

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

FOIL BOARDING COMPANY, INC.

Petitioner,

v.

MHL CUSTOM, INC.

Patent Owner

U.S. Patent No. 9,359,044

IPR Case No.: IPR2024-00086

**PATENT OWNER'S PRELIMINARY RESPONSE TO PETITION FOR
INTER PARTES REVIEW OF U.S. PATENT NO. 9,359,044**

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EXHIBIT LIST

Exhibit No.	Description
2001	<i>MHL v. Foil Boarding Company, Inc.</i> , 3:22-cv-21258 – Scheduling Order (DN31)
2002	Foil Boarding Company, Inc. Invalidity Contentions
2003	WayBack Machine archives for the URL for Evolo Report and Dr. Kутtenkeuler's website
2004	Wayback Machine Archive Information
2005	Båtnytt Publisher Information via WayBack Machine (Certified Translation)
2006	Declaration of Dr. Timothy Takahashi
2007	YouTube Help – Change Video Settings
2008	Declaration of Nicholas Leason
2009	Excerpts of Expert Report of Christopher Barry
2010	Declaration of Jacob Langelaan
2011	Declaration of Cort Larned
2012	"Here's a Surfboard That Can 'Fly'", The Weekly Journal, Oct. 30, 2019
2013	"The innovative surfing tech making waves", BBC, March 14, 2022
2014	"David Carson Rises Up", Standup Journal: A Water Lover's Magazine, March 25, 2020

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2015	"Feel the Thrill of Flying and Surfing With Lift Foil's LIFT3 eFoil", Interesting Engineering, September 8, 2021
2016	"eFoils are the Next Personal Watercraft", BoatingMag.com, August 14, 2021
2017	"Lift Electric Hydrofoil", Uncrate
2018	"Omeir Saeed: Alladin May Ditch His Magic Carpet for This", Tech Times, September 4, 2020
2019	"This 'flying' surfboard can help anyone master the waves", TechNow, July 7, 2017, MHL_0100400-401
2020	"Lift eFoil Is a Motorized Hydrofoil That Lets You Surf Above the Water", The Daily Want
2021	Magic surfing experience with eFoil boards, Inspired by Sports, September 30, 2019
2022	"Electric Flying Surfboard? Yep", September 7, 2017, MHL_0100431-433
2023	<i>MHL Custom, Inc. v. Waydoo USA, Inc., et al.</i> (D. Del. 1:21-cv-00091), DN 220
2024	<i>MHL Custom, Inc. v. Waydoo USA, Inc., et al.</i> (D. Del. 1:21-cv-00091), DN 257
2025	Default Protective Order
2026	REDACTED - Patent Owner's Preliminary Response to the Petition for <i>Inter Partes</i> Review of U.S. Patent No. 9,359,044
2027	REDACTED - Declaration of Nicholas Leason

I. INTRODUCTION

Pursuant to 35 U.S.C. § 313 and 37 C.F.R. § 42.107, Patent Owner, MHL Custom, Inc. ("Patent Owner") submits the following Preliminary Response to the Petition for *Inter Partes* Review of claims 1, 2, 5-8, 10-15, 17-18, and 20-21 of U.S. Patent No. 9,359,044 ("the '044 Patent") ("the Challenged Claims") filed by Petitioner, Foil Boarding Company, Inc. ("Petitioner").

The Petition does not satisfy the threshold for instituting *inter partes* review because it does not show that there is a reasonable likelihood that Petitioner would prevail with respect to any of the Challenged Claims. Petitioner's grounds for challenging the '044 Patent should be rejected for several reasons:

First, the Petition is redundant when analyzed under the *Fintiv* factors, as discussed below. Given the state of the co-pending district court litigation (among other factors), efficiency and integrity of the system are best served by denying the Petition. Petitioner fails to address the status of the co-pending litigation or the *Fintiv* factors at all.

Secondly, Petitioner has failed to meet the burden of demonstrating that the asserted prior art is, in fact, actually prior art to the '044 Patent. As discussed herein, Petitioner has not presented sufficient evidence that the Evolo Report and the Evolo Videos were publicly available at the time of the invention.

Thirdly, even assuming *arguendo*, the Evolo Report and collective Evolo Videos are prior art (which Patent Owner disputes), Petitioner has failed to meet the obviousness burden. Petitioner has failed to provide a sufficient motivation to combine the references, as alleged, to have a reasonable likelihood of success in achieving the claimed invention.

Finally, Petitioner attempts to lump multiple, individual pieces of prior art under the umbrella of “Evolu Videos” in Grounds 2-5. This “multiplicity of grounds” fails to satisfy the particularity requirement under 35 U.S.C. § 312(a)(3), which states that a petition for inter partes review must identify “with particularity, each claim challenged, the grounds on which the challenge to each claim is based, and the evidence that supports the grounds for the challenge to each claim.” As discussed in *Adaptics Ltd. v. Perfect Co.*, a case may lack particularity where it “results in voluminous and excessive grounds.” IPR2018-01596, Paper 20 at p. 18 (March 6, 2019).

II. THE PETITION FAILS TO IDENTIFY ALL RELATED MATTERS

The Petition must be dismissed because Petitioner has failed to identify all related matters. An inter partes review petition must identify “any other judicial or administrative matter that would affect, or be affected by, a decision in the proceeding.” 37 C.F.R. § 42.8(a)(1), (b)(2); *see also* 35 U.S.C. § 312(a)(4). Petitioner failed to identify that U.S. Patent No. 9,586,659 (“the ‘659 Patent”) (a

continuation of the '044 Patent) is the subject of an *ex parte* reexamination (Appl. No. 90/015,269) before the USPTO.

III. THE PETITION IS REDUNDANT

The '044 Patent is currently the subject of district court litigation, which was filed on October 21, 2022. *MHL Custom, Inc. v. Foil Boarding Company, Inc., d/b/a Foil, f/k/a Get Foil* (N.D. Fla. 3:22-cv-21258). The PTAB may deny institution discretionarily if parallel proceedings would render a co-pending IPR proceeding inefficient or unfair. *Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 11 (P.T.A.B. Mar. 20, 2020) (precedential). In *Fintiv*, the Board explained “how ‘the concerns of inefficiency and the possibility of conflicting decisions were particularly strong’” and “stated generally that the factors ‘relate to whether efficiency, fairness, and the merits support the exercise of authority to deny institution in view of an earlier trial date in the parallel proceeding.’” *Apple Inc. v. Vidal*, 63 F.4th 1, 9 (Fed. Cir. 2023). The factors the Board examines include: (1) whether the court granted a stay; (2) proximity of the court’s trial date to the Board’s projected statutory deadline for a final written decision; (3) investment in the parallel proceeding by the court and the parties; (4) overlap between issues raised in the petition and in the parallel proceeding; (5) whether the petitioner and the defendant in the parallel proceeding are the same party; and (6) any other circumstances that might impact the Board’s

exercise of discretion. With respect to the '044 Patent, all of the *Fintiv* factors support discretionary denial.

As to the first factor, no stay has been moved for by either party and there is no evidence that the district court will stay its case in view of the Petition. Accordingly, this factor weighs in favor of a discretionary denial. Relatedly and with respect to the second factor, the district court anticipates the case being trial ready in November 2024. EX2001. The trial could occur as much as six months before a final written decision in the instant matter (should Petition be instituted) with the final written decision calendared for approximately May 2025. This factor also weighs in favor of a discretionary denial.

Regarding the third factor, the parties are currently engaged in fact discovery and claim construction in the district court. EX2001. The parties have already invested significant time and resources into the district court litigation, and further investment will only grow as the case progresses closer to trial. Both the level of current investment along with the anticipated investment in advance of a final written decision in the instant case (should it be instituted) weigh in favor of a discretionary denial of the Petition.

Regarding the fourth factor (overlap in issues raised), the prior art being asserted in the district court by the Petitioner is nearly identical to that in the Petition. EX2002. The main prior art utilized in both the Petition and in Petitioner's Invalidity

Contentions in the district court litigation are the Evolo Report, EvoloVideos-PrototypeRun, EvoloVideos-EvoloMovie, EvoloVideos-TestRun, and Woolley. This factor also supports a discretionary denial of the Petition. Finally, with respect to the fifth factor, the Petitioner and the defendant in the district court litigation are the same party – Foil Boarding Company, Inc. This factor also weighs in favor of a discretionary denial.

The Board summarized in *Fintiv* that “in evaluating the factors, the Board takes a holistic view of whether efficiency and integrity of the system are best served by denying or instituting review.” IPR2020-00019, Paper 11 (P.T.A.B. Mar. 20, 2020) (precedential). As detailed above in view of the *Fintiv* factors, efficiency and integrity of the system are best served by denying the Petition, as a co-pending IPR proceeding with the ongoing district court litigation would be inefficient and unfair.

IV. OVERVIEW OF THE ‘044 PATENT

The ‘044 Patent, entitled “Weight-Shift Controlled Personal Hydrofoil Watercraft,” was filed on October 8, 2014, claiming priority to U.S. Provisional App. No. 61/889,071 filed on October 10, 2013, and issued on June 7, 2016. The ‘044 Patent is generally directed to a passively stable personal hydrofoil watercraft. The ‘044 Patent contains a total of 22 claims, including 1 independent claim and 21 dependent claims.

The '044 Patent states that the invention "improve[s] upon the powered surfboard by incorporating a hydrofoil." EX1001, 1:63-64. The embodiments of the '044 Patent "[have] been designed to provide passive stability in the longitudinal direction, making traditional altitude control systems based on moveable surfaces unnecessary." EX1001, 2: 7-9. The control of the board is through the weight shift of a user, such that "riding the board is similar in feel to surfing or snowboarding, and the lack of a mechanical steering system makes the craft lighter, reduces parts count, and reduces the likelihood of a mechanical failure." EX1001, 2:11-14. Below is a copy of Figure 1 from the '044 Patent.

