

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 IPR2017-02141
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 1–28 and 31–33 of the ’965 patent. Paper 1 (“Pet.”). At our request, Yamaha and Club Car

each filed a supplemental claim construction brief addressing the meaning of a term central to this proceeding. Papers 13, 15.

After considering the parties' submissions at the preliminary stage, we declined to institute *inter partes* review because Yamaha had not demonstrated a reasonable prospect of success as to the challenged claims. Paper 17 ("Inst. Dec."). Yamaha asked us to reconsider. Paper 19. Upon reconsideration, we changed course and instituted *inter partes* review of the challenged claims because, in the first instance, we overlooked material fact disputes with respect to competing witness testimony, which at the institution stage should have been viewed in a light most favorable to Yamaha rather than Club Car. Paper 21, 10–12 (citing 37 C.F.R. 42.108(c)).

After institution, Club Car opposed Yamaha's challenges raised by the petition. Paper 33 ("PO Resp."). Yamaha replied. Paper 45 ("Pet. Reply"). Club Car, as patent owner, had the last word in a sur-reply. Paper 50 ("PO Sur-Reply"). Yamaha also filed a motion to exclude certain evidence, as did Club Car. Papers 53, 52, respectively. None of the evidence objected to in those motions is relied upon in this decision. An oral hearing was conducted on February 14, 2019. Paper 70 ("Tr.").

Notably, Club Car filed a statutory disclaimer under 35 U.S.C. § 253 for claim 20 of the '965 patent.¹ 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 1–19, 21–28, and 31–33.

We have jurisdiction over this proceeding under 35 U.S.C. § 6. After considering the parties' arguments and supporting evidence, we determine

¹ The statutory disclaimer was filed in a companion *inter partes* review involving the '965 patent. See Case IPR2017-02142, Paper 22, Ex. A.

that Yamaha has *not* proven by preponderant evidence that claims 1–19, 21–28, and 31–33 are unpatentable. *See* 35 U.S.C. § 316(e). We deny as moot Club Car’s motion to exclude. We grant-in-part Yamaha’s motion to exclude and deny as moot the remainder of its motion. 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, IPR2017-02142 (“the 2142 IPR”), involves our review of the same patent and several of the same claims at issue here—claims 4, 5, 14, 15, 19, 20, and 27—only 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 GPS location of a golf cart on a golf course to control the golf cart’s movements over 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.

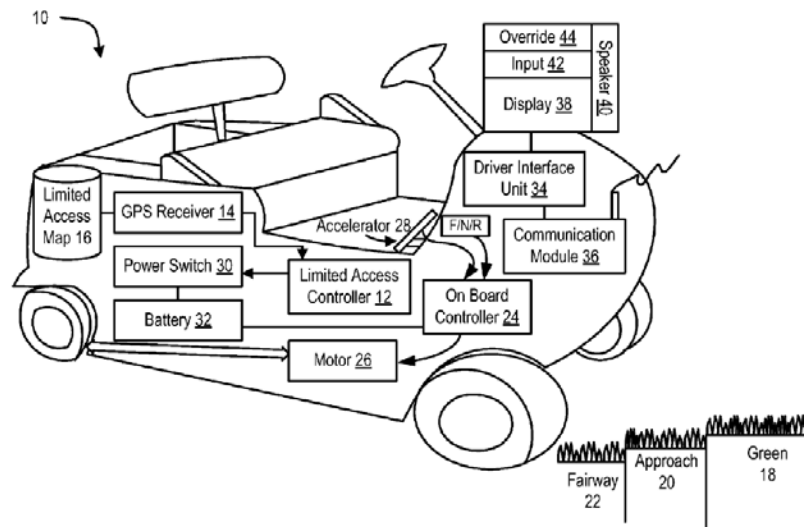


Figure 1

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 limited access map 16, and direct override from the base station 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

Of the challenged claims, three are independent—claims 1, 11, and 21. Claims 1 and 21 are directed to a “system” for controlling golf cart movement relative to “limited access areas” of a golf course, and claim 11 is directed to a “method” for doing the same. The challenged dependent claims describe additional features of the system, including a “driver interface unit” that communicates with a “base station” to provide updates of limited access areas. Claim 1 is illustrative of the golf cart control system:

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 (emphases added).

D. The Asserted Challenges

Yamaha challenges the patentability of claims 1–28 and 31–33 as follows. See Pet. 3–4.

