

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

YAMAHA GOLF CAR COMPANY,
Petitioner,

v.

CLUB CAR, LLC
Patent Owner.

Case IPR2017-02142
Patent 7,239,965 B2

Before JOSIAH C. COCKS, CARL M. DEFRANCO, and
ROBERT L. KINDER, *Administrative Patent Judges*.

DEFRANCO, *Administrative Patent Judge*.

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

Club Car, LLC (“Club Car”) is the owner of U.S. Patent No. 7,239,965 B2 (“the ’965 patent”). Yamaha Golf Car Company (“Yamaha”) petitioned for *inter partes* review of claims 4, 5, 10, 14, 15, 19, 20, 27, 29, and 30 of the ’965 patent. Paper 1 (“Pet.”). At our request, Yamaha and Club Car each filed a supplemental claim construction brief.

Papers 13, 15. After considering the parties' submissions, we instituted *inter partes* review because Yamaha had demonstrated a reasonable prospect of success as to claim 20, but we denied institution as to the other challenged claims. Paper 17 ("Inst. Dec."). Yamaha asked us to reconsider. Paper 19. Upon reconsideration, we changed course and instituted *inter partes* review of all the challenged claims because, in the first instance, we overlooked material fact disputes created by competing expert testimony, which at the institution stage should have been viewed in a light most favorable to Yamaha rather than Club Car. Paper 26, 4, 13–14 (citing 37 C.F.R. § 42.108(c)).

After institution, Club Car opposed Yamaha's challenges raised by the petition. Paper 37 ("PO Resp."). Yamaha replied. Paper 48 ("Pet. Reply"). Club Car, as patent owner, had the last word in a sur-reply. Paper 53 ("PO Sur-Reply"). An oral hearing was conducted on February 14, 2019. Paper 62 ("Tr.").

Notably, early in the proceeding, Club Car filed a statutory disclaimer under 35 U.S.C. § 253 for claim 20 of the '965 patent. Paper 22, Ex. A. As such, we no longer consider the patentability of claim 20. *See* 37 C.F.R. § 42.107(e). We address only the remaining challenged claims, namely, claims 4, 5, 10, 14, 15, 19, 27, 29, and 30.

We have jurisdiction over this proceeding under 35 U.S.C. § 6. After considering the parties' arguments and supporting evidence, we determine that Yamaha has *not* proven by preponderant evidence that claims 4, 5, 10, 14, 15, 19, 27, 29, and 30 of the '965 patent are unpatentable. *See* 35 U.S.C. § 316(e). We issue this Final Written Decision pursuant to 35 U.S.C. § 318(a).

I. BACKGROUND

A. *Related Matters*

The '965 patent is the subject of an infringement action, *Club Car, LLC v. Yamaha Golf Car Company*, No. 1:17-cv-00034 (S.D. Ga.), currently stayed pending resolution of this and several related *inter partes* review (“IPR”) proceedings. Pet. 1. One of those related IPR proceedings, IPR2017-02141 (“the 2141 IPR”), involves our review of the same patent and claims at issue here (as well as other claims), but on different grounds. The other two related proceedings, IPR2017-02143 and IPR2017-02144, involve U.S. Patent No. 7,480,569 B2 (“the '569 patent”), which issued from a continuation of the application for the '965 patent and shares an almost identical specification.

B. *The '965 Patent*

The '965 patent is titled “Method and System for Golf Cart Control,” and claims priority to U.S. Provisional Application No. 60/440,894 (“the '894 Provisional”), filed January 17, 2003. Ex. 1002, (54), (60), 1:6–9. As described, the system and method use the GPS location of a golf cart on a golf course to control the golf cart’s movements on the course and “preempt or otherwise reduce damage from golf cart movement” in “sensitive golfing areas, such as greens [and] locations having wet turf” and “natural hazards, such as cliffs, water, steep inclines or sharp turns.” *Id.* at 1:36–67.

Movement of the golf cart is controlled by equipping the golf cart with a “limited access controller” that “automatically imposes restrictions on a golf cart’s movement . . . if the golf cart is positioned to enter a limited access area.” *Id.* at 2:21–53. Figure 1 of the '965 patent, reproduced below,

depicts a functional block diagram of a golf cart equipped with the limited access controller.

