of board 20 to planing blade 38. *Id.* at 6:17–19. Planing blade 38 has front blade 40 and rear blade 42 interconnected by fuselage 44.

3. *Whether the Evolo Report is a Prior Art Printed Publication*

The determination of whether a document is a "printed publication" under 35 U.S.C. § 102 "involves a case-by-case inquiry into the facts and circumstances surrounding the reference's disclosure to members of the public." *In re Klopfenstein*, 380 F.3d 1345, 1350 (Fed. Cir. 2004).

"Because there are many ways in which a reference may be disseminated to the interested public, 'public accessibility' has been called the touchstone in determining whether a reference constitutes a 'printed publication.'" *Jazz Pharm., Inc. v. Amneal Pharm., LLC*, 895 F.3d 1347, 1355 (Fed. Cir. 2018) (quoting *In re Hall*, 781 F.2d 897, 898–99 (Fed. Cir. 1986)). The Federal Circuit has "interpreted § 102 broadly, finding that even relatively obscure documents qualify as prior art so long as the relevant public has a means of accessing them." *GoPro, Inc. v. Contour IP Holding LLC*, 908 F.3d 690, 693 (Fed. Cir. 2018)

As the Board has held in a precedential decision, "at the institution stage, the petition must identify, with particularity, evidence sufficient to

establish a reasonable likelihood that the reference was publicly accessible before the critical date of the challenged patent and therefore that there is a reasonable likelihood that it qualifies as a printed publication.” *Hulu, LLC v. Sound View Innovations, LLC*, IPR2018-01039, Paper 29 at 13 (PTAB Dec. 20, 2019) (precedential).

Petitioner submits that the “Evoloreport is a design document describing the work conducted by a Master’s Level course on Marine Design/Lightweight Design taught at Kungliga Tekniska högskolan (‘KTH’) in Stockholm, Sweden.” Pet. 13. Petitioner notes that the Evoloreport was authored by the instructors and students in the class.” *Id.* Petitioner submits that “Evoloreport was uploaded to http://flygmac7.flyg.kth.se/cdio/old_projects/evolo as of 2009.” *Id.* Petitioner also contends that the “Evoloreport was further published when a popular Swedish boating magazine, *Båtnytt*, published an article in its August 2009 issue, which described the watercraft disclosed in [the] Evoloreport, including several photographs of the watercraft.” *Id.* at 14 (citing Ex. 1018 ¶¶ 29–30). In addition to describing the Evolo watercraft and providing pictures, the article included a link to the project’s webpage that included the Evoloreport. *Id.* at 14–16. Petitioner notes that *Båtnytt* had a readership of approximately 125,000 readers per issue and was available at public newsstands in Sweden. *Id.* at 16. Petitioner argues that “[t]he article in *Båtnytt* would have served as a publicly available [r]esearch aid that would have led a POSITA to the Evolo website, which contained the Evolo Report.” *Id.* (citing *Blue Calypso, LLC v. Groupon, Inc.*, 815 F.3d 1331, 1350 (Fed Cir. 2016)).

Patent Owner raises several arguments why Petitioner has not met its burden of showing a reasonable likelihood that the Evolo Report was publicly accessible. First, Patent Owner argues that the Petition “provides

little analysis as to the alleged public availability of the Evolo Report, but rather makes conclusory statements that the Evolo Report was publicly available prior the priority date of the '659 patent.” Prelim. Resp. 8–9. Patent Owner contends that the Petition improperly incorporates arguments from the Declaration of Dr. Kутtenkeuler (Ex. 1018), which cannot be relied upon. *See* Prelim. Resp. 8–9 (citations omitted). Patent Owner argues that “[t]here must be some evidence demonstrating how a person of ordinary skill in the art, exercising reasonable diligence, could have found the reference, in this case the Evolo Report, online.” *Id.* at 9. Patent Owner asserts that “[b]ased on the lack of evidence supporting Petitioner’s claim, there is no reasonable likelihood that the Evolo Report qualifies as a printed publication.” *Id.* Patent Owner notes that “[e]xisting on a website alone is insufficient to establish that publication is ‘publicly accessible.’” *Id.* at 9–10. Instead, “[s]ome evidence that a person of ordinary skill could have reasonably found the website and then found the reference on that website is required.” *Id.* at 10. Patent Owner argues that “Petitioner has done no more than provide minimal assertions that the Evolo Report was posted somewhere within Dr. Kутtenkeuler’s website.” *Id.* at 10–11.

Second, Patent Owner argues that Petitioner’s reliance on the Båtnytt article does not cure the deficiencies in Petitioner’s case. *Id.* at 11. In particular, Patent Owner contends that Båtnytt, at the time, was a consumer magazine “with a relatively small circulation” and “a narrow geographic focus” and a person of ordinary skill in the art would not have looked at that type of magazine. *Id.* at 12

We find that Petitioner has shown a reasonable likelihood that the Evolo Report is a printed publication and prior art. As an initial matter, we note that the Petition contains several pages of explanation (*see* Pet. 13–17),

and it is permissible to support that explanation with additional testimony in a declaration. Thus, we do not agree with Patent Owner's contention that the Petition improperly incorporates by reference from Dr. Kутtenkeuler's declaration.

Even without the additional testimony, we find that Petitioner has provided sufficient evidence to establish a reasonable likelihood that the Evolo Report was posted on the Internet without any restrictions by at least 2009 (well before the priority date). *See* Ex. 1018 ¶¶ 18–20. We note that, as Patent Owner correctly contends, posting alone is not enough to show something qualifies as a printed publication and prior art, Petitioner must show “that persons interested and ordinarily skilled in the subject matter or art[,] exercising reasonable diligence, can locate it.” Prelim. Resp. 9 (citing *Acceleration Bay, LLC v. Activision Blizzard Inc.*, 908 F.3d 765, 772 (Fed. Cir. 2018)). The Federal Circuit has recognized that “the presence of a ‘research aid’ can also establish public accessibility.” *Blue Calypso*, 815 F.3d at 1350.

On this record, Petitioner has shown a reasonable likelihood that the Båtnytt article is a “research aid” that would have guided a person of ordinary skill in the art to Dr. Kутtenkeuler's website and to the Evolo Report. *See* Pet. 14–17; Ex. 1018 ¶¶ 29–30; Ex. 1019, 9, 12. On the current record, we disagree with Patent Owner's contentions that a person of ordinary skill would not have looked to Båtnytt as a research aid because it is a consumer magazine of limited subscription and geographic reach. *See* Prelim. Resp. 11–14. In support of these contentions, Patent Owner only cites to the testimony of its declarant Dr. Takahashi, but we are not persuaded by Dr. Takahashi's reasoning. *See id.* at 12 (citing Ex. 2006 ¶ 38). Dr. Takahashi opines that a person of ordinary skill in the art would

“likely . . . use a free search tool such as scholar.google.com” or “[t]ypical academic articles . . . published by major scientific printing houses (e.g., Elsevier) or by professional societies (e.g., American Society of Mechanical Engineers – ASME).” Ex. 2006 ¶ 39. Dr. Takahashi further opines “[i]t is extremely unlikely that a POSITA would, when designing a watercraft, look to a boating magazine such as Båtnytt that is (i) directed to a lay (consumer) audience, (ii) has a relatively small circulation (e.g., 104,000 readers at the relevant time frame . . .), (iii) has a narrow geographic focus (e.g., Sweden . . .) and/or (iv) is not typically indexed in Google Scholar or similar academic search engines.” *Id.* Dr. Takahashi does not cite any sources to support his opinion.