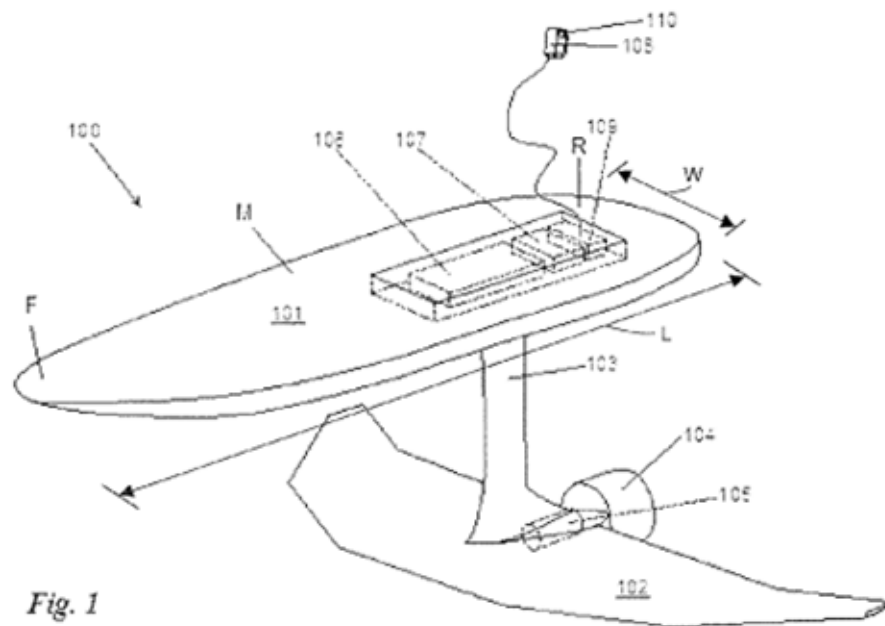


Figure 1 depicts the hydrofoil watercraft (100) in a perspective view, and includes a flotation board (101), a hydrofoil (102), and a strut (103) connecting the hydrofoil

to the board. EX1001, 2:66 –3:6. The watercraft of Figure 1 further includes a propulsion system (104), an electric motor (105), a battery (106), a motor speed controller (107), a throttle system (108), a throttle interface (109), and a spring-loaded trigger (110). *Id.*

The hydrofoil 102 is designed to be statically stable via a combination of airfoil design, planform design and span-wise twist distribution. EX1001, 3:57 - 4:3. Once the watercraft gains speed during use, the hydrofoil generates sufficient lift to raise the board above the water; the user may then control the altitude of the board by leaning back to go up and lean forward to go down, and the user can steer the board left or right by leaning in the appropriate direction. EX1001, 4:33-44.

V. THE EVOLO REPORT IS NOT PRIOR ART TO THE '044 PATENT

Ground 1 of the Petition should be rejected because Petitioner's patentability challenge is based on the Evolo Report (EX1003), which is not prior art to the '044 Patent. The '044 Patent issued from U.S. Patent Application No. 14/509,289, filed October 8, 2014. The '289 Application claims priority to Provisional Application No. 61/889,071, filed October 10, 2013. The '044 Patent's earliest effective priority date is therefore October 10, 2013. The Evolo Report was not publicly available on or before October 10, 2013.

Additionally, in April of 2023, a Delaware jury and district court found that the Evolo Report was not prior art to the '044 Patent, as it was not publicly accessible

before October 10, 2013. *See MHL Custom, Inc. v. Waydoo USA, Inc., et al.* (D. Del. 1:21-cv-00091), DN 220 (submitted herewith as EX2023); *see also* DN 257 (submitted herewith as EX2024) (denying Waydoo's JMOL motion and that "the jury's finding that the Evolo Report was not publicly accessible is not against the clear weight of evidence.").

A. The Petition's evidence of alleged public accessibility is insufficient

The Petition provides little analysis as to the alleged public availability of the Evolo Report, but rather makes conclusory statements asserting that the Evolo Report was publicly available prior to the priority date of the '044 patent, while citing to the Kутtenkeuler Declaration (EX1018). Pet., at 13-14. Any reliance on the log data and/or other information contained in the declaration is an improper incorporation by reference. *Conopco, Inc. v. The Procter & Gamble Company*, IPR2013-00510, Paper 9 at 8-9 (PTAB Feb. 12, 2014) ("We decline to consider information presented in a supporting declaration, but not discussed in a petition"). The Board has made clear that "[a]rguments must not be incorporated by reference from one document into another document." *Intelligent Bio-Systems, Inc. v. Illumina Cambridge LTD.*, IPR2013-00517, Paper 87 at 16 (PTAB Feb. 11, 2015) (quoting 37 C.F.R. § 42.6(a)(3)); *Tempur Sealy Int'l, Inc. v. Select Comfort Corp.*, IPR2014-01419, Paper 7 at 7-8 (PTAB Feb. 17, 2015); *see also Cisco Systems, Inc. v. C-*

Cation Technologies, LLC, IPR2014-00454, Paper 12 at 7-10 (PTAB Aug. 29, 2014).

Accordingly, the Petition merely asserts through the statement of Dr. Kутtenkeuler that the Evolo Report was contained on a website as of 2009. However, Petitioner cannot present credible evidence that the Evolo Report was publicly accessible prior to October 10, 2013 – the date at issue. Petitioner relies on the allegation that the Evolo Report appeared on a website at that time. The case law makes it clear, however, that this is insufficient. *Acceleration Bay, LLC v. Activision Blizzard Inc.*, 908 F.3d 765, 772 (Fed. Cir. 2018); *Blue Calypso, LLC v. Groupon, Inc.*, 815 F.3d 1331, 1348-49 (Fed. Cir. 2016). There 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. Petitioner alleges that the Båynytt magazine article (EX1019) cures this deficiency, but as discussed below it does not. Based on the lack of evidence supporting Petitioner's claim, there is not a reasonable likelihood that the Evolo Report qualifies as a printed publication.

In an invalidity analysis, a prior art reference is considered “publicly accessible” if it was “disseminated or otherwise made available to the extent that persons interested and ordinarily skilled in the subject matter or art, exercising reasonable diligence, can locate it.” *Acceleration Bay*, 908 F.3d at 772. Existing on

a website alone is insufficient to establish that a publication is “publicly accessible.” *See Blue Calypso, LLC*, 815 F.3d at 1348-49. Some evidence that a person of ordinary skill could have reasonably found the website and then found the reference on that website is required. *Acceleration Bay*, 908 F.3d at 773; *see also Samsung Elecs. Co. v. Infobridge Pte. Ltd.*, 929 F.3d 1363, 1372 (Fed. Cir. 2019) (a work is not publicly accessible if the only people who know how to find it are the ones who created it).

In *Acceleration Bay*, for example, the Federal Circuit affirmed the Patent Office's finding that the alleged prior art was not a printed publication under § 102(a) because it was not publicly accessible since there was insufficient evidence that a person of ordinary skill in the art could have located the prior art online. 908 F.3d at 773-774. In that case, the prior art at issue was uploaded to a university website which was sorted and indexed by author and year. *Id.* The Federal Circuit held that “public accessibility requires more than technical accessibility.” *Id.* According to the court, more was needed other than just evidence that someone could find the reference online. *Id.*

It is well established that the party seeking to introduce a reference is required to “produce sufficient proof of its dissemination or that it has otherwise been available and accessible **to persons concerned with the art** to which the document relates and thus most likely to avail themselves of its contents.” *In re Wyer*, 655 F.2d

221, 227 (CCPA 1981). Here, Petitioner has done no more than provide minimal assertions that the Evolo Report was posted somewhere within Dr. Kутtenkeuler's website.

Furthermore, a review of the WayBack Machine archives for the URL for the Evolo Report and Dr. Kутtenkeuler's website on which the Report is posted reveal that they were first archived in 2020 – well after the October 2013 priority date. EX2003. According to the Wayback Machine, only those webpages that are publicly available get archived on the site. EX2004. One could infer that the Evolo Report and website were not publicly accessible until they were first archived by the Wayback Machine in 2020. In fact, as part of his development process leading to his invention, the inventor of the '044 Patent conducted extensive prior art research and did not locate the Evolo Report. EX2010, ¶¶5-7.

B. The Båtnytt Website does not remedy the deficiencies regarding public accessibility

Petitioner attempts to bolster its argument regarding public accessibility by citing a Båtnytt article discussing the Evolo project. However, the Båtnytt article does not cure the deficiencies outlined above. Petitioner conclusorily asserts that Båtnytt “is the type of publication a POSITA would review” based on a two-sentence statement from its expert. Pet., at 16. Taking a step further, Petitioner alleges that the Båtnytt article would be a “research aid” that would have led a POSITA to the

Evolvo Report. This is simply untrue. The publisher of the Båtnytt magazine, at the relevant time (January 2013) described its magazine as “solid consumer journalism by boating people for boating people”. EX2005. A POSITA would look to a number of sources and publications for information regarding personal hydrofoil watercraft design, but a leisure or consumer boating magazine would not be included in such publications. EX2006, ¶38. As Dr. Takahashi opines, a POSITA would do independent research through Google Scholar or Elsevier and look to publications such as trade journals (e.g., American Society of Mechanical Engineers – ASME), and the like. EX2006, ¶38. Leisure or consumer magazines, especially those with a relatively small circulation of 104,000 readers at the relevant time and with a narrow geographic focus would not be to what a POSITA would look. EX2006, ¶38. Furthermore, Dr. Takahashi opines that these types of consumer or leisure magazines are not typically indexed in Google Scholar or similar academic search engines. EX2006, ¶38.

Furthermore, the Båtnytt article could not serve as a “research aid”, as it is not the type of document of which a POSITA would likely avail themselves. Petitioner cites *Blue Calypso, LLC v. Groupon, Inc.* for the proposition of use of a “research aid” but it is clear that the “research aid” must not only link the prior art at issue, but also be something to which a POSITA would look to in conducting research. See e.g., *Univ. v. Hewlett-Packard Co.*, No. 01-CV-1974, 2008 WL 11274580, at *6

(N.D.N.Y. May 14, 2008) (citing *Bruckelmyer v. Ground Heaters, Inc.*, 445 F.3d 1374, 1379 (Fed. Cir. 2006) and *In re Wyer*, 655 F.2d 221, 226-27 (C.C.P.A. 1981)) (The prior art at issue was cited in “a seminal publication in the field of electrical engineering. The public—in this case those concerned with the field of electrical engineering—had and has broad access to this IEEE publication, and by extension the [art at issue]” (emphasis added)).

Although Petitioner discusses details regarding the Evolo project disclosed in the Båtnytt article, this is irrelevant to the Petition. The Båtnytt article is not included as alleged prior art in a single invalidity ground presented in the Petition; its teachings do not matter. The only purported purpose of the Båtnytt article is its failed attempt to bolster the Petitioner's claim that the Evolo Report was publicly accessible to a POSITA at the relevant time. As outlined *supra*, it is the burden of the party seeking to introduce the reference to “produce sufficient proof of its dissemination or that it has otherwise been available and accessible to persons concerned with the art to which the document relates and thus most likely to avail themselves of its contents.” *In re Wyer*, 655 F.2d 221, 227 (CCPA 1981). The Evolo Report was not publicly accessible as of October 10, 2013, and the Båtnytt article does not cure this deficiency as no POSITA would look to a leisure or consumer magazine in designing a personal hydrofoil watercraft. Further, Petitioner fails to

provide any other allegations as to how a POSITA could have supposedly found the Evolo Report.