Ground	Basis	Challenged Claims
§ 102(a)	'053 Application ²	1, 3–5, 7, 11, 12, 16
§ 103(a)	'053 Application	4, 13, 16, 18, 19
§ 103(a)	'053 Application and '918 Publication ³	1, 3–5, 7, 11–13, 16, 18, 19
§ 103(a)	'053 Application, '918 Publication, and '496 Application ⁴	8
§ 103(a)	'053 Application, '918 Publication, and '605 Application ⁵	2, 6, 17
§ 103(a)	'053 Application, '918 Publication, '496 Application, and '605 Application	9, 10, 14, 15, 20
§ 102(a)	'388 Patent ⁶	21, 22, 28
§ 103(a)	'388 Patent	23
§ 103(a)	'388 Patent and '918 Publication	21–23, 28
§ 103(a)	'388 Patent, '918 Publication, '053 Application, and '496 Application	26, 27, 31, 32

² Japanese Patent App. Pub. No. H9-128053, May 16, 1997 (Exs. 1003, 1009, “the '053 Application”).

³ US Patent App. Pub. No. US 2006/0052918 A1, pub. Mar. 9, 2006 (Ex. 1006, “the '918 Publication”).

⁴ Japanese Patent App. Pub. No. H9-75496, pub. Mar. 25, 1997 (Exs. 1005, 1011, “the '496 Application”).

⁵ Japanese Patent App. Pub. No. H11-316605, pub. Nov. 16, 1999 (Exs. 1004, 1010, “the '605 Application”).

⁶ US Patent No. 5,711,388, iss. Jan. 27, 1998 (Ex. 1008, “the '388 Patent”).

Ground	Basis	Challenged Claims
§ 103(a)	'388 Patent, '918 Publication, '053 Application, '496 Application, and '605 Application	24, 25, 33

In further support of these challenges, Yamaha proffers initial and reply declarations from Kevin C. Breen, an expert witness retained for purposes of this proceeding. *See* Exs. 1001, 1047. Club Car, in turn, submits declarations from two expert witnesses, Scott Andrews and Henry DeLozier. *See* Ex. 2013 (Mr. DeLozier); Ex. 2015 (Mr. Andrews).

To show that the '918 Publication qualifies as prior art, Yamaha relies on a priority date—March 18, 2002—of an earlier provisional application for the '918 Publication, U.S. Provisional Application No. 60/365,339 (“the '339 Provisional”). Pet. 14–21. Club Car does not dispute that the '918 Publication is entitled to that earlier date. As such, we consider the '918 Publication to be prior art to the challenged claims for purposes of this proceeding.⁷

We also note that Yamaha continues to fault Club Car for something it did in the institution phase—Club Car relied on improperly certified translations of the '053 Publication. *See* Pet. Reply 6–7, 9, 24 n.14. While the parties' competing translations were a point of contention in the course of institution, they are no longer an issue now. Club Car concedes in its Patent Owner Response that, for purposes of this proceeding, it “will rely on Petitioner’s translation of the '053 Application.” PO Resp. 14; Tr. 63:17–

⁷ We note that Yamaha does not make this same contention in the companion 2142 IPR, relying instead on the '918 Publication’s filing date of March 18, 2003, as the effective date for determining its prior art status.

64:6 (Club Car confirming that “[d]uring the trial . . . Petitioner’s translation is fine”). As such, we consider only the certified translation of the ’053 Publication offered into evidence by Yamaha and marked as Exhibit 1003. The two uncertified translations offered by Club Car—Exhibits 2001 and 2003—will be disregarded. Tr. 64:5–9 (Club Car conceding that “there’s no prejudice” if the Board were to “exclude” the uncertified translations). As such, we also disregard any testimony in the declarations of Club Car’s experts that even remotely relies on or concerns the uncertified translations in Exhibits 2001 and 2003.

II. ANALYSIS

We now decide whether Yamaha has proven the challenged claims unpatentable by a “preponderance of the evidence.” 35 U.S.C. § 316(e). Central to our decision is the construction of the terms “golf cart” and “driver” appearing in each of independent claims 1, 11, and 21.

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).⁸ We are careful not to import limitations from the specification into the claims.

⁸ The recent change in the claim construction standard employed in *inter partes* reviews is not applicable here because the petition in this case was filed before the November 13, 2018 effective date of that change. See *Changes to the Claim Construction Standard for Interpreting Claims in Trial Proceedings Before the Patent Trial and Appeal Board*, 83 Fed. Reg. 51,340 (Nov. 13, 2018) (to be codified at 37 C.F.R. pt. 42).

Yamaha proposes a construction of three claim terms—“golf cart,” “driver,” and “velocity.” Pet. 5–8. Club Car disputes Yamaha’s proposed constructions and offers its own construction of the terms “golf cart” and “driver.” PO Resp. 4–12. Club Car is silent on Yamaha’s construction of “velocity.” *See id.* We determine that only the terms “golf cart” and “driver” need to be construed expressly for purposes of this decision.

1. “*golf cart*”

The parties’ dispute centers on whether the term “golf cart” is limited to a rideable cart that carries a player and other passengers, as Club Car contends, or more broadly includes a riderless cart, such as a “caddy cart,” that carries only a player’s golf bag, as Yamaha argues. In our institution decision, after entertaining supplemental briefing, we construed the term “golf cart” to mean *a motorized cart for carrying golfers or other passengers over a golf course*. Having considered the parties’ latest contentions, addressing both intrinsic and extrinsic evidence, we maintain our initial construction of the term “golf cart” as a golf cart that carries golfers and other passengers, in other words, a rideable cart.