We do not necessarily agree that a magazine of more than 100,000 subscribers has limited circulation, or that a magazine found in a relatively large, wealthy, and highly developed country, such as Sweden, is necessarily geographically limited. In any event, we find that, even if limited, this level of distribution is sufficient at this stage to show a reasonable likelihood that a person of ordinary skill would have been able to locate Dr. Kутtenkeuler’s website and the Evolo Report. As for Patent Owner’s contention that a person of ordinary skill would not have been aware of Båtnytt because it is directed to a lay audience, we disagree. The ’659 patent is directed to a “personal watercraft.” Ex. 1001, 1:13. On the current record, we disagree with Patent Owner and Dr. Takahashi that a person of ordinary skill in the art designing “personal watercraft” for consumers would not be interested in magazines related to boating and watercraft for customers of their designs. Indeed, a person of ordinary skill in the art in “personal watercraft” would need to be aware of the design needs of consumers for such craft. *See KSR*, 550 U.S. at 421 (noting a person of ordinary skill will be sensitive to “design

need[s] or market pressure[s]”). Finally, we decline to impose any requirement that an article be found in any particular database to be considered a printed publication. Dr. Takahashi provides no support for his contention that a person of ordinary skill would “likely” rely on Google Scholar and not some other search engine. *See* Ex. 2006 ¶ 38. Even if he is correct, we find the other evidence sufficient to establish a reasonable likelihood that a person of ordinary skill would have access to the Båtnytt article and it would have guided such person to the Evolo Report.

Accordingly, we find that Petitioner has shown a reasonable likelihood that the Evolo Report is a prior art printed publication.

4. *Independent Claim 1*

We address each of the limitations of claim 1 as partitioned by Petitioner. *See* Pet. 20–29.

a. *Element 1(P): “A passively stable, weight-shift controlled personal hydrofoil watercraft”*

Petitioner submits that the Evolo Report discloses a weight-shifting controlled personal hydrofoil watercraft, to the extent that the preamble is limiting. *See* Pet. 20. Petitioner further submits that the

EvoloReport discloses that both pitch stability and rolling stability are factors in the design of the disclosed EvoloReport hydrofoil. The term “stable” as used by the EvoloReport was being used to mean passive static stability as contemplated by the ‘659 patent (“By stable is meant that if Evolo is exposed to a disturbance, it will return to its initial position.”).

Id. at 21 (citing Ex. 1003, 58–62 (“The purpose of this analysis is to establish a configuration of the hydrofoil so that it is stable in pitch.”), 88–98; Ex. 1002 ¶ 38).

To address the requirement that the watercraft be “passively stable,” Petitioner cites to Woolley’s teachings. *See* Pet. 21.

Petitioner submits that Woolley teaches a “hydrofoil fixedly interconnected with the lower end of a strut, the hydrofoil having no moveable surface and designed to provide passive static stability controlled solely by weight shift of the user.” Pet. 21 (citing Ex. 1002 ¶ 40). Petitioner refers to Woolley’s planing blade, shown above by reference numeral 38 in Woolley’s Figure 1, and submits that “the purpose of the planing blade is to provide a combination of ‘stability, lift, and responsiveness.’” *Id.* (citing Ex. 1011, 6:16–18, 10:22–27; Ex. 1002 ¶ 40). Petitioner’s declarant, Dr. Brizzolara, testifies that Woolley’s use of “counteracting forces between the upward force caused by the forward blade of the hydrofoil and the downward force caused by the rear blade of hydrofoil is a well-known method for increasing pitch stability.” Ex. 1002 ¶ 42.

Petitioner further submits that the “forward blades and rear blades disclosed within Woolley show the use of winglets or fins at their ends . . . [and that] these features are used to provide roll and yaw stability.” Pet. 23 (citing Ex. 1011, Figs. 6A, 9A, 10A, 11A; Ex. 1011, 11:6–15 (“[t]he relatively large distance of the edge of the blade from the plane of symmetry A increases the moment created by water acting on the surface of the blade”); Ex. 1002 ¶ 44).

Petitioner submits that “Woolley’s disclosure of both pitch stability along with roll and yaw stability through the use of the hydrofoil discloses a hydrofoil designed to provide passive static stability.” Pet. 23–24.

Based on Woolley’s teachings, Petitioner reasons that a “POSITA would have been motivated to combine [the] EvoloReport with Woolley to provide for a passively stable hydrofoil.” Pet. 21.

Alternatively, Petitioner also reasons, “To the extent that the disclosed hydrofoil in Woolley could be found to not be designed to provide passive static stability, a POSITA would have sufficient knowledge to modify the disclosed hydrofoil in Woolley such that it was designed to provide passive static stability.” Pet. 24 (citing Ex. 1002 ¶ 47).

Patent Owner argues that “the Evolo Report lacks any evidence of success in achieving longitudinal stability.” Prelim. Resp. 23. Patent Owner further argues that the “Evolo Report teaches away from a passively stable configuration” (*id.* at 23–24) as a “POSITA would recognize that the device of the ‘Evolo Report could only be stabilized using some sort of active control system (e.g., through the use of moveable hydrodynamic control surfaces) and, thus, would lead a POSITA to use such an active control system’” (*id.* at 24).

Patent Owner also argues that there is “neither a motivation to combine the Evolo Report with Woolley nor is there a reasonable expectation of success in achieving the claimed invention.” Prelim. Resp. 24. Patent Owner points out that Woolley is designed to be pulled by a powered watercraft, whereas the device in the Evolo Report is self-propelled. *See id.* at 25–26. Dr. Takahashi testifies that “the propulsive force differs significantly between the watercraft of the Evolo Report and the watercraft described in Woolley.” Ex. 2006 ¶ 67. Patent Owner contends that a “hydrofoil is not designed in a vacuum; the positioning of the propulsive forces, among other things, must be considered when considering hydrofoil craft stability.” Prelim. Resp. 26 (citing Ex. 2006 ¶¶ 67–68). Dr. Takahashi testifies that the “hydrofoil configuration of Woolley would be unworkable on the device described in the Evolo Report, as this combination would result in an unstable hydrofoil.” Ex. 2006 ¶ 68. Patent

Owner further points out that Woolley’s device is not controlled by weight-shifting, but by the towing watercraft. *See* Prelim. Resp. 28 (citing Ex. 2006 ¶¶ 53, 54).