VI. THE EVOLO VIDEOS ARE NOT PRIOR ART TO THE '044 PATENT

The remaining grounds of the Petition (Grounds 2 to 5) should be rejected because Petitioner's patentability challenges are based on EvoloVideos-PrototypeRun (EX1006), EvoloVideos-EvoloMovie (EX1008), and EvoloVideos-Torquedo (EX1010) (collectively referred to as "the Evolo Videos"), which taken individually or in combination with each other, are not prior art to the '044 Patent. In particular, there is insufficient evidence in the record to establish a reasonable likelihood that the Evolo Videos were publicly accessible as prior art. This alone is a sufficient basis for the Board to find that the Petition fails to establish the required reasonable likelihood of success with respect to each of Grounds 2 to 5.

According to the Petition, EvoloVideos-EvoloMovie "has been publicly accessible since it was uploaded" to YouTube. Petitioner relies on Dr. Kuttenueler who states, "When uploading it, I permitted the video to be viewed publicly." EX1018, p. 5. Referring to YouTube (and another website), the Petition further asserts that "[t]hese platforms are well-known, public (e.g., no access restrictions), searchable, and intended to reach a wide audience." Pet., at 19.

Dr. Kuttenueler's statement is not sufficient to establish that EvoloVideos-EvoloMovie was publicly accessible as prior art. YouTube provides three different

video privacy settings (alternatively referred to as “visibility settings”) for uploaded videos: “Private”, “Unlisted”, and “Public”, as shown below.

YouTube Video Privacy Settings	
	Save or publish ☐ Private ☒ Unlisted ☐ Public

These video privacy settings allow users who upload a video to impose various access restrictions (e.g., which users may view the video) and other restrictions (e.g., visibility in search) on the uploaded video. For example, YouTube indicates that a video with the “Unlisted” video privacy setting “can be seen and shared by anyone with the link”, however, it “won’t show up in YouTube’s search results unless someone adds your unlisted video to a public playlist”. “Change video privacy settings – YouTube Help”, <https://support.google.com/youtube/answer/157177>. EX2007.

Features of YouTube Video Privacy Settings			
Feature	Private	Unlisted	Public
Can share URL	No	Yes	Yes
Can be added to a channel section	No	Yes	Yes
Can show up in search, related videos, and recommendations	No	No	Yes
Posted on your channel	No	No	Yes
Shows in Subscriber feed	No	No	Yes
Can be commented on	No	Yes	Yes
Can show up in a public playlist	No	Yes	Yes

Assuming, *arguendo*, that Dr. Kuttenueler is correct in his recollection of the events over a decade prior that, when uploading EvoloVideos-EvoloMovie, he “permitted the video to be viewed publicly” (EX1018, p. 4) (a point which Patent Owner disputes), Petitioner has nevertheless failed to submit evidence showing that EvoloVideos-EvoloMovie was either indexed or searchable. *Acceleration Bay*, 908 F.3d at 774 (concluding that there was no evidence that the website at issue was meaningfully indexed such that a skilled artisan exercising reasonable diligence would have found it). Dr. Kuttenueler provides no testimony that the video privacy setting for EvoloVideos-EvoloMovie was configured, as of the upload date, such that EvoloVideos-EvoloMovie was indexed and searchable. Dr. Kuttenueler also provides no testimony directed to whether or not the video privacy setting was ever changed subsequent to the upload date. Accordingly, the Petition lacks sufficient

evidence to show that there is a reasonable likelihood that EvoloVideos-EvoloMovie was publicly available before the critical date.

The Petition also lacks sufficient evidence to show that there is a reasonable likelihood that the other videos, EvoloVideos-PrototypeRun and EvoloVideos-Torqueedo, were publicly available before the critical date. Dr. Kuttenueler states that “I know that my Evolo students also uploaded videos to YouTube in 2008 and 2009.” EX1018, p. 5. However, Dr. Kuttenueler provides no testimony that EvoloVideos-PrototypeRun and EvoloVideos-Torqueedo were uploaded to YouTube in 2008 or 2009. Moreover, Dr. Kuttenueler provides no testimony that the video privacy settings for EvoloVideos-PrototypeRun and EvoloVideos-Torqueedo were configured, as of the upload date, such that EvoloVideos-PrototypeRun and EvoloVideos-Torqueedo were viewable by all users of YouTube. As previously discussed, YouTube indicates that a video with the “Private” video privacy setting can only be seen by the user who uploaded the video and particular users designed by that person. “Change video privacy settings – YouTube Help”, <https://support.google.com/youtube/answer/157177>. EX2007.

Additionally, even if EvoloVideos-PrototypeRun and EvoloVideos-Torqueedo were viewable by all users of YouTube (a point which Patent Owner disputes), Petitioner has nevertheless failed to submit evidence showing that the video privacy setting for EvoloVideos-PrototypeRun and EvoloVideos-Torqueedo were configured,

as of the upload date, such that EvoloVideos-PrototypeRun and EvoloVideos-Torqueedo were indexed and searchable. Dr. Kuttenukueler also provides no testimony directed to whether or not the video privacy setting was ever changed subsequent to the upload date. Accordingly, the Petition lacks sufficient evidence to show that there is a reasonable likelihood that EvoloVideos-PrototypeRun and EvoloVideos-Torqueedo were publicly available before the critical date. In fact, as with the Evolo Report, the inventor of the '044 Patent conducted extensive prior art research as part of his development process leading to his invention and did not find the Evolo Videos. EX2010, ¶¶5-7.

VII. PATENT OWNER'S PROPOSED CLAIM CONSTRUCTION

The Petition was filed on October 26, 2023. The claim terms therefore should be given their “ordinary and customary meaning” as understood by a person of ordinary skill in the art in question and in accordance with the prosecution history. *See Phillips v. AWH Corp.*, 415 F.3d 1303, 1312-13 (Fed. Cir. 2005) and 37 C.F.R. § 42.100(b). Petitioner asserts that no claims need to be construed, but to the extent they do the Board should adopt the district court's construction from a Memorandum Order by the Court in *MHL Custom Inc. v. Waydoo USA, Inc. et al.* (D.Del 1:21-CV-00091). Pet., at 12-13. Patent Owner disagrees in part and proposes constructions below.

A. Person of Ordinary Skill in the Art

A person of ordinary skill in the art in the field of the '044 Patent on October 10, 2013 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. EX2006, ¶22.

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

Claim 1 recites “wherein a user can be disposed on the top surface of the flotation device in a prone, kneeling, or standing position”. Petitioner proposes a construction of “‘prone, kneeling, or standing’ are alternatives. Only one of them is required”. Pet., at 12. Patent Owner proposes an alternative construction of “wherein a user can be disposed on the top surface of the flotation device in each of the following positions: prone; kneeling; or standing”.

The intrinsic evidence supports Patent Owner's interpretation that the flotation device allows a user to be disposed in each of the three positions. The '044 Patent's Abstract states that the watercraft “has a flotation device, wherein a user can ride in a prone, kneeling, or standing position.” Moreover, the Specification expressly contemplates that a user can be disposed in multiple positions on the

flotation device at different times: “[t]o operate the watercraft 100, a user initially lies prone on the flotation board 101. The throttle is engaged, causing the craft to accelerate. As the craft gains speed the user may move to a kneeling or standing position.” EX1001, 4:33-36. Thus, 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. Like a surfboard, the claimed flotation device of the watercraft allows a user to transition from a prone position to a kneeling or standing position to provide a “surfing feel.”

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.” EX1001, 4:38-40. A user would not, for example, be able to control the altitude of the board by “leaning” forward or backward while in a prone position, further evidencing that the flotation device is designed to allow the user to be in multiple positions at different times during use. This interpretation is also supported by the declaration of Dr. Takahashi, a POSITA; as Dr. Takahashi recognizes, the Specification teaches a device that allows a user to move or transition between each of the three positions, beginning in a prone position and then moving

to a kneeling or standing position in order to control the altitude and/or direction of the watercraft. EX2006, ¶18.

The Specification contradicts the Petitioner's interpretation that prone, kneeling, or standing are alternatives because it teaches that the top surface of the flotation device (i.e., surfboard) allows a user to move between all three positions, and expressly contemplates that a user can be in multiple positions at different times during use. EX1001, 4:33-36. The word "or," not "and," is necessary here because a person cannot be in two different positions at the same time. "Or" is indeed used disjunctively to state alternative positions of the user in a temporal context, because the user cannot be in multiple positions at the same time, and to identify alternative positions available to the user. It does not alter that the flotation device allows the user the ability to assume each of the three alternative positions at various times during use, as supported by the Specification. EX1001, 3:13-17; 4:33-38. The claims list alternative positions, each of which are available to the user.

C. "Designed to provide passive static stability"

Patent Owner does not dispute the Petitioner's proposed construction of "designed to provide passive static stability" as "designed such that the hydrofoil has an initial tendency to return to its original condition when disturbed without the hydrofoil having any moveable components." See Pet., at 12-13.

**VIII. THE PETITION DOES NOT SATISFY THE STATUTORY
THRESHOLD FOR INSTITUTING *INTER PARTES* REVIEW**

The petitioner asserts five (5) grounds of unpatentability. As shown below, none of these grounds establish a reasonable likelihood that the Petitioner will prevail on any of the Challenged Claims.¹ A trial therefore should not be instituted.

A. Ground 1 Should Not Be Instituted

Petitioner asserts as Ground 1 that claims 1, 2, 5-8, 10-15, 17-18, and 20-21 of the '044 Patent are obvious in view of the Evolo Report and U.S. Patent No. 6,234,856 (hereinafter "Woolley"). Assuming, *arguendo*, that the Evolo Report is prior art (a point which Patent Owner disputes) the Evolo Report in combination with Woolley fails to render these claims obvious, as discussed herein.