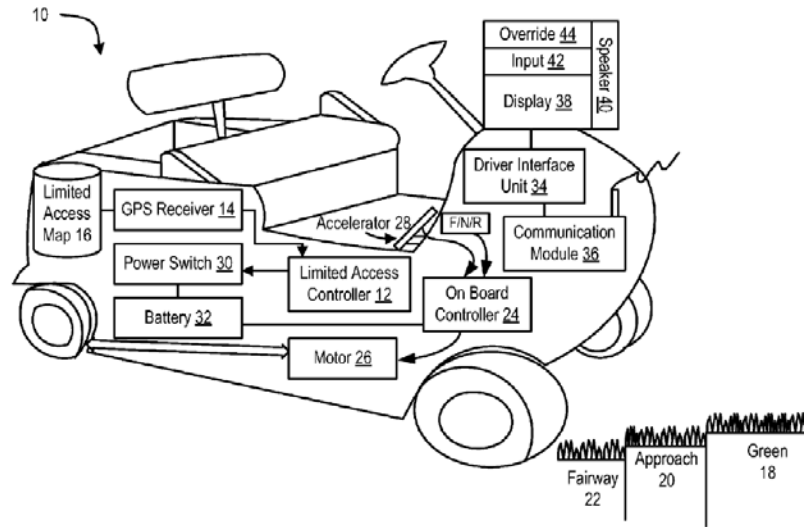


Figure 1

The limited access controller acts “in response to driver inputs” and determines a “projected path” of the golf cart by comparing the golf cart’s “GPS position over time” to a “limited access map” defining restricted access areas of the course. *Id.* at 3:66–4:67; *see also id.* at 2:5–58 (describing same). If a potential or actual violation is perceived, the limited access controller has the ability to “override driver inputs,” such as by limiting the golf cart’s maximum speed, shutting down the golf cart’s motor, or disabling operation of the golf cart in a particular gear (*e.g.*, forward or reverse movement). *Id.* at 2:21–44, 5:1–21. The limited access controller conveys movement restrictions to the golf cart’s driver through a “driver interface unit” and a “base station to allow centralized tracking of golf cart movement and status, updates to the limited access map, and direct override of driver inputs.” *Id.* at 5:21–55; *see also id.* at 2:21–44 (describing same). The base station may communicate with multiple golf carts to manage and restrict their movements over the course. *Id.* at 5:56–6:13, 7:15–52.

C. The Challenged Claims

In its Petition, Yamaha does not challenge any of independent claims 1, 11, or 21 of the '965 patent, rather only claims that stem directly or indirectly from those base claims, namely, dependent claims 4, 5, 10, 14, 15, 19, 27, 29, and 30. *See, e.g.*, Pet. 22 (mapping limitations of base claim 1 and dependent claim 4, while clarifying that “[o]nly Claim 4 is challenged here.”).

The unchallenged base claims are directed to a “system” and “method” for controlling movement of a golf cart relative to a “limited access area” of a golf course. The challenged dependent claims are directed to additional features of the controller and how it interfaces with the driver of the golf cart and a base station. Claim 1, reproduced below, is illustrative of the golf cart control system and method that underlies each of the challenged dependent claims:

1. A system for control of a golf cart on a golf course, the golf cart having a motor for moving the golf cart, the motor responding to driver commands input through an on board controller, the system comprising:

- a GPS receiver operable to determine the golf cart position on the golf course;

- a limited access map defining limited access areas of the golf course; and

- a limited access controller interfaced with the GPS receiver and the limited access map, the limited access controller operable to override a driver command to move the golf cart to violate a limited access area.

Ex. 1002, 7:62–8:7.

D. The Asserted Challenges

In challenging the various dependent claims, Yamaha relies on a single reference—U.S. Patent Application Publication No. US 2006/0052918 A1 (Ex. 1003, “the ’918 Publication”), published March 9, 2006. Pet. 3, 20. Yamaha asserts the following challenges based on the ’918 Publication. Pet. 3, 22, 42.

Ground	Reference	Challenged Claims
§ 102(e)	’918 Publication	4, 5, 14, 19, 27
§ 103(a)	’918 Publication	10, 15, 20, 29, 30

In further support, Yamaha proffers a declaration from Kevin Breen, an expert witness retained for purposes of this proceeding. *See* Ex. 1001. Club Car, in turn, submits a rebuttal declaration from its expert witness, Scott Andrews, in support of patentability of the challenged claims.¹ *See* Ex. 2009. Yamaha does not submit a reply declaration.

II. ANALYSIS

We now decide whether Yamaha has proven the challenged claims unpatentable by a “preponderance of the evidence.” 35 U.S.C. § 316. In doing so, we also decide whether the ’918 Publication qualifies as prior art to the ’965 patent.

¹ Club Car submits a further declaration from a golf industry expert who testifies on the meaning of the claim terms “golf cart” and “driver.” *See* Ex. 2007. Given the parties’ agreement that construction of those terms is unnecessary here (*see infra* Section III.A), we neither rely on nor give any weight to that additional declaration.

A. Claim Construction

We give claim terms in an unexpired patent their broadest reasonable interpretation in light of the specification of the patent in which they appear. 37 C.F.R. § 42.100(b). Yamaha proposes a construction of three claim terms—“golf cart,” “driver,” and “velocity.” Pet. 4–7. Club Car responds that “no construction of the disputed claim terms is necessary.” PO Resp. 6. In its reply, Yamaha “agrees that the terms ‘golf cart’ and ‘driver’ do not need to be construed in this IPR.”² Pet. Reply 4. But Yamaha maintains that construction of the term “velocity” is “material” here. *Id.* at 4, 6.