Even though we see nothing in the Evolo Report that rises to the level of *teaching away* (i.e., discourages, discredits, or criticizes) from the proposed combination, at this stage of the proceeding, we note that Patent Owner’s arguments have merit. *See In re Fulton*, 391 F.3d 1195, 1201 (Fed. Cir. 2004) (“A reference does not teach away . . . if it merely expresses a general preference for an alternative invention but does not ‘criticize, discredit, or otherwise discourage’ investigation into the invention claimed.”). Indeed, Woolley’s towed-device is different from the self-propelled device described in the Evolo Report. Although we believe Dr. Brizzolara’s testimony and reasoning are sufficient, at this stage, to satisfy Petitioner’s burden of showing a reasonable likelihood of success, there are questions whether the stability taught by Woolley’s towed device would have led a skilled artisan to achieve stability with the self-propelled device taught in the Evolo Report. In particular, given Dr. Takahashi’s testimony, we have questions about Dr. Brizzolara’s testimony that Woolley’s use of “counteracting forces between the *upward force caused by the forward blade* of the hydrofoil and the *downward force caused by the rear blade* of hydrofoil is a well-known method for increasing pitch stability” (Ex. 1002 ¶ 42 (emphases added)) when applied to the self-propelled watercraft shown and described in the Evolo Report. For example, Dr. Takahashi’s testimony that Woolley’s “tow rope significantly contributes to any stability of the watercraft” (Ex. 2006 ¶ 66) raises questions regarding Petitioner’s application of Woolley’s teachings. *Compare, e.g.*, Ex. 1002 ¶ 40, *with, e.g.*, Ex. 2006 ¶¶ 59–70. At this

preliminary stage, however, neither party has had the opportunity to cross-examine the opposing party's witness, and it would be beneficial for our consideration of this issue to have the record further developed following institution. At this stage of the proceeding, based on the current briefing and evidence, Petitioner's contentions are sufficient.

Without determining whether the preamble is limiting, we find that Petitioner has shown a reasonable likelihood that the combination of the Evolo Report and Woolley satisfies Element 1(P).

b. Element 1A1: "a floatation device that has a fore-aft length greater than a lateral width, the floatation device having a top surface and a bottom surface"

Petitioner submits that the Evolo Report discloses this limitation. Pet. 25 (citing Ex. 1002 ¶ 48).

The Evolo Report discloses the use of a watercraft, or flotation device, with a "floating body." See Ex. 1003, 550. The Evolo Report teaches that its flotation device "has sufficient volume to stay afloat with the drive." *Id.* The Evolo Report further discloses that the device has an overall length (bow to stern) of C1, which is given as a length of 2313 millimeters, and an overall breadth (port to starboard) of A3, measuring 701 millimeters. *Id.* at 546–47.

Patent Owner does not dispute these assertions. See generally Prelim. Resp.

At this preliminary stage of the proceeding, based on the current briefing and evidence, Petitioner has shown a reasonable likelihood that the Evolo Report satisfies Element 1A1.

c. Element 1A2: “wherein a user can be disposed on the top surface of the flotation device in a prone, kneeling, or standing position”

Petitioner submits that the Evolo Report discloses a watercraft that is designed for use with a “kneeling driver’s position” holding the handles on the top surface of the flotation device. Pet. 26 (citing Ex. 1003, 551; Ex. 1002 ¶ 53).

Patent Owner refers to the claim construction discussed above regarding “prone, kneeling, or standing,” and argues that the “device of the Evolo Report *only* allows a user to be disposed in a kneeling position.” Prelim. Resp. 29.

For the reasons discussed above, we disagree with Patent Owner’s argument as it is premised on an overly narrow construction of the limitation. *See supra* § IV.B.1.

Furthermore, *even if* we adopted Patent Owner’s proposed construction that requires the claimed device to be configured to accommodate a user in each of the standing, prone, *and* kneeling positions, it appears that the device described in the Evolo Report is *capable* of allowing a user to be disposed on the top surface in a standing, kneeling, and prone position. A prior art structure satisfies a functional limitation in an apparatus claim if the structure is capable of performing the recited function. *See, e.g., In re Schreiber*, 128 F.3d 1473, 1478–79 (Fed. Cir. 1997) (explaining that a device disclosed in a prior art reference was capable of performing a function recited in the claimed apparatus).

Patent Owner submits the following annotated image from the Evolo Report:

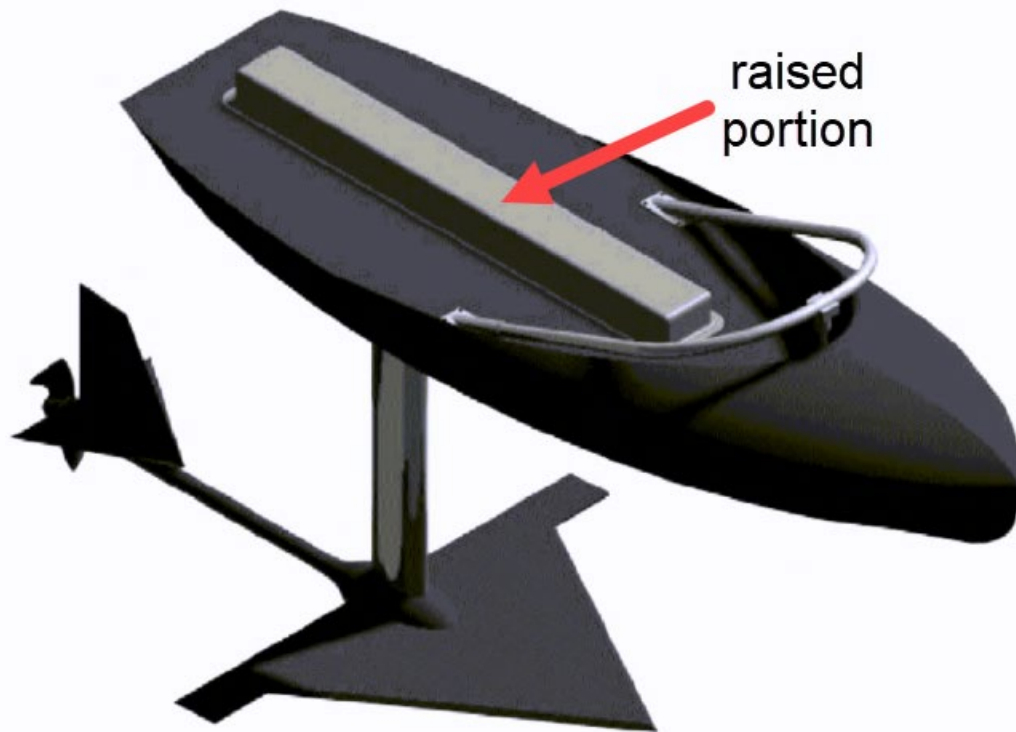


Figure 1 Evolo's final design

Prelim. Resp. 29. Patent Owner’s reproduction of Figure 1, which shows “Evolos final design” (Ex. 1003, 3), includes an annotation in the form of a red arrow pointing to a rectangular structure, which is on the top surface of the flotation device and parallel to the centerline of the Evolo watercraft, that Patent Owner identifies as a “raised portion.” *See* Prelim. Resp. 29. Patent Owner, supported by Dr. Takahashi’s testimony, argues that the claim requires the flotation device to have a “substantially flat surface,” and that the raised portion of the Evolo watercraft would prevent a user from being in a prone or standing position. *See id.* at 29–30 (citing in part Ex. 2006 ¶ 75); *see also* Ex. 2006 ¶ 75.