¹As set forth herein, the Petition fails to establish a reasonable likelihood of prevailing on claim 1 in Grounds 1 and 2. Thus, Petitioner also necessarily fails to establish a reasonable likelihood of prevailing in each of the dependent claims in Grounds 1-5. Patent Owner reserves the right to address each of dependent claims 2, 5-8, 10-15, 17-18, and 20-21 (as asserted in Grounds 1-5) individually should trial be instituted.

i. Claim 1

- a. Evolo + Woolley does not teach “wherein a user can be disposed on the top surface of the flotation device in a prone, kneeling, or standing position”

Petitioner alleges that the Evolo Report teaches this claim limitation because the device disclosed in the Evolo Report is designed for use with a “kneeling driver’s position”. Pet., at 22. However, as outlined *supra*, the proper construction of this phrase in view of the teachings of the Specification of ‘044 Patent is “wherein a user can be disposed on the top surface of the flotation device in each of the following positions: prone; kneeling; or standing”. The device of the Evolo Report only allows a user to be disposed in a kneeling position. The final design of the Evolo device, an image of which is reproduced herein, demonstrates that the Evolo device includes a raised portion. This raised portion would prevent a user from being capable of laying prone or standing on the device.

EX1003, p. 3. Dr. Takahashi states that “the flotation device being a

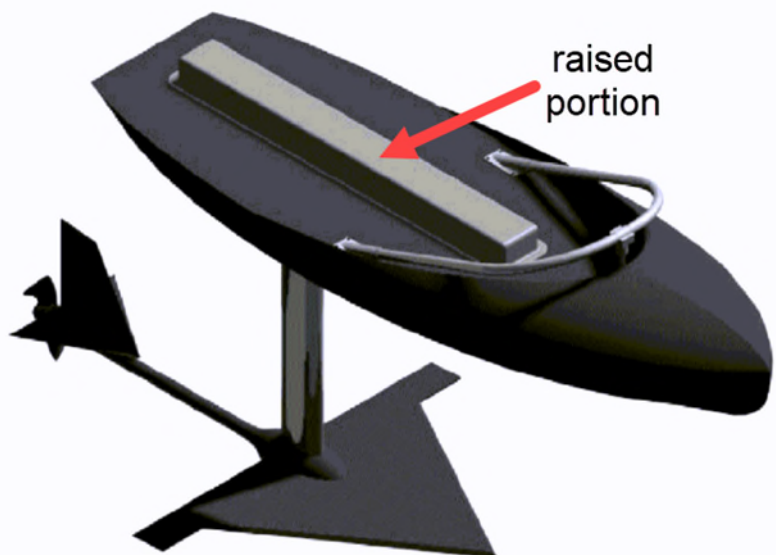


Figure 1 Evolo's final design

boat-like structure without a substantially flat surface” makes the device of the Evolo

Report unable to support a user in each of a prone or standing position. EX2006, ¶63.

Woolley does not cure this deficiency, as Woolley is specifically designed for a user to be disposed in a seated position. For example, Woolley states that “[o]ne aspect of the present invention involves a recreational device that supports a seated human rider while the rider and the device are towed behind a powered watercraft.” EX1011, 1:54-56; Figs. 1-4. Accordingly, neither the Evolo Report or Woolley (alone or in combination) teach a watercraft where “a user can be disposed on the top surface of the flotation device in a prone, kneeling, or standing position” as properly construed.

- b. Evolo + Woolley does not teach “a hydrofoil fixedly interconnected with the lower end of the strut, the hydrofoil having no moveable surface and designed to provide passive static stability controlled solely by weight shift of the user”

The parties agree that “passive static stability” should be construed to mean “designed such that the hydrofoil has an initial tendency to return to its original condition when disturbed without the hydrofoil having any movable components”. See Pet., at 12-13.

The Evolo Report does not teach a device with passive static stability, which Petitioner admits in looking to Woolley for this feature. Pet., at 26. The Evolo Report made attempts during the design stages to address longitudinal stability, but

the Evolo Report lacks any evidence of success in achieving longitudinal stability. EX2006, ¶67. Furthermore, the Evolo Report admits that rolling stability remained an unsolved problem in their watercraft design. EX2006, ¶44; *see also* EX1003, page 142. To a POSITA, as Dr. Takahashi opines, the Evolo Report teaches away from passive static stability as recited in claim 1 of the '044 Patent. EX2006, ¶68. Rather, he opines, 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.” EX2006, ¶68.

Petitioner and its expert, Dr. Brizzolara, allege that “[a] POSITA would have been motivated to combine EvoloReport with Woolley to provide for a passively stable hydrofoil.”² Pet., at 24. “Obviousness” under 35 U.S.C §103, requires a petitioner show that a POSITA would have been (1) motivated to combine or modify prior art teachings and (2) would have a reasonable expectation of success in doing so. *See Endo Pharm., Inc. v. Actavis LLC*, 922 F.3d 1365, 1373 (Fed. Cir. 2019). As outlined in detail below, there is neither a motivation to combine the Evolo Report

² Petitioner uses the phrase “passively stable hydrofoil”, but the phrase of claim 1 is actually “a hydrofoil [...] designed to provide passive static stability [...]”.

with Woolley nor is there a reasonable expectation of success in achieving the claimed invention.

With respect to Woolley, Petitioner specifically points to Woolley's "front planing blade containing a chorded upper surface that tapers towards the rear so that the upper surface has a larger surface area than the lower surface, which causes an upward lifting force on the forward blade" and "use of the rear blade with a negative angle of attack, so that the rear blade creates a downward force on the rear blade" as creating passive static stability. EX1002, p. 22. More specifically, it is from this that Dr. Brizzolara concludes that "[t]he 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 by a POSITA." EX1002, p. 22. This is not a "well-known" strategy for increasing pitch stability as Dr. Brizzolara suggests. EX2006, ¶71. In contrast, the hydrofoil configuration of Woolley only produces a nose-up torque, which is not an indication of stability (or instability). EX2006, ¶71.

Furthermore, Woolley is "designed to be towed behind a conventional powered watercraft utilizing a standard ski tow rope". EX1011, Abstract. Each embodiment described in Woolley is towed behind a powered watercraft, and Woolley makes no mention of the device or hydrofoils contained therein being self-propelled. Towing the Woolley device with a tow rope significantly contributes to

any stability of the device. EX2006, ¶72. In the design of Woolley, the propulsive force is coming solely from the powered watercraft towing the hydrofoil-containing device, which is in front of the hydrofoil-containing craft and above the plane of the water. EX2006, ¶74. The hydrofoil elements of Woolley are designed to account for the propulsive force being transmitted from a tow rope being held by a rider near the watercraft's center of gravity. EX2006, ¶74.

In contrast, when a propulsor and electric motor are affixed directly to the hydrofoil-containing craft the propulsive force is coming from directly below the hydrofoil-containing craft and below the plane of the water. EX2006, ¶74. Dr. Takahashi explains “the propulsive force differs significantly between the watercraft of the Evolo Report and the watercraft described in Woolley.” EX2006, ¶73 (emphasis added). Petitioner and its expert, Dr. Brizzolara, devote significant space to going through all Woolley's statements regarding hydrofoil design, but completely neglect the significant role the tow rope of Woolley has on the stability of the hydrofoil and overall system. 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. EX2006, ¶74. Petitioner conveniently ignores this fact.

However, as Dr. Takahashi explains, these facts cannot be ignored. Simply taking the hydrofoil from Woolley and placing it on the device described in the

Evolvo Report, as Petitioner suggests, would not generate a device with passive static stability. EX2006, ¶74. As outlined above, the hydrofoil elements of Woolley are configured based on where the propulsive force is relative to the center of gravity (e.g., based on the propulsive force being near the center of gravity). EX2006, ¶74. 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. EX2006, ¶74. The combination of the hydrofoil of Woolley with the device of the Evolo Report would not result in a “hydrofoil [...] designed to provide passive static stability” as recited in claim 1. EX2006, ¶¶67-78. A POSITA would not be motivated to combine Evolo, which is self-propelled, with the teachings of Woolley to achieve a self-propelled hydrofoil designed to provide passive static stability, or “designed such that the hydrofoil has an initial tendency to return to its original condition when disturbed without the hydrofoil having any movable components” as construed.

Dr. Brizzolara summarily concludes that “[t]o 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 would be designed to provide passive static stability.” EX1002, p. 24. However, as mentioned above there are several considerations in hydrofoil design that POSITA would need to consider, and

Petitioner offers no rationale for how or why a POSITA would have a reasonable expectation of success with this combination, particularly in view of the Evolo Report teaching away from a passive static stability altogether. EX2006, ¶¶69-78 (“Evolo Report teaches away from the claimed statically stable configuration because the watercraft described in the Evolo Report could only be stabilized using some sort of active control system ... and, thus, would lead a POSITA to use such an active control system.”).

In addition to providing stability, the tow rope and powered watercraft towing the Woolley device function to control the device of Woolley. EX2006, ¶53. The Petitioner alleges that “[t]he limitation ‘controlled solely by weight shift of the user’ refers to the control of the entire personal watercraft, rather than the control of the hydrofoil separately from the personal watercraft.”³ Pet., at 26. However, the full claim phrase is “the hydrofoil having no moveable surface and designed to provide passive static stability controlled solely by weight shift of the user.” EX1001, 7:42-44. The hydrofoil of the Woolley device is not designed to provide passive static stability controlled solely by weight shift of the user.

Petitioner alleges that “[b]ecause EvoloReport does not disclose any other moveable objects that would change the force of gravity on the disclosed watercraft,

³ Petitioner proposed no construction of this phrase.

the weight shift of the user of the disclosed watercraft is the gravity shift disclosed in EvoloReport.” Pet., at 25. However, the Evolo Report does not teach a hydrofoil that was designed to both provide passive static stability and to allow control solely by weight shift of the user. EX1001, 7:42-44 (emphasis added); EX2006, ¶¶76-77. Even Petitioner agrees, stating that it is “the purported passive stability of the claimed hydrofoil [that] allows ‘the watercraft to be controlled by weight shift rather than by mechanical system’” (Pet., at 25), while simultaneously utilizing Woolley to allegedly provide for a passively stable hydrofoil. Pet., at 25-26. This is a tacit admission that the hydrofoil of the Evolo Report is not designed to provide passive static stability or allow control solely by weight shift of the user.

Further, the hydrofoil design of Woolley would not allow for sole control via weight shifting. EX2006, ¶53. Nor would a POSITA look to Woolley for a hydrofoil design that would allow for sole control via weight shift. The Woolley device, including its hydrofoil, are designed to be controlled by the tow rope and the towing watercraft, not solely via weight shift. EX2006, ¶¶52-53.

In Woolley, the user is strapped into a seat of the ski. EX1011, 8:60-62. Being strapped into a seat in the Woolley device minimizes the amount of weight a user is able to shift. EX2006, ¶¶52-53. Furthermore, Woolley explicitly contemplates that the device may be adapted to accommodate beginner riders “while being relatively unresponsive to rider actions (such as swaying side to side). In this mode, ski

responsiveness is generally analogous to a conventional jet ski.” EX1011, 16:42-47. It is clear from the teachings of Woolley that a user may, in some circumstances (e.g., advanced riders) contribute to the steering and control of the hydrofoil-containing craft, but that the control of the hydrofoil-containing craft is largely a result of the powered watercraft towing the device. EX2006, ¶¶52-53. Control of Woolley is not “solely by weight shift of the user”. EX2006, ¶¶52-53.