According to Yamaha, the term “velocity” is “a measure of *both* speed *and* direction of travel (*i.e.*, “bearing”), *not just* speed.” *Id.* at 7. While Yamaha acknowledges that “speed is a component of velocity,” it contends that to measure velocity, “the direction of the ‘speeding’ thing must also be known.” *Id.* Club Car submits that the term “velocity” should be construed according to its “plain and ordinary meaning,” but never elaborates on what that meaning might be. PO Resp. 15; PO Sur-Reply 3. We note the dictionary definition of “velocity” is “quickness of motion : SPEED . . . the rate of change of position along a straight line with respect to time.” *Merriam-Webster’s Collegiate Dictionary*, 1305 (10th ed. 2000). Aside from saying that speed is measured “along a straight line,” the definition does not include any further directional component.

² To the extent construction of these terms is necessary to this proceeding, we adopt and incorporate into this decision our claim construction (and reasoning) from the related 2141 IPR. See IPR2017-02141, Paper 71 (Final Written Decision).

The term “velocity” is found in claims 14 and 15. Each of the claims requires “estimating the velocity” of the golf cart in connection with controlling the golf cart’s movements. Claim 15 adds that the estimation of velocity encompasses “polling the golf cart motor to determine the selected motor speed” and “analyzing the change in GPS position of the golf cart over time.” We do not see the need to provide an express construction of the term “velocity” separate and apart from the way it is used there. *See Wellman, Inc. v. Eastman Chem. Co.*, 642 F.3d 1355, 1361 (Fed. Cir. 2011) (“claim terms need only be construed ‘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)). Here, the surrounding claim language lends sufficient context for how “velocity” is used and determined (such as by analyzing a change of position over time) without the need for further construction.

B. Club Car’s Priority Claim for Claims 4, 5, 14, 15, and 19

As mentioned above, the ’965 patent claims priority to an earlier provisional application, the ’894 Provisional, filed January 17, 2003. Ex. 1002, (60), 1:6–9. Whether the challenged claims of the ’965 patent are entitled to priority to the ’894 Provisional is relevant here because Club Car relies on the priority claim in order to antedate the ’918 Publication (priority date of March 18, 2003) relied on by Yamaha as evidence of anticipation of claims 4, 5, 14, and 19 and obviousness of claim 15. PO Resp. 19–34. In other words, Club Car disputes Yamaha’s assertion that the ’918 Publication is prior art to claims 4, 5, 14, 15, and 19 because those claims find support in the earlier ’894 Provisional to which the ’965 patent claims priority. *Id.* Club Car does not challenge Yamaha’s contention that the other challenged

claims—claims 10, 27, 29, and 30—are not supported by the '894 Provisional. *See id.* Thus, based on the record before us, the '918 Publication is prior art to claims 10, 27, 29, and 30.

Turning to whether the '918 Publication is prior art with respect to claims 4, 5, 14, 15, and 19, we begin with Yamaha's contentions. In its petition, Yamaha relies on the March 18, 2003 filing date of the '918 Publication in order to antedate what it contends is the earliest priority date of the challenged claims—the application filing date of January 9, 2004 for the '965 patent. Pet. 21. Presuming that Club Car would assert the '965 patent's priority claim to the January 17, 2003 filing date of the '894 Provisional, Yamaha argues that it “must be disregarded . . . because the subject matter of the Challenged Claims was not disclosed in the manner required by 35 U.S.C. § 112 in the '894 Provisional.” *Id.* at 9. “For the non-provisional utility application to be afforded the priority date of the provisional application . . . the written description of the provisional must adequately support the claims of the non-provisional application” in the manner set forth by 35 U.S.C. § 112. *New Railhead Mfg. LLC v. Vermeer Mfg. Co.*, 298 F.3d 1290, 1294 (Fed. Cir. 2002). Here, Yamaha argues that Club Car's priority claim must fail “because at least one element of each Challenged Claim is not adequately disclosed by the '894 Provisional,” including claims 4, 5, 14, 15, and 19. Pet. 11–19.

In response, Club Car argues only that the '918 Publication is not prior art with respect to challenged claims 4, 5, 14, 15, and 19. *See* PO Resp. 19, 21, 27, 32. By seeking to antedate the '918 Publication, Club Car bears the burden of production (i.e., coming forward with evidence) to show entitlement to the priority date for the '894 Provisional. *See Dynamic*

Drinkware, LLC v. Nat'l Graphics, Inc., 800 F.3d 1375, 1379–80 (Fed. Cir. 2015). To meet its burden, Club Car points to detailed descriptions in the '894 Provisional as support for the disputed claim limitations, and submits declaration testimony from its expert as evidence of what a skilled artisan would have understood from these descriptions. PO Resp. 21–34 (citing Ex. 2009).

Also, because the challenged claims necessarily include limitations from base claims 1 and 11, as well as intervening claims 3 and 18, Club Car submits proof of how the '894 Provisional provides adequate written description support for those claims. PO Resp. 22 n.3 (citing Ex. 2009 ¶¶ 45–48), 28 n.5 (citing Ex. 2009 ¶ 64), 32 n.7 (citing Ex. 2009 ¶ 75–76). Yamaha does not dispute that the '894 Provisional provides adequate written description support for base claims 1 and 11 and intervening claims 3 and 18. From our review of the final record, we are persuaded that Club Car has met its burden of showing sufficient support in the '894 Provisional for claims 1, 3, 11, and 18. Thus, we begin our analysis of the priority issue with the challenged claims in dispute, i.e., claims 4, 5, 14, 15, and 19.