We disagree with Patent Owner’s position, as claim 1 does not recite structure, such as a “substantially flat top surface,” which would exclude the watercraft disclosed in the Evolo Report from satisfying the claim. *See* Ex. 1001, 7:36–54; *see also supra* § IV.B.1 (addressing the same). Furthermore, it appears that a user would be capable of being “disposed on the top surface of the flotation device in a prone, kneeling, or standing position” with the presence of the raised portion, thereby meeting the claim limitation even under Patent Owner’s overly narrow construction. The claim does not recite structure that requires a certain level of comfort when a user is disposed in the prone position, and we see nothing in the embodiment disclosed in the Evolo Report that would necessarily preclude a person from being disposed in the prone position, even with the “raised portion” present. *See, e.g.*, Ex. 1003, 3.

At this preliminary stage of the proceeding, based on the current briefing and evidence, Petitioner has shown a reasonable likelihood that the Evolo Report satisfies Element 1A2.

d. Element 1A3: “the flotation device having a forward section, a middle section, and a rear section”

Petitioner submits that the Evolo Report discloses a “floatation device having a forward section, a middle section, and a rear section.” Pet. 26 (citing in part Ex. 1003, 546; Ex. 1002 ¶¶ 54, 55).

Patent Owner does not dispute these assertions. *See generally* Prelim. Resp.

At this preliminary stage of the proceeding, based on the current briefing and evidence, Petitioner has shown a reasonable likelihood that the Evolo Report satisfies Element 1A3.

- e. Element 1B: “a strut having an upper end and a lower end, the upper end fixedly interconnected with the flotation device between the middle section and the rear section of the flotation device”*

Petitioner submits that the Evolo Report discloses this structure. Pet. 27 (citing Ex. 1003, 211–15, 549, Fig. 10; Ex. 1002 ¶ 58). We reproduce Figure 10 of the Evolo Report, below:

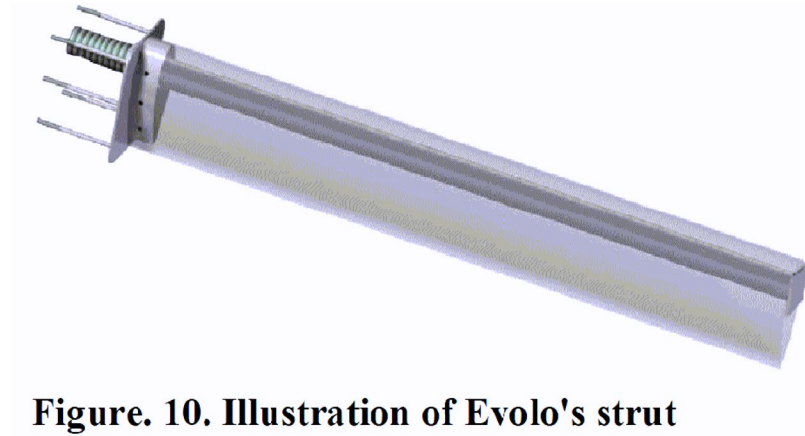


Figure. 10. Illustration of Evolo's strut

Figure 10 is an illustration of Evolo’s strut. Ex. 1003, 549. The Evolo Report discloses a “strut is the part that connects the floating body and the hydrofoil.” *Id.*

We further reproduce Figure 2 from the Evolo Report’s “final design” (Ex. 1003, 4), below:

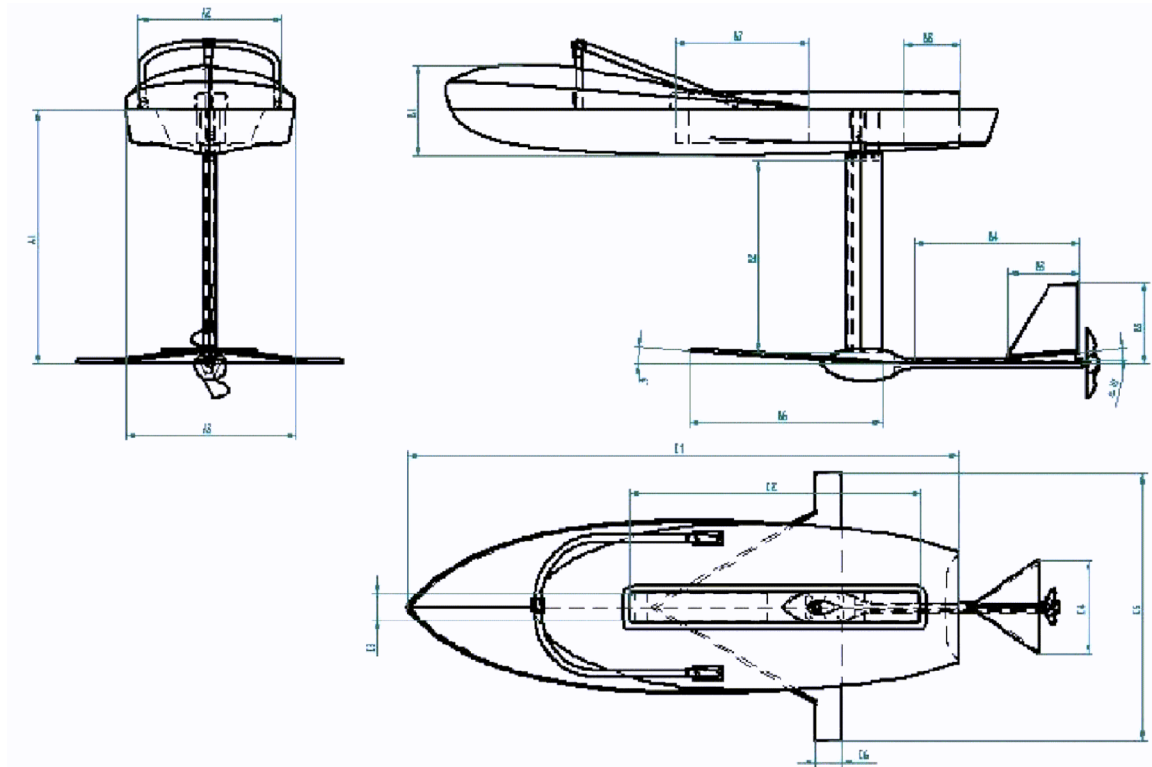


Figure 2 General arrangement of Evolo

Figure 2 is titled, “Figure 2 General arrangement of Evolo.” Ex. 1003, 4. As shown above, the “strut” appears to connect the triangular-shaped forward hydrofoil to the flotation device, at a location between the middle and rear section of the flotation device. *See id.*

Patent Owner does not dispute these assertions. *See generally* Prelim. Resp.

At this preliminary stage of the proceeding, based on the current briefing and evidence, Petitioner has shown a reasonable likelihood that the Evolo Report satisfies Element 1B.

f. Element 1C: “a hydrofoil fixedly interconnected with the lower end of the strut, the hydrofoil having no moveable surface”

Petitioner submits that the Evolo Report discloses this structure, citing in part Figure 9 of the report. *See* Pet. 28. We reproduce Figure 9 from the Evolo Report, below:



Figure. 9. Illustration of Evolo's underwater body

Figure 9 is an “[i]llustration of Evolo’s underwater body.” Ex. 1003, 546.