The crux of Petitioner's argument is that one can simply take the allegedly “stable” hydrofoil from Woolley and attach it to the device of the Evolo Report and that would result in the Evolo device having “a hydrofoil fixedly interconnected with the lower end of the strut, the hydrofoil having no moveable surface and designed to provide passive static stability controlled solely by weight shift of the user” as claimed. The combination of the Evolo Report and Woolley do not teach every element of claim 1; furthermore, even if, *arguendo*, every element of claim 1 is illustrated in the Evolo Report and Woolley individually and a POSITA was motivated to combine them, 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. The Petition therefore does not establish a reasonable likelihood of prevailing on Ground 1 and institution should be denied.

ii. Ground 1 Summary

As discussed above with respect to claim 1 and, thus, necessarily each of the dependent claims 2, 5-8, 10-15, 17-18, and 20-21, the Petition does not establish a reasonable likelihood of prevailing on Ground 1; therefore, institution on this ground should be denied.

Patent Owner reserves the right to address each of dependent claims 2, 5-8, 10-15, 17-18, and 20-21 individually should trial be instituted.

B. Grounds 2 through 5 Do Not Include the Evolo Report as Prior Art

Grounds 2 through 5, as outlined in the Petition, utilize a collection of Evolo Videos (EX1006, EX1008, and EX1010) as the primary pieces of prior art. Pet., at 8-9. The Evolo Report is not included as prior art in these grounds. Accordingly, any teachings from the Evolo Report cannot be utilized when referencing the Evolo Videos – as the Petitioner has not presented any ground that include both the Evolo Report and the Evolo Videos. As the Federal Circuit instructs, “the Board does not enjoy a license to depart from the petition and institute a different inter partes review of his own design.” *Koninklijke Philips N.V. v. Google LLC*, 948 F.3d 1330, 1336 (Fed. Cir. 2020) (quoting *SAS Inst. Inc. v. Iancu*, — U.S. —, 138 S. Ct. 1348, 1355) (2018). Petitioner had the option to include a ground utilizing both the Evolo Report and Evolo Videos but declined to do so; they cannot now utilize information garnered from the Evolo Report to bolster their arguments on Grounds 2 through 5.

As SAS states, the institution is guided by the petition, where the Petitioner describes “‘each claim challenged’ and ‘the grounds on which the challenge to each claim is based.’” 138 S. Ct. at 1355 (citing 35 U.S.C. § 312(a)(3)). Accordingly, the decision on the institution of Grounds 2 through 5 must be made pursuant to the Petition. *Id.*; *see also Koninklijke Philips N.V.* 948 F.3d at 1336.

C. Grounds 2 through 5 Improperly Conflate Three Separate Videos into a Single Prior Art Reference

Each of Grounds 2 through 5 assert that claims are rendered obvious by the combination of the Evolo Videos and one or more of Woolley (EX1011), Gleason (EX1012), Manning (EX1013), and TorqueedoManual (EX1014). Assuming, *arguendo*, that the Evolo Videos are prior art (a point which Patent Owner disputes), they constitute three separate references: EvoloVideos-PrototypeRun (EX1006), EvoloVideos-EvoloMovie (EX1008), and EvoloVideos-Torqueedo (EX1010). Petitioner improperly conflates these three separate videos into a single prior art reference.

Dr. Kутtenkeuler states that the Evolo team built several prototypes, including a first prototype tested in October 2008, a second prototype tested in December 2008, and a final prototype tested in or around May and June 2009. EX1018, ¶¶11-14. Dr. Kутtenkeuler further states that certain Evolo videos are from the 2008 and 2009 prototype testing sessions. EX1018, ¶¶27. Based on Dr. Kутtenkeuler's declaration,

it is more than likely that the three Evolo Videos show two or more different prototypes.

Petitioner repeatedly asserts that the Evolo Videos disclose various claim features without setting forth how the teaching of such features may be ascertained from each of the Evolo Videos. To the extent that Petitioner asserts that the different Evolo Videos teach different claim features, Petitioner does not show that a POSITA would have been motivated to combine EvoloVideos-PrototypeRun (EX1006), EvoloVideos-EvoloMovie (EX1008), and EvoloVideos-Torqueedo (EX1010), each of which may show a different prototype. Furthermore, Petitioner does not show that a POSITA would have a reasonable expectation of success in doing so. The Petition therefore does not establish a reasonable likelihood of prevailing on Grounds 2 through 5 and institution on these grounds should be denied.

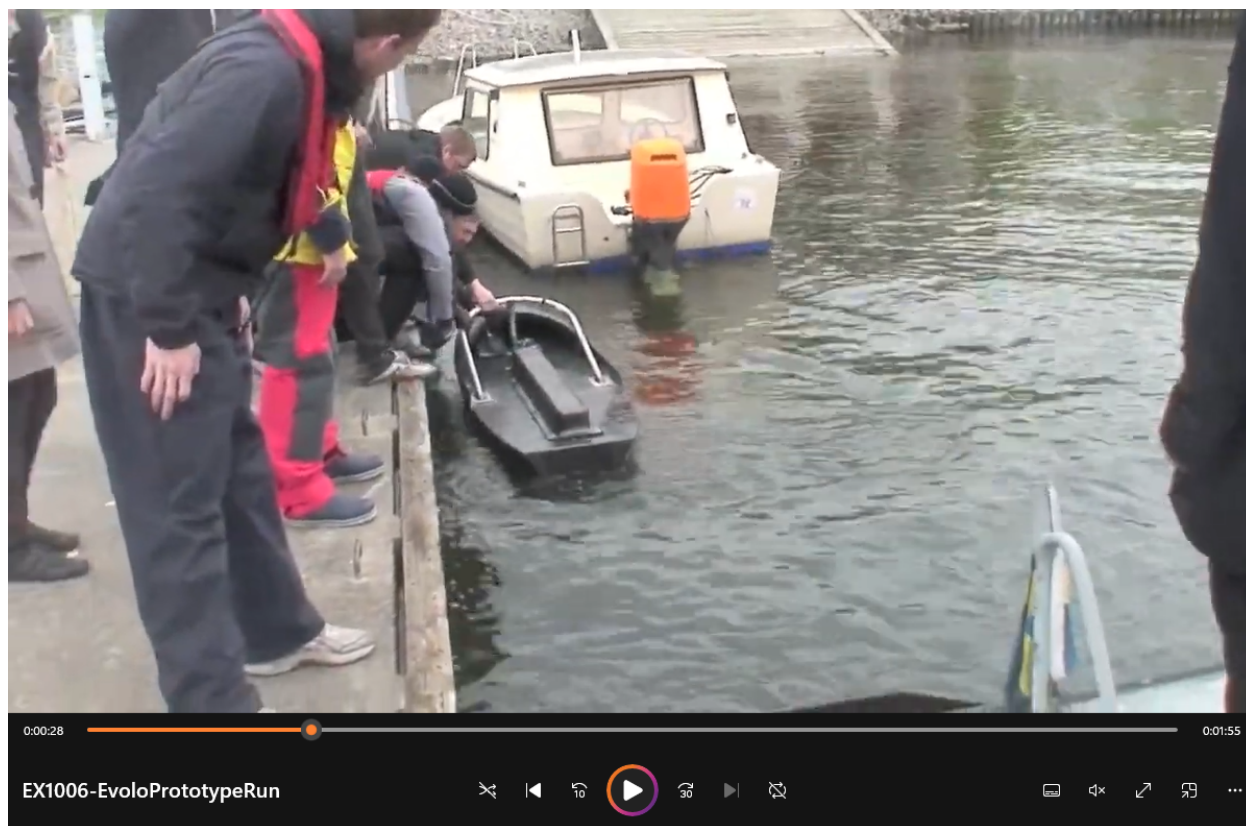
D. Ground 2 Should Not Be Instituted

Petitioner asserts as Ground 2 that claims 1, 5-8, 10, 17, and 21 of the '044 Patent are obvious in view of the Evolo Videos and Woolley. Assuming, *arguendo*, that the Evolo Videos are prior art (a point which Patent Owner disputes) the Evolo Videos in combination with Woolley fail to render these claims obvious, as discussed herein.

i. Claim 1

- a. Evolos Videos + Woolley does not teach “wherein a user can be disposed on the top surface of the flotation device in a prone, kneeling, or standing position”

Petitioner alleges that the Evolos Videos teach this claim limitation because the Evolos Videos, and in particular EvolosVideos-PrototypeRun (EX1006) at 1:21, allegedly depict “a watercraft where a user can be disposed in a kneeling position on the top of the surface of the flotation device”. Pet., at 61-62. However, as outlined *supra*, the proper construction of this phrase in view of the teachings of the Specification is “wherein a user can be disposed on the top surface of the flotation device in each of the following positions: prone; kneeling; or standing”. The device depicted in the Evolos Videos only allows a user to be disposed in a kneeling position. As shown in the below images reproduced from the Evolos Videos, the device depicted therein includes a raised portion. This raised portion would prevent a user from laying prone or from standing on the device. Dr. Takahashi states that the “the flotation device being a boat-like structure without a substantially flat surface” makes the device of the Evolos Videos unable to support a user in each of a prone or standing position. EX2006, ¶90.