1. The '894 Provisional Supports the “Accelerator Input” and “Overrides” Limitations of Claims 4 and 5

Claims 4 and 5 require that “*the driver input comprises an accelerator input to advance the golf cart along a vector that intercepts a limited access area*” and that “*the limited access controller overrides the accelerator input to prevent forward motion along the vector.*” Ex. 1002, 8:15–23 (emphases added). Yamaha argues that claims 4 and 5 lack adequate written description support because “[t]he '894 Provisional never once uses the terms ‘accelerator input,’ ‘vector,’ or ‘override’ in its disclosure.” Pet. 11

(citing Ex. 1004). In its reply, Yamaha no longer disputes that the '894 Provisional discloses the “accelerator input” and “overrides” aspects of claims 4 and 5, and, instead, Yamaha focuses on the “vector” limitation of these claims. Nonetheless, we address the “accelerator input” and “overrides” limitations in the event they are still in dispute. We address the “vector” limitation of claims 4 and 5 in the next section where we also address the “project a path” limitation of claims 14 and 15.

In determining whether a claim limitation is adequately supported by an earlier provisional application, we note that the exact terms appearing in the claim “need not be used *in haec verba*.” *Blue Calypso, LLC v. Groupon, Inc.*, 815 F.3d 1331, 1345 (Fed. Cir. 2016). Here, the '894 Provisional does not use the terms “accelerator input” or “overrides” but nonetheless makes clear that driver input occurs through an accelerator pedal and throttle setting on the golf car and that driver input is controlled in certain areas of the golf course.

More specifically, the '894 Provisional describes a “SmartCar” system for a golf car that incorporates a “Curtis 1510 controller” in which the “control features [] are linked to the GPS location of the car.” Ex. 1004, 9. As described, the Curtis 1510 controller “regulate[s] motor performance” and “enable[s] configuration functionality.” *Id.* at 10. That functionality includes “monitoring the GPS location of the car” and “implementing SmartCar control actions that are specified in access configuration map files.” *Id.* The specified control actions (or “configuration settings”) executed by the controller include “PEDAL UP MODE,” “SPEED SETTING,” “MAX SPEED,” “REVERSE SPEED,” and “FAST ACCEL.” *Id.* at 12. Club Car’s expert confirms this. Ex. 2009 ¶ 54 (citing Ex. 1004,

12). He also confirms that the controller executes these actions by monitoring “THROTTLE,” “FOOT INPUT,” “FORWARD INPUT”, and “REVERSE INPUT,” and “SPEED PULSES.” *Id.* Yamaha’s expert never addresses these express disclosures in the ’894 Provisional. See Ex. 1001 ¶¶ 33–40.

That the controller in the ’894 Provisional controls the golf car’s speed and acceleration based on foot pedal inputs and throttle settings, Club Car’s expert testifies, would have been understood by a skilled artisan to mean “that the car includes a foot pedal accelerator input for a driver.” Ex. 2009 ¶¶ 56–57. That unrebutted testimony is consistent with our understanding of the ’894 Provisional’s disclosure. Thus, we find that the ’894 Provisional provides clear support for the limitation of “an accelerator input to advance the golf cart forward,” as recited in claims 4 and 5.

As for the limitation in claims 4 and 5 that the “controller overrides the accelerator input to prevent forward motion” that would take the cart into a limited access area, the ’894 Provisional discloses that the Curtis 1510 controller “monitor[s] the GPS location of the car” and takes “[a]ctions based on an Area of Interest.”³ Ex. 1004, 10, 16; see also *id.* at 11 (“control actions that will be taken in specific areas of a golf course”). The actions taken by the Curtis 1510 controller in response to the GPS location of the car relative to a restricted area (i.e., an “Area of Interest”) include “*preventing the car from being driven into* restricted areas (such as off the course, or on

³ The ’894 Provisional defines “Areas of Interest” as “Cart Path Only,” “Greens,” “Lakes, Cliffs or other such dangers,” “Steep Hill on Cart Path,” “Natural Areas,” “Congested Areas,” “Parking Lots,” and “Totally restricted areas such as to deter theft.” Ex. 1004, 15.

fairways when cart path only conditions exist or near greens at all times).” *Id.* at 51 (emphasis added). That disclosure indicates that preventative action is taken *before* the car enters the restricted area, contrary to what Yamaha and its expert say. Pet. 13; Ex. 1001 ¶ 37.