Dr. Brizzolara testifies that the Evolo’s “hydrofoil has no moveable surface” (Ex. 1002 ¶ 59) and that the hydrofoil “was designed to be ‘controlled by means of a center of gravity shift’” (*id.* ¶ 60).

Under a heading reciting the language of Element 1C, Patent Owner argues that “the Evolo Report (alone or in combination with Woolley) fails to teach a hydrofoil designed to achieve the *passively stable* feature of the hydrofoil watercraft.” Prelim. Resp. 30 (emphasis added) (citing Ex. 2006 ¶ 79).

Patent Owner’s argument does not address the particular language of Element 1C. *See* Prelim. Resp. 30–31. Rather, Patent Owner addresses language (“passively stable”) recited in the preamble, which we discussed

above. *See supra* § IV.D.4.a. Therefore, Patent Owner’s argument as applied to Element 1C is inapposite and Petitioner’s contentions regarding Element 1C are not challenged at this stage.

At this preliminary stage of the proceeding, based on the current briefing and evidence, Petitioner has shown a reasonable likelihood that the Evolo Report satisfies Element 1C.

g. Element 1D: “a propulsion system for propelling the watercraft in a body of water, wherein the propulsion system is connected to the hydrofoil”

Petitioner submits that the Evolo Report discloses a watercraft with a propulsion system for propelling the craft in a body of water, wherein the propulsion system is connected to the hydrofoil. Pet. 29 (citing Ex. 1002 ¶ 29). Petitioner further submits that the device disclosed in the Evolo Report uses an “electric motor coupled with batteries and a propellor to provide a propulsion system for propelling the watercraft in a body of water.” *Id.* (citing Ex. 1003, 551–52; Ex. 1002 ¶ 52). Petitioner also submits that the propulsion system is directly connected to the hydrofoil. *Id.* (citing Ex. 1003, 549; Ex. 1002 ¶ 63).

Patent Owner does not dispute these assertions. *See generally* Prelim. Resp.

At this preliminary stage of the proceeding, based on the current briefing and evidence, Petitioner has shown a reasonable likelihood that the Evolo Report satisfies Element 1D.

h. Element 1E: “the watercraft having no movable steering system”

Petitioner submits that the watercraft disclosed in the Evolo Report has no movable steering system. Pet. 29 (citing Ex. 1002 ¶ 64). Petitioner further submits that the device uses a “fixed, unmovable handle for the rider

to hold onto the watercraft and apply weight shifting.” *Id.* (citing Ex. 1003, 551; Ex. 1002 ¶ 64).

Although Patent Owner disputes Petitioner’s position, Patent Owner simply repeats its arguments from the discussion of the preamble of claim 1 pertaining to a passively stable, weight-shift controlled watercraft, which we addressed above. *See* Prelim. Resp. 30–31 (“As discussed above with respect to the limitation of ‘a passively stable, weight-shift controlled personal hydrofoil watercraft’”); *see also id.* at 31 (“Petitioner fails to provide an explanation for why a POSITA would have a reasonable expectation of success at achieving the claimed invention with such a combination” of the Evolo Report and Woolley.); *see also supra* §§ IV.B.2, D.4.a. At this stage of the proceeding, based on the current briefing and evidence, Petitioner’s contentions are sufficient.

The Evolo Report discloses that its watercraft “is powered by an electric motor and is controlled only by means of center of gravity movement.” Ex. 1003, 3.

At this preliminary stage of the proceeding, based on the current briefing and evidence, Petitioner has shown a reasonable likelihood that the Evolo Report satisfies Element 1E.

i. Objective Evidence of Nonobviousness

Patent Owner argues that evidence of commercial success, long-felt yet unresolved need, failure of others, industry praise (including licensing), copying, and unexpected results weigh against a finding of obviousness. *See* Prelim. Resp. 47–57.

This Decision is not a final determination of unpatentability. Rather, it is simply a determination that Petitioner has shown a reasonable likelihood that at least one of the Challenged Claims is unpatentable.

Petitioner has not had the opportunity to address Patent Owner's objective evidence, which is oftentimes very fact intensive. At this stage of the proceeding, we note that Patent Owner has presented objective evidence of nonobviousness, but at this time, in view of the preliminary posture of the proceeding, we determine that Petitioner has met its burden of showing a reasonable likelihood of success. During the trial phase of this proceeding, the parties will have a full opportunity to submit argument and evidence addressing this issue, giving us the opportunity to assess the evidence based on a fully developed record.

j. Summary of Independent Claim 1

At this preliminary stage, Petitioner demonstrates a reasonable likelihood that the subject matter of claim 1 would have been obvious over the combined disclosures of the Evolo Report and Woolley.

2. Dependent Claims 2, 4, 5, 7–11, 13, and 15

Petitioner contends, with citations to the evidence and testimony, that the Evolo Report and Woolley teach or suggest every limitation of claims 2, 4, 5, 7–11, 13, and 15. *See* Pet. 9, 30–51. Patent Owner does not address Petitioner's arguments with respect to these additional claims, apart from the arguments directed to claim 1, which we addressed above. *See* Prelim. Resp. 31 ("Patent Owner reserves the right to address each of dependent claims 2, 4-5, 7-11, 13, and 15 individually should trial be instituted.").

Upon review of the parties' arguments and supporting evidence, and based on the current state of briefing, Petitioner demonstrates a reasonable

likelihood that the subject matter of claims 2, 4, 5, 7–11, 13, and 15 would have been obvious over the combined disclosures of the Evolo Report and Woolley.

3. Summary of Ground 1

Petitioner demonstrates a reasonable likelihood that the subject matter of claims 1, 2, 4, 5, 7–11, 13, and 15 would have been obvious over the combined disclosures of the Evolo Report and Woolley.

E. Ground 2: Alleged Obviousness over the Evolo Videos and Woolley

Petitioner submits that claims 1, 4, 5, 7, and 15¹⁰ would have been obvious over the Evolo Videos and Woolley. *See* Pet. 9, 51.

1. Evolo Videos (Exs. 1006, 1008, and 1010)

The Evolo Videos refer to a collection of three separate videos: (1) the Evolo Prototype Run (Ex. 1006); (2) the Evolo Movie (Ex. 1008); and (3) the Torquedo Video (Ex. 1010). Pet. 51–52. Petitioner reasons that a “POSITA would have been motivated to combine the disclosures of these three videos because the videos are related to the disclosure of the same information – the development of the Evolo Project.” *Id.* at 52 (citing Ex. 1002 ¶ 98).

¹⁰ The heading on page 66 of the Petition and the sentence that follows include inadvertent and harmless typographical errors by listing claim “21,” rather than claim 15. *Compare* Pet. 9, 51 (identifying claim 15 within Ground 2), *with id.* at 66 (referring to claim 21). Claim 21 does not exist (*see* Ex. 1001, columns 7–9, listing the claims of the ’659 patent), and the language erroneously attributed to claim 21 on page 66 is identical to that of claim 15. *Compare* Pet. 66, *with* Ex. 1001, 8:34–36. Thus, it is clear that Petitioner intended to challenge claim 15 and we refer to claim 15 hereinafter.