EX1006 at 0:28

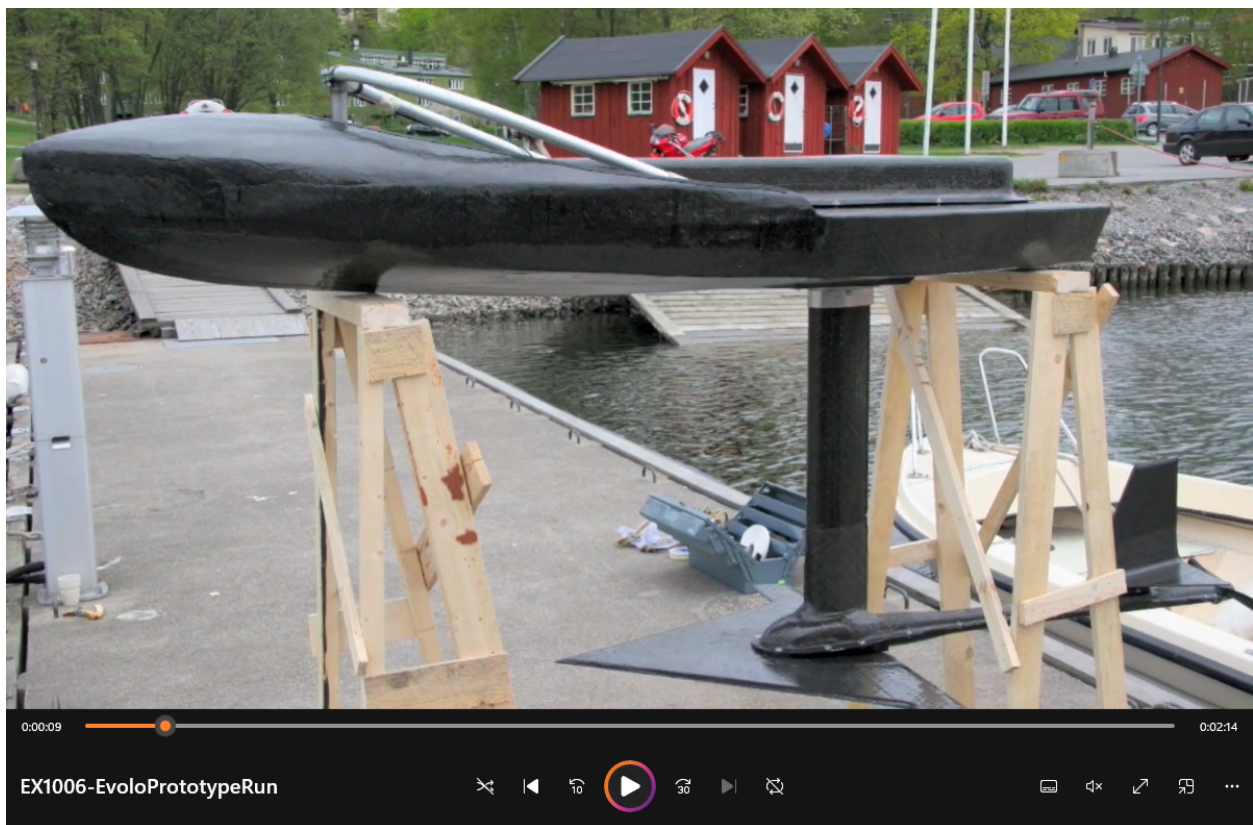


EX1006 at 1:21

Woolley does not cure this deficiency, as Woolley is specifically designed for a user to be seated. For example, Woolley states that “[o]ne aspect of the present invention involves a recreational device that supports a seated human rider while the rider and the device are towed behind a powered watercraft.” EX1011, 1:54-56; Figs. 1-4.

- b. Evolo Videos + Woolley does not teach “a hydrofoil fixedly interconnected with the lower end of the strut, the hydrofoil having no moveable surface and designed to provide passive static stability controlled solely by weight shift of the user”

Petitioner and Dr. Brizzolara rely on a single second of one of the Evolo Videos (EX1006 at 0:09) as allegedly teaching “a hydrofoil fixedly interconnected with the lower end of the strut, the hydrofoil having no moveable surface”. However, this single second of video fails to show “the hydrofoil having no moveable surface” as recited in claim 1. Portions of the hydrofoil are outside the frame of the video, and other portions are obscured by the wood supporting the watercraft.



EX1006 at 0:09

Turning to “passive static stability”, the parties have agreed that this feature should be construed to mean “designed such that the hydrofoil has an initial tendency

to return to its original condition when disturbed without the hydrofoil having any movable components". See Pet., at 12-13.

The Evolo Videos do not teach a device with passive static stability, which Petitioners admits in looking to Woolley for this feature of claim 1. Pet., 64. Dr. Takahashi opines, based on his review of the Evolo Videos, "when operated as a hydrofoil, the watercraft lunges and plunges into and out of the water" and exhibits a "lack of both pitching stability and rolling stability". EX2006, ¶95. As shown in the below images reproduced from the Evolo Videos, the watercraft depicted in the Evolo Videos exhibits a porpoising motion. Dr. Takahashi opines, "[i]n view of this porpoising, the watercraft of the Evolo Videos cannot be said to be 'passively stable'". EX2006, ¶85.

Patent Owner's Preliminary Response
IPR2024-00086 (U.S. Patent No. 9,359,044)



EX1006 at 1:42



EX1006 at 1:43

As a POSITA, Dr. Takahashi opines that the Evolo Videos teach away from the “passive static stability” recited in claim 1. EX2006, ¶96. Rather, he opines, a POSITA would recognize that “the watercraft depicted in the Evolo Videos could only be stabilized using some sort of active control system (e.g., through the use of moveable hydrodynamic control surfaces)”. EX2006, ¶96.

Petitioner and Dr. Brizzolara allege that “[a] POSITA would have been motivated to combine the watercraft disclosed in the EvoloVideos with Woolley to

provide for a passively stable hydrofoil.”⁴ Pet., at 64. “Obviousness” under 35 U.S.C §103 requires a petitioner show that a POSITA would have been (1) motivated to combine or modify prior art teachings and (2) would have a reasonable expectation of success in doing so. *See Endo Pharm., Inc.* 922 F.3d at 1373. As discussed below, there is neither a motivation to combine the Evolo Videos with Woolley nor is there a reasonable expectation of success of achieving the claimed invention with the combination of the Evolo Videos and Woolley.

With respect to Woolley, Petitioner alleges that, “[a]s disclosed in Section IX.A.1(f), Woolley discloses 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., at 65. However, in contrast to Dr. Brizzolara’s assertions, the hydrofoil configuration of Woolley only produces a nose-up torque, which is not an indication of stability (or instability). EX2006, ¶98.

Woolley is “designed to be towed behind a conventional powered watercraft utilizing a standard ski tow rope”. EX1011, Abstract. Each embodiment described in Woolley is towed behind a powered watercraft, and Woolley makes no mention

⁴ Petitioner uses the phrase “passively stable hydrofoil”, but the phrase of claim 1 is actually “a hydrofoil [...] designed to provide passive static stability [...]”.

of the device or hydrofoils contained therein being self-propelled. Towing the Woolley device with a tow rope significantly contributes to any stability of the device. EX2006, ¶99. In the design of Woolley, the propulsive force is coming solely from the powered watercraft towing the hydrofoil-containing device, which is in front of the hydrofoil-containing craft and above the plane of the water. EX2006, ¶101. The hydrofoil elements of Woolley are designed to account for the propulsive force being transmitted from a tow rope being held by a rider near the watercraft's center of gravity. EX2006, ¶101.

In contrast, when a propulsor and electric motor are affixed directly to the hydrofoil-containing craft, the propulsive force is coming from directly below the hydrofoil-containing craft and below the plane of water. EX2006 ¶100. Dr. Takahashi explains “the propulsive force differs significantly between the watercraft of the Evolo Videos and the watercraft described in Woolley.” EX2006, ¶100 (emphasis added). Petitioner and Dr. Brizzolara devote significant space to going through all Woolley's statements regarding hydrofoil design, but completely neglect the significant role the tow rope of Woolley has on the stability of the hydrofoil and overall system. 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. EX2006, ¶101. Petitioner conveniently ignores this fact.

However, as Dr. Takahashi explains, these facts cannot be ignored. Simply taking the hydrofoil from Woolley and placing it on the device depicted in the Evolo Videos, as Petitioner suggests, would not generate a passively statically stable device. As outlined above, the hydrofoil elements of Woolley are configured based on where the propulsive force is compared to the center of gravity (e.g., based on the propulsive force being near the center of gravity). EX2006, ¶101. The hydrofoil configuration of Woolley would be unworkable on the device depicted in the Evolo Videos, as this combination would result in an unstable hydrofoil. EX2006, ¶101. The combination of the hydrofoil of Woolley with the device depicted in the Evolo Videos would not result in a “hydrofoil [...] designed to provide passive static stability” as recited in claim 1. EX2006, ¶101.

Dr. Brizzolara summarily concludes that “[a] POSITA would have the same motivation to combine the hydrofoil disclosed and described in Woolley with EvoloVideos as with the EvoloReport in that all are directed to personal hydrofoil watercraft.” EX1002, p. 59. Petitioner references arguments made in connection with Ground 1 regarding how Woolley allegedly teaches “a hydrofoil [...] designed to provide passive static stability controlled solely by weight shift of the user”, as recited in claim 1 of the ‘044 Patent. Pet., p. 65. However, Petitioner fails to set forth any motivation to combine the Evolo Videos, as distinct from the Evolo Report, with Woolley. Petitioner also fails to provide any evidence of a reasonable expectation of

success of achieving the claimed invention with the combination of the Evolo Videos, as distinct from the Evolo Report, and Woolley. Contrary to Dr. Brizzolara's assertion, a POSITA would not be motivated to combine the device depicted in the Evolo Videos, which is self-propelled, with the teachings of Woolley to achieve a self-propelled hydrofoil designed to provide passive static stability, or "designed such that the hydrofoil has an initial tendency to return to its original condition when disturbed without the hydrofoil having any movable components" as construed.

Dr. Brizzolara summarily concludes that "[t]o 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 would be designed to provide passive static stability." EX1002, p. 24. However, as mentioned above, there are several considerations in hydrofoil design that a POSITA would need to consider, and Petitioner offers no rationale for how or why a POSITA would have a reasonable expectation of success with this combination, particularly in view of the Evolo Videos teaching away from passive static stability altogether. EX2006, ¶96 ("Evolo Videos teach away from the claimed statically stable configuration because the watercraft described in the Evolo Videos could only be stabilized using some sort of active control system")

In addition to providing stability, the tow rope and powered watercraft towing the Woolley device functions to control the hydrofoil-containing device of Woolley. EX2006, ¶53. The Petitioner alleges that “[t]he limitation ‘controlled solely by weight shift of the user’ refers to the control of the entire personal watercraft, rather than the control of the hydrofoil separately from the personal watercraft.”⁵ Pet., at 26. However, the full claim phrase is “the hydrofoil having no moveable surface and designed to provide passive static stability controlled solely by weight shift of the user.” EX1001, 7:42-44.

The Evolo Videos do not teach a hydrofoil that was designed to both provide passive static stability and to allow control solely by weight shift of the user. EX1001, 7:42-44 (emphasis added); EX2006, ¶103. Dr. Brizzolara asserts that “In EvoloVideos, the user of the watercraft is shown to control the watercraft solely by the weight shift of the user,” but the only evidence offered in support of this conclusion is a ten second clip from one of the Evolo Videos (0:50 to 1:00 of EX1006). EX1002, p. 58.