Likewise, the ’894 Provisional discloses that other control actions include either slowing the cart down if driven toward a green or otherwise adjusting the maximum speed of the cart dependent on the area of interest. *See* Ex. 1004, 38 (“Attention: your cart has been slowed down because you are too close to a green.”); *id.* at 16 (“Actions based on an Area of Interest” include “Maximum speed adjustment (0 to Max possible)”); *id.* at 3 (“[t]he car will automatically slow to a safe speed to traverse the event, then will be allowed to accelerate again”). Importantly, those control actions are executed “immediately” and “automatically” upon the golf car heading toward a green, water hazard, steep downhill, sharp turn, or other “restricted access areas on a golf course.” *Id.* at 11; *see also id.* at 3, 15, 52, 58, 63–65 (identifying areas where access by the golf car is automatically limited or forbidden).

Club Car’s expert testifies that the ’894 Provisional’s disclosure that the controller can prevent forward movement of the golf cart into a restricted area or can limit the speed of the golf car before entering a restricted area is no different than saying the controller “overrides the accelerator input” of a golf car that is headed toward a restricted area. Ex. 2009 ¶ 58. Thus, we find that the ’894 Provisional provides clear support for the limitation that “the controller overrides the accelerator input to prevent forward motion” of the cart into a restricted area, as recited by claims 4 and 5.

2. *The '894 Provisional Supports the “Vector” Limitation of Claims 4 and 5 and the “Project a Path” Limitation of Claims 14 and 15*

The brunt of Yamaha’s argument in dispute of Club Car’s claim of priority to the ’894 Provisional centers on the “vector” limitation of claims 4 and 5 and the “project a path” limitation of claims 14 and 15. See Pet. 12–13, 15; Pet. Reply 15–18. In particular, Yamaha contends that the ’894 Provisional lacks adequate written description support for either of these limitations. Pet. 13, 15. Yamaha refers to these limitations collectively as the “projecting/vector limitation.” Pet. Reply 15 n.4.

At the outset, we note that Yamaha disputes whether the ’894 Provisional has a sufficient disclosure of “estimating the velocity” of the cart, as required by claims 14 and 15. As recited in claim 15, the estimation of “velocity” involves “polling the golf cart motor to determine the selected motor speed” and “analyzing the change in GPS location of the golf car over time.” Ex. 1002, 9:1–6. While the ’894 Provisional does not use the term “velocity” outright, it does use language akin to claim 15. In particular, the ’894 Provisional discloses an “IQ Control” application that “will poll the controller at regular intervals for status information.” *Id.* at 11. As described, the IQ control application is “responsible for monitoring the GPS location of the car.” *Id.* at 10. Also, one of the status information fields polled is “SPEED PULSES” read from the motor’s “SPEED SENSOR.”⁴ *Id.* at 12.

The ’894 Provisional’s disclosure of polling the car’s current speed and monitoring the car’s GPS location in connection with controlling the golf

⁴ Yamaha concedes that “[t]he ’894 Provisional discloses polling a car for its current speed.” Pet. 15.

car's movement is no different than the way claim 15 recites the estimation of velocity in terms of "polling . . . speed" and "analyzing . . . GPS position." Indeed, Club Car's expert confirms that the '894 Provisional's disclosure of polling speed and monitoring GPS location equates to an estimation of velocity. Ex. 2009 ¶¶ 54–56, 67–69 (citing Ex. 1004, 10, 12, 51); *see also id.* App. B, 45–47. In its reply, Yamaha never disputes that rebuttal testimony from Club Car's expert, which is telling. *See* Pet. Reply 14–17. In any event, we find the unrebutted testimony of Club Car's expert on this point to be persuasive, and, thus, determine that the '894 Provisional provides sufficient written description support for the "estimating the velocity" limitation of claims 14 and 15.

Yamaha also argues that the '894 Provisional fails to disclose using that golf car's GPS position and velocity to "project a path" or "vector" of the car into a limited access area. Pet. 13, 15; Pet. Reply 14–17. According to Yamaha, the '894 Provisional merely describes limiting movement of the cart in response to "the cart being within a limited access area or proximate thereto [] without regard to the cart's bearing or projected path []." Pet. 15 (citing Ex. 1001 ¶¶ 46–52). Yamaha adds that the controller in the '894 Provisional only "determines where the cart *has been* or *monitor[s]* where it *currently is*" and does not "project[] where the cart *will be*." Pet. Reply 16. We disagree.

What Yamaha ignores is that the Curtis 1510 controller described in the '894 Provisional works in conjunction with an "UpLink tracker application." Ex. 1004, 10–11. As described, the Uplink tracker application "will monitor 'SmartCar' information" and, using that information, initiate "SmartCar control commands." *Id.* As discussed above, the SmartCar

information monitored by the tracker includes “the GPS location of the car” and the “SPEED” of the car’s motor. *Id.* at 10, 12. The SmartCar control commands initiated by the tracker include “control actions that will be taken in specific areas of a golf course.” *Id.* at 11.

More specifically, according to the ’894 Provisional, the tracker application will “store and monitor SmartCar information” relative to “restricted areas on a golf course and define the actions that will be automatically taken in those areas.” *Id.* The control actions include “limiting the car’s maximum speed when *approaching* a steep downhill section of the cart path” (*id.* at 51), as well as “the ability to stop cars *approaching* lakes or cliffs, etc.” (*id.* at 3) (emphases added). Because tracking is done in “real-time,” the ’894 Provisional explains, control actions can be taken immediately, for example, by “instructing the golfer to take corrective action (i.e., ‘Please return to the cart path immediately’)” or by having the car’s maximum speed “automatically adjusted downward to as low as 3 MPH.” *Id.* at 65.