Patent Owner contends that the grounds based on the Evolo Videos are improper because they “conflate[] these three separate videos into a single prior art reference.” Prelim. Resp. 33. Patent Owner also contends that the combination of the Evolo Videos “results in voluminous and excessive grounds.” Prelim. Resp. 2 (quoting *Adaptics Ltd. v. Perfect Co.*, *IPR2018-01596*, Paper 20 at 18 (PTAB Mar. 6, 2019)).

On this record, we find that Petitioner has shown sufficiently that a person of ordinary skill in the art would have been motivated to combine the teachings of the Evolo Videos because they are related to common subject matter. Patent Owner is free to explore any differences between the Evolo Videos during the trial. We also do not agree with Patent Owner that Petitioner’s five grounds are excessive. Thus, on the present record, we do not agree with Patent Owner that the combination of the Evolo Videos is improper.

a. Evolo Prototype Run (Ex. 1006)

The Evolo Prototype Run is a two minute, 23 second video posted on YouTube. *See* Ex. 1006. We reproduce a snapshot of the Evolo Prototype Run video, below:



Evolo prototype run

As shown above, a user, or more precisely, a rider, is kneeling on what appears to be the Evolo watercraft while holding on to a U-shaped handlebar. *See id.* at 1:50. Throughout the video, the user rides what is generally referred to as the Evolo, or Evolo watercraft. *See generally id.*

Petitioner submits that Dr. Kutteneuler (the professor at KTH) uploaded, on or about June 11, 2009, a video of the final Evolo prototype showing the testing sessions that took place during 2009. Pet. 17 (citing Ex. 1018, 4) (“On or about June 11, 2009, I uploaded to YouTube.com a video of the final Evolo prototype, taken by me and some of my students during the testing sessions in 2009.”); *see also* Ex. 1018 ¶ 1 (declaration of Dr. Kutteneuler).

b. Evolo Movie (Ex. 1008)

The Evolo Movie is a one minute, 45 second YouTube video. *See* Ex. 1008. We reproduce a snapshot of the Evolo Movie, below:



Evolu movie

As shown in the above snapshot, about fourteen people are posing under and around what appears to be the Evolu watercraft. *See id.* at 1:43. Throughout the Evolu Movie, a user is shown riding the watercraft. *See generally id.*

Petitioner submits that in the Evolu Movie, “the Evolu watercraft is shown in various different operating conditions, including while hydrofoiling and being completely removed from the water such that the hydrofoil and motor are visible.” *See* Pet. 17–18 (citing Ex. 1008, 1:17 (showing the watercraft hydrofoiling), 1:42 (showing the craft removed from the water with hydrofoil and motor visible)).

c. Torqeedo Video (Ex. 1010)

The Torqeedo Video is a 54 second video posted on YouTube. *See* Ex. 1010. The Torqeedo Video is titled “Test run – the new Torqeedo 4.0 R installed on Evolu!!!” *See id.* We reproduce a snapshot from the video, below:



Test run - the new Torqeedo 4.0 R installed on Evolo!!!

As shown above, two people appear to install a propeller shaft in a housing. *See id.* at 0:18. Throughout the video, two people use a motor to operate the propeller while speaking to each other. *See generally id.*

Petitioner submits that the Torqeedo Video “depicts installation of a Torqeedo motor by routing the top rod of the motor through the strut such that the rod of the motor becomes a part of the strut.” Pet. 62 (citing Ex. 1010, 0:00–0:01). Petitioner further submits that the Torqeedo Video depicts the Evolo’s motor pod housing connected to the forward hydrofoil and strut. *See* Pet. 59 (citing Ex. 1010, 0:23), 61 (citing Ex. 1010, 0:27)

2. *Whether the Evolo Videos are Prior Art Printed Publications*

Petitioner contends that, “throughout 2008 and 2009, both the instructor of the class, Jakob Kутtenkeuler, and project members published a number of videos on YouTube related to the watercraft disclosed in Evolo-Report.” Pet. 17 (citing Ex. 1018, 5; Ex. 1006; Ex. 1008; Ex. 1010). Petitioner argues that “Jakob Kутtenkeuler uploaded, on or about June 11, 2009, a video of the final Evolo prototype showing the testing sessions that took place during 2009.” *Id.* at 17–18 (citing Ex. 1018, 4; Ex. 1008; Ex. 1009). Petitioner asserts that “[t]he video has been publicly accessible since it was uploaded.” *Id.* at 18 (citing Ex. 1018, 5). Petitioner contends that “YouTube and Twitter are both mainstream Internet-based platforms that are used to disseminate information about projects and updates in the state of the art (e.g., a new type of recreational/sporting watercraft) to interested members of the public, including POSITAs. These platforms are well-known, public (e.g., no access restrictions), searchable, and intended to reach a wide audience.” *Id.* at 19. Petitioner notes that “[t]o date, the three EvoloVideos have received over 17,000, 72,000, and 12,000 views.” *Id.* (citing Ex. 1007; Ex. 1009; Ex. 1022). Petitioner further submits that “[t]he description page of EvoloVideos-EvoloMovieYouTube further contains description of the Evolo watercraft being an ‘electrically propelled hydrofoil watertoy’ and a link to additional information, containing a link to the Evolo-Report.” *Id.* (citing Ex. 1009).

Patent Owner argues that “there is insufficient evidence in the record to establish a reasonable likelihood that the Evolo Videos were publicly accessible prior art.” Prelim. Resp. 14. Patent Owner asserts that YouTube has different privacy settings, and that under some of those settings the video

may not have been locatable with a search. *Id.* at 14–15. Patent Owner also argues that, even assuming that Dr. Kuttenueler remembers events correctly and he “permitted the video to be viewed publicly,” Petitioner failed to submit evidence showing that the EvoloVideos-EvoloMovie (Ex. 1007) was either indexed or searchable. *Id.* at 16. Patent Owner makes similar contentions regarding the other Evolo Videos. *See id.* at 17–18.

On this record, we find that Petitioner has established a reasonable likelihood of showing that the Evolo Videos are prior art printed publications. Here, Petitioner has provided evidence that the videos were uploaded to YouTube and were capable of being viewed by the public. Patent Owner speculates that it is possible the videos were not searchable. At this stage of the proceeding, we find Dr. Kuttenueler’s testimony to be sufficient to establish a reasonable likelihood that the videos were accessible to the public. Petitioner has also provided extensive evidence that the Evolo project was promoted at different conferences, in the *Båtnytt* magazine, and that at least some of the videos were shown in a television program on the Discovery channel. *See* Ex. 1018 ¶¶ 24–37. At this stage of the proceeding, we find this evidence sufficient to meet the reasonable likelihood of prevailing standard that the Evolo Videos are prior art printed publications.

3. Independent Claim 1

We address each of the limitations of claim 1 as partitioned by Petitioner. *See* Pet. 51–58.

a. Element 1(P): “A passively stable, weight-shift controlled personal hydrofoil watercraft”

Petitioner relies on the Evolo Prototype Run (Ex. 1006), the Evolo Movie (Ex. 1008), and the Torquedo Video (Ex. 1010) (*see supra* § IV.E.1,

collectively, the “Videos,” the “Evolò Videos,” or the “EvolòVideos”) and argues that a “POSITA would have been motivated to combine the disclosures of these three videos because the videos are related to the disclosure of the same information – the development of the Evolo Project.” Pet. 51–52 (citing Ex. 1002 ¶ 98).