Contrary to Dr. Brizzolara's assertion, this clip from EX1006 is wholly insufficient to establish that the watercraft depicted therein includes a “hydrofoil having no moveable surface and designed to provide passive static stability

⁵ Petitioner proposed no construction of this phrase.

controlled solely by weight shift of the user”. As discussed above, Dr. Takahashi notes, based on his review of the Evolo Videos, “when operated as a hydrofoil, the watercraft lunges and plunges into and out of the water” and exhibits a “lack of both pitching stability and rolling stability”. EX2006, ¶95. The watercraft depicted in the Evolo Videos exhibits a porpoising motion. Dr. Takahashi opines, “In view of this porpoising, the watercraft of the Evolo Videos cannot be said to be ‘passively stable’”. EX2006, ¶85. Furthermore, Dr. Takahashi opines that, due to this lack of “passive static stability” that “does not appear to be able to be cured through some sort of active control system [...] the watercraft depicted in the Evolo Videos is fundamentally uncontrollable during hydrofoil operation”. EX2006, ¶102. Accordingly, the hydrofoil depicted in the Evolo Videos is not designed to provide passive static stability or allow control solely by weight shift of the user. EX2006, ¶103.

Further, the hydrofoil design of Woolley would also not allow for sole control via weight shifting. EX2006, ¶¶53. Nor would a POSITA look to Woolley for a hydrofoil design that would allow for sole control via weight shift. The Woolley device, including its hydrofoil, are designed to be controlled by the tow rope and the towing watercraft, not solely via weight shift. EX2006, ¶¶52-53.

In Woolley, the user is strapped into a seat of the ski. EX1011, 8:60-62. Being strapped into a seat in the Woolley device minimizes the amount of weight a user is

able to shift. EX2006, ¶¶52-53. Further, Woolley explicitly contemplates that the device may be adapted to accommodate beginner riders “while being relatively unresponsive to rider actions (such as swaying side to side). In this mode, ski responsiveness is generally analogous to a conventional jet ski.” EX1011, 16:42-47. It is clear from the teachings of Woolley that a user may, in some circumstances (e.g., advanced riders) contribute to the steering and control of the hydrofoil-containing craft, but that the control of the hydrofoil-containing craft is largely a result of the powered watercraft towing the device. EX2006, ¶¶52-53. Control of Woolley is not “solely by weight shift of the user”. EX2006, ¶¶52-53.

The crux of Petitioner's argument is that one can simply take the allegedly “stable” hydrofoil from Woolley and attach it to the device depicted in the Evolo Videos and that would result in the device depicted in the Evolo Videos having “a hydrofoil fixedly interconnected with the lower end of the strut, the hydrofoil having no moveable surface and designed to provide passive static stability controlled solely by weight shift of the user” as claimed. The combination of the Evolo Videos and Woolley do not teach every element of claim 1; furthermore, even if, *arguendo*, every element of claim 1 is illustrated in the Evolo Videos and Woolley individually and a POSITA was motivated to combine them, 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. The Petition therefore

does not establish a reasonable likelihood of prevailing on Ground 2 and institution should be denied.

c. Evolos Videos + Woolley does not teach “the watercraft having no movable steering system”

For this feature, Petitioner relies on an unsupported statement by Dr. Brizzolara in EX1002 ¶ 119 that “[t]he watercraft disclosed by the Evolos Videos has no movable steering system”. *See* Pet., at 65. It is unclear how Dr. Brizzolara arrives at such a conclusion. The prototype(s) of the watercraft depicted in Evolos Videos is not shown at a level of detail sufficient to ascertain whether or not a movable steering system is present. Accordingly, “the watercraft having no movable steering system” is not rendered obvious by the combination of the Evolos Videos and Woolley.

The combination of the Evolos Videos and Woolley does not teach every element of claim 1; furthermore, even if, *arguendo*, every element of claim 1 is illustrated in the Evolos Videos and Woolley individually and a POSITA was motivated to combine them, Petitioner fails to provide an explanation for why a POSITA would have a reasonable expectation of success at achieving the claimed invention. The Petition therefore does not establish a reasonable likelihood of prevailing on Ground 2 and institution on this ground should be denied.

i. Ground 2 Summary

As discussed above with respect to claim 1 and, thus, necessarily each of the dependent claims 5-8, 10, 17, and 21, the Petition does not establish a reasonable likelihood of prevailing on Ground 2; therefore, institution on this ground should be denied.

Patent Owner reserves the right to address each of dependent claims 5-8, 10, 17, and 21 individually should trial be instituted.

E. Ground 3 Should Not Be Instituted

Petitioner asserts as Ground 3 that claims 2, 12-14, and 20 of the '044 Patent are obvious in view of the Evolo Videos, Woolley, and Torqeedo Manual. However, as set forth above, the Petition fails to establish a reasonable likelihood that claim 1 is obvious. Thus, Petitioner has also necessarily failed to establish a reasonable likelihood that claims 2, 12-14, and 20 are obvious. Institution on this ground should be denied.

Patent Owner reserves the right to address each of dependent claims 2, 12-14, and 20 individually should trial be instituted.

F. Ground 4 Should Not Be Instituted

Petitioner asserts as Ground 4 that claim 11 of the '044 Patent is obvious in view of the Evolo Videos, Woolley, Torqeedo Manual, and Gleason. However, as set forth above, the Petition fails to establish a reasonable likelihood that claim 1 is

obvious. Thus, Petitioner has also necessarily failed to establish a reasonable likelihood that claim 11 is obvious. Institution on this ground should be denied.

Patent Owner reserves the right to address dependent claim 11 individually should trial be instituted.

G. Ground 5 Should Not Be Instituted

Petitioner asserts as Ground 5 that claims 15 and 18 of the '044 Patent are obvious in view of the Evolo Videos, Woolley, Torquedo Manual, Gleason, and Manning. However, as set forth above, the Petition fails to establish a reasonable likelihood that claim 1 is obvious. Thus, Petitioner has also necessarily failed to establish a reasonable likelihood that claims 15 and 18 are obvious. Institution on this ground should be denied.

Patent Owner reserves the right to address each of dependent claims 15 and 18 individually should trial be instituted.

IX. SECONDARY CONSIDERATIONS OF NONOBVIOUSNESS

Secondary considerations of nonobviousness include commercial success; long-felt yet unsolved need; failure of others to solve the problem addressed; skepticism or disbelief; positive recognition; copying; licensing; and unexpected results or properties. *Power Integrations, Inc. v. Fairchild Semiconductor Int'l, Inc.*, 711 F.3d 1348, 1368 (Fed. Cir. 2013). Here, nearly all of the secondary considerations of non-obviousness demonstrate that the '044 Patent is not obvious.

A. Commercial Success

An invention's commercial success may demonstrate significant differences over the available prior art. For example, if the invention had been obvious, there is a presumption that someone else would have brought it to the market sooner. *Merck & Co., Inc. v. Teva Pharms. USA, Inc.*, 395 F.3d 1364, 1376 (Fed. Cir. 2005). In 2017, Patent Owner became the first to commercially manufacture an eFoil (branded as Lift Foil). See Declaration of Nick Leason, EX2008, ¶16. Many of the alleged prior art references, from Evolo (2008/2009), Woolley (2004), Gleason (1976), Manning (2008), and the Torquedo Manual (2007), date back to many years ago. Petitioner's obviousness argument is belied by the fact that despite these references being around for so long, no one else was able to bring an eFoil to the market until Patent Owner did, using the technology of the '044 Patent, in 2017.

Commercial success can be shown by establishing both success in the marketplace of a product encompassed by the claims and a nexus between the commercial product and the claimed invention. *Volvo Penta of the Americas, LLC v. Brunswick Corp.*, 81 F.4th 1202, 1210 (Fed. Cir. 2023) ("A patent owner is entitled to a presumption of nexus when it shows that the asserted objective evidence is tied to a specific product that embodies the claimed features, and is coextensive with them." (citing *Brown & Williamson Tobacco Corp. v. Philip Morris, Inc.*, 229 F.3d 1120, 1130 (Fed. Cir. 2000))). Success in the marketplace can be demonstrated

by significant sales of the product at issue in a relevant market and high market share – both of which can be attributed to the benefits of the patented technology. *Ormco Corp. v. Align Tech., Inc.*, 463 F.3d 1299, 1312 (Fed. Cir. 2006).

As an initial matter, Patent Owner's Lift eFoils are commercial embodiments of the '044 Patent. See Expert Report of Christopher Barry, EX2009, ¶¶72-73; Exhibit 5; EX2008, ¶¶16, 20; and Declaration of Jacob Langelan, EX2010, ¶8. These embodiments have been a tremendous commercial success for Patent Owner. Prior to manufacturing and selling the eFoils, when Patent Owner only manufactured and sold paddleboards, surfboards and hydrofoils, Patent Owner's average annual total revenue was approximately \$[REDACTED] million. EX2008, ¶24. In 2018, the first year in which eFoils were sold, Patent Owner's total revenue increased to around \$[REDACTED] million. *Id.* In 2019, the total revenue jumped again to roughly \$[REDACTED] million, with over \$[REDACTED] million in the U.S. alone. *Id.* The revenues have increased since, with total revenues of \$[REDACTED] million (with around \$[REDACTED] million directly from eFoil sales and around \$[REDACTED] million from sales in the U.S.) in 2020, \$[REDACTED] million (with nearly \$[REDACTED] million from eFoil sales and \$[REDACTED] million from sales in the U.S.) in 2021, \$[REDACTED] million (with \$[REDACTED] million from eFoil sales and \$[REDACTED] million from sales in the U.S.) in 2022, and \$[REDACTED] million (with \$[REDACTED] million from eFoil sales and \$[REDACTED] million from sales in the U.S.) in 2023. *Id.* These revenue numbers represent [REDACTED] eFoil units sold in 2018; [REDACTED] eFoil units ([REDACTED] in the U.S.) sold in 2019; [REDACTED] eFoil units ([REDACTED] in the U.S.) sold in

2020; [REDACTED] eFoil units ([REDACTED] in the U.S.) sold in 2021; [REDACTED] eFoil units ([REDACTED] in the U.S.) sold in 2022; and [REDACTED] eFoil units ([REDACTED] in the U.S.) sold in 2023. *Id.*, ¶23.