Club Car’s expert explains that, because the controller limits the movement of the golf car based on the golf car *approaching* a restricted area, the SmartCar system necessarily determines the path the golf cart is traveling. Ex. 2009 ¶¶ 61, 68. This is done by using the car’s “position from the GPS” and polling the car for its “current speed.” *Id.* (citing Ex. 1004, 12, 51). More specifically, Club Car’s expert explains:

Without determining the direction of the golf cart, such as estimating its path, and determining if it is moving towards water hazards or cliffs (or towards downhill sections), the system would not prevent access *into* these areas (or limit speeds approaching these sections). Merely passing near these areas without following a path that would take it *into* these areas would

not be cause for preventing movement of the cart, and thus a POSITA would have understood that since the system prevents the cart from moving *into* these areas it describes determining the path of the cart.

Ex. 2009 ¶ 68 (emphasis added); *see also id.* ¶¶ 60–61, 72–74. We find this testimony persuasive. It reasonably follows that the controller would initiate preventative action only upon determining the cart is on a projected path or approach that would take into a restricted area.⁵

Put simply, the '894 Provisional describes tracking the golf car's speed and GPS position in real-time to determine if its path of travel is approaching a restricted area that will warrant "corrective action" by the controller. That description is no different than saying the controller determines and analyzes the position and velocity of the cart to project the cart's path, heading, or vector (however phrased) into a restricted area, as required by claims 4, 5, 14 and 15. Thus, we are not persuaded by Yamaha's assertion that the tracker application in the '894 Provisional monitors the golf car only for "where it *currently is*" when, in our view, it clearly contemplates tracking the path of the car so as to determine whether it is "approaching" a restricted area.

In sum, based on our review of the '894 Provisional, as well as the un rebutted and persuasive testimony from Club Car's expert, we find that the '894 Provisional provides adequate written description support for the

⁵ Surprisingly, Yamaha's expert never addresses the disclosure in the '894 Provisional of a "tracker application" nor its disclosure of initiating control actions based on the SmartCar's "approaching" a restricted area (*see* Ex. 1001 ¶¶ 33–38, 46–50), despite our emphasis on both of those disclosures in our institution decision as providing support for claims 4, 5, 14, and 15 (*see* Inst. Dec. 9–11).

“projecting/vector” limitation (as Yamaha calls it) recited by claims 4, 5, 14, and 15. Having already found above that the ’894 Provisional provides support for the “accelerator input” and “overrides” limitations, we conclude that claims 4, 5, 14, and 15 are entitled to claim priority to the ’894 Provisional. Because the ’894 Provisional antedates the ’918 Publication, the ’918 Publication is not prior art to claims 4, 5, 14, and 15. As such, Yamaha cannot demonstrate that claims 4, 5, 14, and 15 are anticipated by the ’918 Publication.

3. Claim 19

Yamaha further contends that the ’894 Provisional lacks support for the claim 19 limitation “wherein disabling golf cart movement towards the limited access area further comprises *disabling golf cart movement except in a reverse direction*.” Pet. 16; *see also* Pet. Reply 18–21. In particular, Yamaha asserts that “there is no disclosure” in the ’894 Provisional “of a control action wherein movement is *disabled* in all respects *except* reverse.” Pet. Reply 19. At most, Yamaha argues, the ’894 Provisional discloses only that “[r]everse will be disabled” but never says whether the car ever actually moves in reverse in response to the controller’s action. Pet. 16 (citing Ex. 1004, 2). And, in addressing Club Car’s reliance on the ’894 Provisional’s disclosures of the controller progressively slowing then stopping a cart or setting a “Reverse Speed” (PO Resp. 32–33), Yamaha contends that neither of those disclosures “*actually teach disabling movement*” of the cart. Pet. Reply 19. In Yamaha’s view, “[t]he reverse gear is *never* actually discussed in connection with automatic control actions *at all*.” *Id.* at 19–20.

The evidence as a whole does not support Yamaha’s contentions. The only evidence Yamaha points to as support is a section of the ’894

Provisional that discusses a “demo” car in which the car’s reverse gear was disabled intentionally due to safety concerns with a “tight area” of space where the demonstration took place—a convention center. *See* Pet 16 (citing Ex. 1004, 2 (titled “Test Track Demonstration”)). Notably, however, Club Car does not look to the “demo” car for support of claim 19. Rather, Club Car relies on other parts of the ’894 Provisional, which describe a fully-operational “SmartCar” that can actually operate in reverse. *See* PO Resp. 32–34 (citing Ex. 1004, 12, 16, 30); PO Sur-Reply 12–14 (citing Ex. 1004, 12).