To the extent that the preamble is limiting, Petitioner submits that the Videos disclose a “passively stable, weight-shift controlled personal hydrofoil watercraft.” Pet. 51. In support of this position, Petitioner submits the following image:



The above image is a snapshot of the Evolo Prototype Run video. *See* Ex. 1006, 1:21; *see also* Pet. 52 (citing the same). Dr. Brizzolara testifies that the

EvolòVideos disclose a single person on a watercraft utilizing weight-shift to control the watercraft. To the extent that [the] EvolòVideos do not sufficiently disclose a watercraft that is passively stable, it would have been obvious to a POSITA to modify the watercraft disclosed in [the] EvolòVideos to make it passively stable.

Ex. 1002 ¶ 47 (citing Ex. 1006, 1:21).

As with Ground 1, Petitioner reasons that a “POSITA would have been motivated to combine the watercraft disclosed in the EvoloVideos with Woolley to provide for a passively stable hydrofoil.” Pet. 53 (citing Ex. 1002 ¶ 100).

In addition to repeating the same arguments under Ground 1, which pertain to the combinability of Woolley’s teachings, Patent Owner also argues that the Videos fail to show a “passively stable” device that also is “weight-shift controlled.” *See* Prelim. Resp. 34–35. Patent Owner explains, “Contrary to Dr. Brizzolara’s assertion, this clip from [the Evolo Prototype Run] is wholly insufficient to establish that the watercraft depicted therein includes ‘[a] passively stable, weight-shift controlled personal hydrofoil watercraft’, as recited in claim 1.” *Id.* at 41. Patent Owner further argues that “this single second of video (or the videos in their entirety) fails to show ‘weight-shift control’ as recited in claim 1.” *Id.* at 34.

As explained under Ground 1, Patent Owner’s arguments have merit, but we find that Petitioner has presented sufficient evidence to meet its burden of showing a reasonable likelihood of prevailing. There are questions as to whether the stability provided by Woolley’s towed device would have led a skilled artisan to modify the self-propelled device taught in the Evolo Videos, as Patent Owner argues. *See* Prelim. Resp. 33–42. Our ability to weigh the conflicting testimony between the parties’ declarants would be more complete upon cross-examination, and we believe the current state of the record warrants further development of the issue. *Compare, e.g.,* Ex. 1002 ¶ 40, *with, e.g.,* Ex. 2006 ¶¶ 81–95.

At this stage of the proceeding, and upon reviewing the Evolo Videos, it appears that the rider in the videos shifts his weight from side to side to

cause the watercraft to turn. *See, e.g.*, Ex. 1006, 0:35–0:53. It also appears, from the bottom of the Evolo watercraft, that there are no moving steering parts. *See, e.g., id.* at 0:09.

Without determining whether the preamble is limiting, Petitioner has shown a reasonable likelihood that the Evolo Videos in combination with Woolley satisfy Element 1(P).

b. Element 1A1: “a floatation device that has a fore-aft length greater than a lateral width, the floatation device having a top surface and a bottom surface”

Petitioner submits that the Evolo Videos disclose this limitation. *See* Pet. 53 (citing Ex. 1002 ¶ 101). In support of this assertion, Petitioner submits the following snapshot from the Evolo Prototype Run:



Id. at 54 (citing Ex. 1006, 0:27–0:30). The above snapshot depicts a screenshot of the Evolo Prototype Run. *See* Ex. 1006, 0:27. In particular, the screenshot appears to depict a floatation device, unmounted, along a pier with several people hovering over the watercraft. *See id.*

Petitioner also submits the following screenshot of the Evolo Prototype Run:



Pet. 54 (citing Ex. 1006, 0:09; Ex. 1002 ¶ 101). The above screenshot depicts what appears to be a side view of the Evolo watercraft, out of the water and mounted on two wooden boat stands. *See* Ex. 1006, 0:09.

Dr. Brizzolara references these screenshots and testifies that the Evolo Videos disclose that the floatation device has a top surface and a bottom surface. *See* Ex. 1002 ¶ 101.

Patent Owner does not dispute these assertions. *See generally* Prelim. Resp.

At this preliminary stage of the proceeding, based on the current briefing and evidence, Petitioner has shown a reasonable likelihood that the Evolo Videos satisfy Element 1A1.

c. Element 1A2: “wherein a user can be disposed on the top surface of the flotation device in a prone, kneeling, or standing position”

Petitioner submits that the Evolo Videos disclose this limitation. *See* Pet. 55. In support of this assertion, Petitioner submits the following snapshot from the Evolo Prototype Run:



Id. (citing Ex. 1006, 1:21; Ex. 1002 ¶ 102). The above image appears to depict a user kneeling on the Evolo watercraft. *See* Ex. 1006, 1:21.

Patent Owner refers to its claim construction position discussed above regarding “prone, kneeling, or standing.” *See* Prelim. Resp. 42–44. Patent Owner argues that the “device of the Evolo Videos only allows a user to be disposed in a kneeling position.” *See id.* at 43.

For the same reasons discussed above, we disagree with Patent Owner’s argument, as it is premised on an overly narrow construction of the limitation. *See supra* § IV.B.1. Further, we disagree that the “raised portion” depicted on Evolo’s watercraft would render the watercraft incapable of allowing a user to be disposed on the top surface of the

floatation device in a prone, kneeling, or standing position, as recited in the limitation. *See supra* § IV.D.4.c. In other words, even if we adopted Patent Owner’s narrow construction, which requires the claimed device to be configured to accommodate a user in the standing, prone, *and* kneeling positions, it appears that the device depicted in the Evolo Videos would be *capable* of performing this function notwithstanding the presence of the “raised portion.” *See Schreiber*, 128 F.3d at 1478–79.

At this preliminary stage of the proceeding, based on the current briefing and evidence, Petitioner has shown a reasonable likelihood that the Evolo Videos satisfy Element 1A2.

d. Element 1A3: “the floatation device having a forward section, a middle section, and a rear section”

Petitioner submits that the Evolo Videos disclose a watercraft with a forward, middle, and rear section. *See* Pet. 55–56 (citations omitted).

As shown in the snapshot reproduced above, at least the Evolo Prototype Run depicts a flotation device having a forward, middle, and rear section. *See, e.g.*, Ex. 1006, 0:09.

Patent Owner does not dispute these assertions. *See generally* Prelim. Resp.

At this preliminary stage of the proceeding, based on the current briefing and evidence, Petitioner has shown a reasonable likelihood that the Evolo Videos satisfy Element 1A3.

- e. Element 1B: “a strut having an upper end and a lower end, the upper end fixedly interconnected with the flotation device between the middle section and the rear section of the flotation device”*

Petitioner submits that the Evolo Videos disclose the use of a strut having an upper end and a lower end with the upper end fixedly interconnected with the flotation device between the middle section and the rear section of the flotation device. Pet. 56. Petitioner cites to the snapshot, reproduced above, of the Evolo watercraft out of the water and on stands. *See id.* (reproducing the snapshot at Ex. 1006, 0:09).