In terms of market share, Patent Owner created the worldwide market for eFoils in 2018 – and Patent Owner enjoyed a [REDACTED]% market share at that time. *Id.*, ¶25. While that percentage has decreased since new competition has entered the market, as of today Patent Owner still controls approximately [REDACTED]% of the global market. *Id.* As can be seen from the above referenced revenue numbers, Patent Owner's revenues have increased even with loss in market share. Further, Patent Owner has been able to maintain the same pricing levels, with great sales success, despite other competitors entering the market. *Id.*, ¶ 21.

Finally, there is a nexus between the commercial success of Patent Owner's eFoils and the features of the '044 Patent because those features, including at least the passive static stability of the patented eFoil, drive sales. First, however, it should be noted that there is a "presumption of nexus for objective considerations when the patentee shows that the asserted objective evidence is tied to a specific product and that product 'is the invention disclosed and claimed in the patent.'" *WBIP, LLC v. Kohler Co.*, 829 F.3d 1317, 1329 (Fed. Cir. 2016). Here, the '044 Patent covers the entirety of the disclosed personal hydrofoil watercraft – or the entire product. As a

result, the nexus presumption applies and the burden should shift to the Petitioner to prove that there is no nexus. Petitioner has not, and cannot do so here.

In any event, the success of Patent Owner's eFoils can be attributed primarily to the ease with which the eFoils can be operated – which itself can be attributed to the stability of the craft. *See* EX2008, ¶¶19, 22; EX2010, ¶11; and Declaration of Cort Larned, EX2011, ¶¶9-12. There is a sufficient nexus in this case and this secondary consideration weighs heavily against a finding of obviousness.

B. Long-Felt Yet Unresolved Need

Evidence of a “long-felt but unresolved need can weigh in favor of the non-obviousness of an invention because it is reasonable to infer the need would not have persisted had the solution been obvious.” *Apple Inc. v. Samsung Electronics Co.*, 839 F.3d 1034, 1056 (Fed. Cir. 2016). To show satisfaction of long-felt need, one must establish that (1) a POSITA recognized a problem that existed for a long period of time without a solution, (2) the long-felt need had not been satisfied by another before the claimed invention, and (3) the invention in fact satisfied the long-felt need. *Immunex Corp. v. Sandoz Inc.*, 395 F. Supp. 3d 366, 405 (D.N.J. 2019).

Here, the inventor of the '044 Patent, Professor Jacob Langelaan, was looking for a personal watercraft that was smaller and portable, self-powered, and could be ridden like a surfboard or snowboard. EX2010, ¶¶2-3. At that time, the market for personal watercraft consisted of (a) larger, gas-powered craft such as jet-skis or

wave-runners which are typically larger, weigh over 500 pounds, are loud, and are difficult to operate in waves or chop; (b) self-powered surfboards which were powered by small internal combustion engines, electric engines or which incorporated control surfaces such as a steering mechanism (all of which did not carry enough power and were not stable or controlled solely by weight shift); or (c) water skis, wake boards and/or hydrofoil “air chairs” which were pulled or towed by a boat. EX 2010, ¶¶2, 3, and 5; EX 2008, ¶¶7-9. There was nothing on the market which matched what Professor Langelaan wanted in terms of being self-propelled, passively stable, weight shift controlled and sufficiently portable such that the craft could be put in the back of a car and easily transported to the nearest body of water. EX 2010, ¶3, 5, 12.

Professor Langelaan's efforts proved successful as his invention addressed all of the recognized market needs in that he was able to create a personal watercraft that was portable, easy to transport, electric-powered, controlled solely by weight-shift, stable, and fun to ride like a surfboard or snowboard. *See* EX2010, ¶19; and EX2008, ¶¶8, 12-13. This consideration weighs heavily against a finding of obviousness.

C. Failure of Others

Evidence that others tried but failed to make the claimed invention “is particularly probative of obviousness.” *Azurity Pharms., Inc. v. Alkem Lab'ys Ltd.*,

655 F. Supp. 3d 270, 301 (D. Del. 2023). To the extent that the Petitioner alleges that the Evolo Report sought to teach a passively stable watercraft with one or more claimed features of the '044 Patent, the Evolo Report is evidence of the failure of others since the watercraft described in the Evolo Report (or shown in the Evolo Videos), was not passively stable. EX2010, ¶18. Petitioner admits as much through its citation of Woolley, not Evolo, as allegedly teaching passive stability. Pet., at 25-26. Furthermore, the Evolo videos (EX1006, EX1008) depict an uncontrollable porpoising watercraft that at any moment could have upset its rider into the water. EX2006, ¶85. The Evolo craft's failure to demonstrate passive stability demonstrates failure to make the claimed invention of the '044 Patent.

In addition, prior to becoming aware of the '289 Application that matured into the '044 Patent, Patent Owner itself tried and failed to create the claimed invention. Patent Owner subsequently discovered the '289 Application and acquired rights to the '044 Patent that issued from the '289 Application from Professor Langelaan. EX2008, ¶¶9-10. This consideration also weighs against a finding of obviousness.

D. Industry Praise and Licensing

Evidence that the industry praised a claimed invention or a product that embodies the patent claims weighs against an assertion that the same claimed invention would have been obvious. *Apple Inc.*, 839 F.3d at 1053. Along these lines, licensing the technology at issue is an objective indicator that the market values the

licensed technology. *Impax Labs., Inc. v. Lannett Holdings Inc.*, 246 F. Supp. 3d 1024, 1039 (D. Del. 2017).

Patent Owner's Lift eFoils garnered instantaneous industry praise upon entry into the market – and even prior to that when Patent Owner began marketing the embodiments online. Indeed, soon after Patent Owner released its first marketing video featuring the eFoil in operation in 2017, the video had been viewed over 100 million times online and Patent Owner was flooded with industry (and competitor) calls and emails praising the product. EX2008, ¶15. Media buzz continued as the product was released. *Id.*, ¶ 17. Numerous articles have featured Patent Owner's Lift eFoil, both discussing and praising the product(s), their stability, and their ease of use. *See e.g.*, EX2012-EX2023. Patent Owner's eFoils have received overwhelmingly positive feedback from its customers. EX2008, ¶17.

As for a specific example of industry praise and recognition, Mr. Cort Larned, who has been a key figure in the watersports industry since 1976 (*see* EX2011, ¶¶1-7), indicates he was “blown away” by Patent Owner's eFoils when they first entered the market and that it was a “revolutionary” and highly refined product. EX2011, ¶8. Mr. Larned touted the eFoils' stability as contributing to its ease of use and further tells of the importance of Patent Owner's eFoil in being an incredible teaching tool for teaching anyone how to foil and develop skills on other personal watercraft. *Id.*, ¶¶8-12.

Finally, the licensing of the '044 Patent demonstrates the value of the patented technology in the eyes of the industry. The '044 Patent was originally licensed by MHL from Professor Langelaan. EX2010 ¶¶12-13, EX2008, ¶¶14-17. After Patent Owner acquired the rights to the '044 Patent from Professor Langelaan, Patent Owner has licensed the patent to competitors named Fliteboard and MSLR. *See* EX2008, ¶ 32. What is more, Professor Langelaan and Patent Owner indicate that they have received a number of inquiries from companies in the personal watercraft industry about licensing the patent. EX2010, ¶16; 2008, ¶31.

This secondary consideration factor weighs against a finding of obviousness.

E. Copying

After Patent Owner first marketed and released its first-generation Lift eFoil in 2017/2018, several competitors entered the market selling what were virtually identical eFoils. EX2008, ¶¶27-28. All of these competitors had access to the Lift eFoils and the products they created were identical in both appearance and function as the Lift eFoils. These competitors included Avante Innovations, LLC ("Avante"), Fliteboard, Shenzhen Waydoo ("Waydoo"), Takuma, and Foil Boarding Company, Inc. ("Foil" or "Petitioner"). *Id.* Avante and Takuma eventually stopped selling their eFoils. *Id.*, ¶ 29. Fliteboard entered into a license with Patent Owner. *Id.*, ¶32. Patent Owner has sued Petitioner for patent infringement and that case is still pending. *Id.*, ¶30. Patent Owner also sued Waydoo and in April of 2023, a Delaware jury found

that Waydoo was a willful infringer of the '044 Patent. *See MHL Custom, Inc. v. Waydoo USA, Inc., et al.* (D. Del. 1:21-cv-00091), DN 220 (submitted herewith as EX2023). Given the rampant copying of the '044 Patent, this consideration also weighs against a finding of obviousness.

F. Unexpected Results

“In considering unexpected results, courts ask whether ‘the claimed invention exhibits some superior property or advantage that a person of ordinary skill in the relevant art would have found surprising or unexpected.’” *Forest Lab’ys., LLC v. Sigmapharm Lab’ys., LLC*, 918 F.3d 928, 937 (Fed. Cir. 2019). As an initial matter, it cannot reasonably be disputed that the embodiments of the '044 Patent demonstrate far superior results than the closest prior art in the form of either (a) larger, gas-powered craft such as jet-skis or wave-runners; (b) self-powered surfboards with minimal power; (c) self-powered watercraft with active control surfaces; and/or (d) water skis, wake boards and/or hydrofoil “air chairs” which were pulled or towed by a boat. *See* EX 2010, ¶¶2, 3, and 5; EX 2008, ¶¶7-9. Part of what made the embodiments of the '044 Patent successful, and made their performance results unexpected, was the unforeseen ease of use of the craft. And the ease of use is due almost exclusively to the craft’s stability. *See* EX 2008, ¶19; and EX2011, ¶¶11, 16-17.

This secondary consideration factor weighs against a finding of obviousness.

X. CONCLUSION

For at least the reasons presented herein, Petitioner fails to show that there is a reasonable likelihood that Petitioner would prevail with respect to any of the Challenged Claims. Accordingly, Patent Owner respectfully submits that Petitioner's request for institution of an *inter partes review* of claims 1, 2, 5-8, 10-15, 17-18, and 20-21 of U.S. Patent No. 9,359,044 should be denied in its entirety.

Patent Owner's Preliminary Response
IPR2024-00086 (U.S. Patent No. 9,359,044)

Dated: February 29, 2024

Respectfully submitted,

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CERTIFICATE OF WORD COUNT

Pursuant to 37 C.F.R. § 42.24(d), Patent Owner hereby certifies that the present paper contains 12,600 words (as counted by the “Word Count” feature of Microsoft Word™). This word count excludes the table of contents, table of authorities, table of exhibits, certificate of word count, and certificate of service.

Dated: February 29, 2024

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CERTIFICATE OF SERVICE

Pursuant to 37 C.F.R. § 42.6(e), the undersigned certifies that on February 29, 2024, a copy of the Patent Owner's Preliminary Response and EX2001 to EX2027 is being served by electronic mail on the following counsel of record:

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