Aside from its argument about an impertinent “demo” car, Yamaha advances only conjecture and unsupported attorney argument in hypothesizing that the ’894 Provisional does “not *eliminate the possibility* that the cart . . . would simply be slowed to a speed . . . to allow it to make a U-Turn (and never leave forward gear).” Pet. Reply 20. In other words, Yamaha would have us believe that the SmartCar’s control actions are limited solely to forward movement of the car and never reverse movement (such that, to avoid a restricted area, the car must perform a U-turn). We disagree and find Club Car’s arguments and evidence more persuasive.

From our review, the ’894 Provisional never mentions slowing the golf car to a speed only tolerable for U-turns, as Yamaha speculates. To the contrary, the ’894 Provisional describes that the Curtis 1510 controller is capable of limiting the golf car’s movement such that it travels only in a reverse direction. For instance, although not using the term “disabling,” the ’894 Provisional describes a control action that automatically slows down the speed of the golf car until it returns to the course—“[Y]our cart has been slowed down because you are outside the boundaries of the course. Your

car will *continue to slow down until you return to the course.*” Ex. 1004, 30 (emphasis added).

As confirmed by Club Car’s expert, in implementing the return of the golf car to the course, the Curtis 1510 controller has a configuration setting for “REVERSE SPEED,” that is separate from the forward movement settings of “M1 MAX SPEED,” “M2 MAX SPEED,” “FAST ACCEL,” etc. Ex. 2009 ¶ 80 (citing Ex. 1004, 12). When the golf car travels toward a restricted area, the controller will issue a warning and eventually set the maximum *forward* speed of the golf car to zero in order to stop the car. *Id.* ¶ 81 (citing Ex. 1004, 16, 30); *see also* Ex. 1004, 30 (depicting user interface for setting speed configurations that is essentially identical to Figure 3 of the ’965 patent). And because the controller’s forward speed setting is separate from the reverse speed setting, Club Car’s expert explains, an ordinarily skilled artisan “would understand that once this occurs, only the ‘REVERSE SPEED’ would remain functional.” *Id.*

Given that unrebutted and persuasive testimony of Club Car’s expert, we find that the ’894 Provisional’s description of a reverse speed setting—i.e., slowing the golf car down and setting the forward maximum speed to zero while leaving intact the reverse speed setting—constitutes sufficient support for a configuration that disables the car’s forward movement while still permitting the car to move in a reverse direction, as required by claim 19. From a functional standpoint, we discern no difference between the description in the ’894 Provisional and the limitation of claim 19. *See* Ex. 2009 ¶¶ 77–82. Thus, we determine that Club Car has met its burden of showing adequate written description support in the earlier ’894 Provisional for claim 19. Accordingly, the ’918 Publication is not prior art to claim 19,

and Yamaha's anticipation challenge against claim 19 based on the '918 Publication must fail.

C. Yamaha's Anticipation Challenge of Claim 27

Yamaha challenges the patentability of claim 27 under 35 U.S.C. § 102(e)(1) as anticipated by the '918 Publication. Pet. 37, 41–42; Pet. Reply 21–25. Yamaha's anticipation challenge of claim 27 is not affected by Club Car's priority claim, discussed above, because Club Car does not dispute that the '918 Publication is prior art to claim 27. See PO Resp. 34–37.

Claim 27 requires that the base station “communicate to the driver interface unit *an authorization . . . to move a golf cart in the limited access area.*” Ex. 1002, 10:21–25 (emphasis added). As explained in the specification of the '965 patent, this authorization allows the base station to “override” or “disable” the limited access controls on the golf cart during an emergency, for example, “if lightening threatens the golf course.” *Id.* at 6:62–65. According to Yamaha, claim 27's “authorization” limitation is satisfied by a single disclosure in the '918 Publication that “[i]f the user acknowledges the trespass [], *the system can be configured for the operator at the base station 17 to manually reset the operation of vehicle 21 in order for it to exit the restricted area, or this reset can be automatic.*”⁶ Pet. 41–42 (citing Ex. 1003 ¶ 68).

The disclosure in the '918 Publication of forcing the golf car to “exit,” or move away from, the restricted area, however, is different from the

⁶ Yamaha also contends that the '918 Publication discloses the limitations of base claim 21 and intervening claim 26. Pet. 38–41. Club Car does not dispute this contention. See PO Resp. 34–37.

“authorization” of claim 27 “to move a golf cart in the limited access area.” That is because the ’918 Publication’s controller acts to exclude the golf cart from traveling in the restricted area, whereas claim 27’s controller acts to allow the golf cart to travel within the area. Yamaha’s expert never addresses this key difference. *See* Ex. 1001 ¶ 201 (quoting ¶ 68 of the ’918 Publication without further explanation). Nor does Yamaha cite any expert testimony in its reply to rebut this difference. *Pet. Reply* 22–25. Club Car’s expert, on the other hand, testifies persuasively on this point. *See* Ex. 2009 ¶¶ 110–114. More succinctly, after considering paragraphs 67 and 68 of the ’918 Publication, Club Car’s expert explains “that the ’918 Publication describes a remote diagnostic system that forbids the golf cart from being driven within the limited access area,” while “[c]onversely, claim 27 . . . is directed to a system that permits a driver to move a golf cart into and within the limited access area.” *Id.* ¶ 114.