Patent Owner does not dispute these assertions. *See generally* Prelim. Resp.

At this preliminary stage of the proceeding, based on the current briefing and evidence, Petitioner has shown a reasonable likelihood that the Evolo Videos satisfy Element 1B.

- f. Element 1C: “a hydrofoil fixedly interconnected with the lower end of the strut, the hydrofoil having no moveable surface”*

Petitioner submits that the Evolo Videos disclose a hydrofoil fixedly interconnected with the lower end of the strut. Pet. 57 (citing Ex. 1006, 0:09; Ex. 1002 ¶ 105).

Dr. Brizzolara testifies that the Evolo Prototype Run discloses a hydrofoil with no moveable surface, as the “user of the watercraft is shown to control the watercraft solely by the weight shift of the user.” *See* Ex. 1002 ¶ 106 (citing Ex. 1006, 0:50–1:00).

Under a heading reciting the language of Element 1C, Patent Owner refers to and repeats its argument discussed above, regarding “passively stable.” *See* Prelim. Resp. 44–45 (“the Evolo Videos (alone or in

combination with Woolley) fails to teach a hydrofoil designed to achieve the *passively stable* feature of the hydrofoil watercraft” (emphasis added)) (citing Ex. 2006 ¶ 94).

Patent Owner’s argument does not address the particular language of Element 1C. *See id.* Rather, Patent Owner addresses language (“passively stable”) recited in the preamble, which we discussed above. *See supra* § IV.E.3.a. Therefore, Patent Owner’s argument as applied to Element 1C is inapposite and Petitioner’s contentions regarding Element 1C are not challenged at this stage.

Furthermore, a snapshot from the Evolo Prototype Run, reproduced above, appears to depict a “hydrofoil fixedly interconnected with the lower end of the strut, the hydrofoil having no moveable surface,” as recited in Element 1C. *See, e.g., supra* § IV.E.3.b (reproducing Ex. 1006, 0:09).

At this preliminary stage of the proceeding, based on the current briefing and evidence, Petitioner has shown a reasonable likelihood that the Evolo Videos satisfy Element 1C.

g. Element 1D: “a propulsion system for propelling the watercraft in a body of water, wherein the propulsion system is connected to the hydrofoil”

Petitioner submits that the Evolo Videos disclose a propulsion system for propelling the watercraft in a body of water, wherein the propulsion system is connected to the hydrofoil. Pet. 58 (citing Ex. 1006, 0:09; Ex. 1002 ¶ 107). We reproduce the following snapshot from the Evolo Prototype Run:



Evolvo prototype run

The above snapshot depicts several people launching the Evolo watercraft into the water. *See* Ex. 1006, 0:12. As can be seen from the snapshot, the watercraft has a propeller with two blades connected, either directly or indirectly, to what appears to be the hydrofoil. *See id.*; *see also id.* at 0:09 (depicting an alternate view of the watercraft with a hydrofoil attached connected to a propeller).

Patent Owner does not dispute these assertions. *See generally* Prelim. Resp.

At this preliminary stage of the proceeding, based on the current briefing and evidence, Petitioner has shown a reasonable likelihood that the Evolo Videos satisfy Element 1D.

h. Element 1E: “the watercraft having no movable steering system”

Petitioner submits that the watercraft depicted in the Evolo Videos has no moveable steering system. Pet. 58 (citing Ex. 1002 ¶ 108).

Patent Owner argues that the “prototype(s) of the watercraft depicted in Evolo Videos is not shown at a level of detail sufficient to ascertain whether or not a movable steering system is present.” Prelim. Resp. 45.

We disagree with Patent Owner.

Upon review of the Evolo Prototype Run, including the screenshot reproduced above with the watercraft on stands, it appears that the watercraft does not have a movable steering system. *See* Ex. 1006, 0:09. From this screenshot, it does not appear that the watercraft has a movable steering system, such as a steering wheel, steering handlebar, or rudder. *See id.*

At this preliminary stage of the proceeding, based on the current briefing and evidence, Petitioner has shown a reasonable likelihood that the Evolo Videos satisfy Element 1E.

i. Summary of Independent Claim 1

At this preliminary stage, Petitioner demonstrates a reasonable likelihood that the subject matter of claim 1 would have been obvious over the combined disclosures of the Evolo Videos and Woolley.

4. Dependent Claims 4, 5, 7, and 15

Petitioner contends, with citations to the evidence and testimony, that the Evolo Videos in view of Woolley teach or suggest every limitation of claims 4, 5, 7, and 15. *See* Pet. 59–66. Patent Owner does not address Petitioner’s arguments with respect to these dependent claims, apart from the arguments addressed above. *See* Prelim. Resp. 46 (“Patent Owner reserves the right to address each of dependent claims 4-5, 7, and 15 individually should trial be instituted.”).

Upon review of the parties’ arguments and supporting evidence, and based on the current state of briefing, Petitioner demonstrates a reasonable

likelihood that the subject matter of claims 4, 5, 7, and 15 would have been obvious over the combined disclosures of the Evolo Report and Woolley.

5. Summary of Ground 2

Petitioner demonstrates a reasonable likelihood that the subject matter of claims 1, 4, 5, 7, and 15, and would have been obvious over the combined disclosures of the Evolo Videos and Woolley.

F. Grounds 3–5: Alleged Obviousness over the Evolo Videos, Woolley, the Torqeedo Manual, Gleason, and Manning

Petitioner identifies where it contends the Evolo Videos, when combined with Woolley, the Torqeedo Manual, Gleason, and Manning, teach or suggest every limitation of dependent claims 2, 8–11, and 13. *See* Pet. 66–86. Patent Owner does not address Petitioner’s arguments with respect to these dependent claims, apart from the arguments addressed above. *See* Prelim. Resp. 46 (“Patent Owner reserves the right to address each of dependent claims 2 and 9–10 individually should trial be instituted”); *see also id.* at 47 (“Patent Owner reserves the right to address each of dependent claims [8,] 11 and 13 individually should trial be instituted.”).

Upon review of the parties’ arguments and supporting evidence, and based on the current state of briefing, Petitioner demonstrates a reasonable likelihood that the subject matter of claims 2, 8–11, and 13 would have been obvious over the combined disclosures of the Evolo Videos, Woolley, the Torqeedo Manual, Gleason, and Manning.

V. CONCLUSION

After considering the evidence and arguments presented in the Petition, Preliminary Response, Preliminary Reply, and the Preliminary Sur-

reply, we determine that the information presented shows a reasonable likelihood that Petitioner would prevail in establishing that claims 1, 2, 4, 5, 7–11, 13, and 15 of the '659 patent are unpatentable. Our analysis is based on the preliminary record developed thus far and may change after the record is developed fully, during trial.

VI. ORDER

Accordingly, it is

ORDERED that, pursuant to 35 U.S.C. § 314(a), an *inter partes* review is instituted for claims 1, 2, 4, 5, 7–11, 13, and 15 of the '659 patent on the unpatentability grounds asserted in the Petition; and

FURTHER ORDERED that pursuant to 35 U.S.C. § 314(c) and 37 C.F.R. § 42.4, notice is hereby given of the institution of a trial, which commences on the entry date of this Decision.

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