As for Yamaha’s attorney argument that the ’918 Publication controller must allow the golf cart to be driven within the restricted area in order for it to exit the area, we are not persuaded. *See Pet. Reply* 23–24. The ’918 Publication states that “[i]f the user continues further [], the mapping processor [] will signal the controller to apply the vehicle brakes [] and motor [] braking in proportion to the vehicle’s speed and interrupts motor [] operation.” Ex. 1003 ¶ 67; *see also id.* at ¶ 70 (“[i]f the user persists in remaining, or negotiating in the restricted area [], the vehicle [] will come to rest again via automatic application of motor and/or mechanical braking”). Yamaha’s attorney argument relies on presumptions that are outside the disclosure of the ’918 Publication, which is improper for an anticipation analysis.

Because the sole disclosure in the '918 Publication relied upon by Yamaha describes authorizing movement outside the restricted area, rather than within it, Yamaha fails to demonstrate that the “authorization” limitation of claim 27 is disclosed by the '918 Publication. Thus, we determine that Yamaha has not demonstrated by a preponderance of the evidence that claim 27 is unpatentable as anticipated by the '918 Publication.

D. Yamaha’s Obviousness Challenge of Claims 10, 29, and 30

Yamaha challenges the patentability of claims 10, 29, and 30 under 35 U.S.C. § 103(a) as obvious over the '918 Publication.⁷ Pet. 42–43, 46–50; Pet. Reply 26–29. Claim 10 requires a “pass code” for permitting the driver to move the golf cart. And claims 29 and 30 similarly require an “authorization code” for doing the same. Club Car does not dispute that the '918 Publication is prior art to claims 10, 29, and 30. See PO Resp. 37–43.

For teaching the limitations of these claims, Yamaha points to an “acknowledgment” process described in the '918 Publication, which allows movement of the golf car to be restored once the driver acknowledges a restricted area infraction. Pet. 42–43 (citing Ex. 1003, claims 29, 30), 48–49 (citing Ex. 1003 ¶¶ 67–69). But nowhere does Yamaha point to a teaching in the '918 Publication of a “code” being sent to the controller, which it may then “accept” or “verify” to permit further movement of the cart, as required by claims 10 and 29. In other words, the code, as claimed, is an active input

⁷ Yamaha also challenges claim 15 as obvious over the '918 Publication. Pet. 43–45; Pet. Reply 29–30. As discussed above, however, the '981 Publication is not prior art to claim 15, and, thus, is not a proper basis for an obviousness challenge to that claim. See *supra* section II.B.2.

to the cart, not a simple “acknowledgment of restricted area operation.” Ex. 1003, 23 (claim 30). That the golf cart’s driver “acknowledges the trespass” (Ex. 1003 ¶ 68) is not tantamount to the driver actively inputting a “code” to activate movement of the cart.

Yamaha’s reliance on its expert also falls short because he merely testifies in conclusory fashion that the acknowledgement process “*could be* achieved” by requiring entry of a code and “*might improve*” effectiveness of the acknowledgement process, without any explanation of how an ordinarily skilled artisan would have done so based on the teachings in the ’918 Publication. See Pet. 43 (citing Ex. 1001 ¶¶ 204–209) (emphases added). That testimony is insufficient to supply a missing limitation to arrive at the claimed invention. Nor are we persuaded by Yamaha’s reliance on “common sense and background knowledge” as a reason for which the missing limitation “may be supplied” to the ’918 Publication. Pet. Reply 28–29. Nowhere does Yamaha provide the necessary foundation, testimonial or otherwise, for that assertion; it is simply conclusory attorney argument. See *id.* As such, Yamaha fails to demonstrate by preponderant evidence that the ’918 Publication renders obvious claims 10, 29, and 30.

III. MOTION TO EXCLUDE

Club Car moves to exclude Exhibits 1021–1029, 1036, and 1037 as proffered by Yamaha. Paper 55. We do rely on any of those exhibits in our decision. Thus, we deny as moot Club Car’s motion to exclude.

IV. CONCLUSION

Because Club Car has met its burden of showing that the ’918 Publication is not prior art against claims 4, 5, 14, 15, and 19, we

determine that Yamaha cannot prevail in its anticipation challenge against those claims.

As for the challenged claims to which the '918 Publication is prior art, we determine that Yamaha has failed to demonstrate by a preponderance of the evidence that claim 27 is unpatentable as anticipated by the '918 Publication or that claims 10, 29, and 30 are unpatentable as obvious over the '918 Publication. We do not consider claim 20, as it was disclaimed by Club Car.

V. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that, on the record before us, Yamaha has not shown by a preponderance of the evidence that claims 4, 5, 10, 14, 15, 19, 27, 29, and 30 of the '965 patent are unpatentable;

FURTHER ORDERED that Club Car's motion to exclude (Paper 55) is *denied as moot*; and

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

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