Resolution of the meaning of “golf cart” is important because, in asserting its anticipation and obviousness challenges, Yamaha relies on a broad definition of “golf cart” that means “any motorized, wheeled vehicle intended for use on a golf course.” Pet. 5–6. The term “golf cart,” according to Yamaha, “is not limited to a riding cart,” but encompasses any cart “that can carry either a passenger *or* equipment *or both*.” Pet. Reply 1. In Yamaha’s view, the specification of the ’965 patent uses the term “to refer to any motorized wheeled vehicle that is intended to be operated on the course—manned or unmanned—including, for example, beverage carts and

mowers.” Pet. 5 (citing Ex. 1002, 7:10–30). Yamaha further notes that the purpose of the invention described in the ’965 patent specification is to “preempt or otherwise reduce damage from golf cart movement,” which it asserts could be caused by “any motorized, wheeled vehicle,” regardless of whether or not the vehicle includes a driver or other rider. *Id.* at 6 (citing Ex. 1002, 1:65–67); *see also* Pet. Reply 15–17 (citing Ex. 1002, 7:49–54).

Club Car responds that the intrinsic record—the claim language and the specification of the ’965 patent—supports a construction of “golf cart” that requires “a cart with a driver.” PO Resp. 6 (emphasis omitted); *see also* PO Sur-Reply 8 (“each type of ‘golf cart’ described in the ’965 Patent *is a cart with a driver.*”). Club Car points to the additional limitation of “driver commands” in the independent claims, and asserts, in that context, the “golf cart” must be a rideable cart that has an “on-board operator.” PO Resp. 5.

In further support, Club Car notes the ’965 patent’s objective of controlling a golf cart “to minimize damage caused by ‘[i]nnatentive and even malicious golf cart drivers,’” which, it asserts, can only mean “manned golf cart operation.” *Id.* at 5–6 (emphasis omitted). Club Car also contends that the only type of “golf cart” contemplated by the ’965 patent “is a cart with a driver” and, in support, points to the specification’s reference to marshal carts, player carts, utility carts, beverage carts, handicap carts, and mowers. *Id.* at 6 (citing Ex. 1002, 7:10–24) (emphasis omitted). According to Club Car, those carts are all “manned vehicles controlled by an operator who rides in the vehicle.” *Id.* at 6–8 (citing Ex. 2016, 62:4–67:25).

Finally, Club Car cites to extrinsic evidence in the form expert testimony and various federal and state regulations to contrast the industry’s definition of the terms “golf car” and “golf cart”—which “convey a person

or persons and equipment to play the game of golf” and “are heavier and typically capable of much higher speeds”—with the industry’s understanding of the term “caddie carts”—which “do not carry golfers” and “are lighter and operate at slower speeds,” and, thus, “many of the environmental and safety concerns relevant to ‘golf carts’ are not present.” *Id.* at 9–11 (citing Ex. 2007, 2; Ex. 2009, 7; Ex. 2016, 47:220, 69:16–70:4).

As we previously decided at the institution stage, the intrinsic evidence supports a construction of the term “golf cart” that means *a motorized cart for carrying golfers or other passengers over a golf course*. Inst. Dec. 6–9. First, we note that the claim language itself focuses on limiting the ability of a “driver” to move the cart. For example, independent claim 1 recites “the motor responding to *driver commands* input through an on board controller . . . the limited access controller operable to override a *driver command* to move the golf cart to violate a limited access area.” The other independent claims have a similar requirement—“restricting the performance of *golf cart driver commands* by the golf cart motor to inhibit violation of the limited access area” (claim 11) and “the limited access controller operable to limit the performance of *driver commands* to move an associated golf cart in a limited access area” (claim 21). Emphases added. That the “driver commands” need to be overridden or otherwise restricted presumes that the golf cart is being driven by a person who has independent control of the cart and is susceptible to driving in an unruly manner, in other

words, an onboard driver of the cart. This is especially true given the lack of any indication in the claims of remote or autonomous operation of the cart.⁹

The specification of the '965 patent further supports that the “golf cart” as claimed is limited to a rideable cart with a driver onboard. At the outset, the specification explains a need “for control of a golf cart” due to the “substantial financial investment” that golf course owner’s make in the appearance of the golf course and the purchase of “golf carts for golfers *to drive*.” Ex. 1002, 1:13–31 (emphasis added). Golf carts place a risk on the owner’s investment because thoughtless golfers have the potential to damage sensitive areas “*by driving a golf cart* in the wrong place, such as locations having wet turf that is particularly susceptible to damage.” *Id.* at 1:36–40. “Inattentive and even malicious *golf cart drivers*,” the specification states, “also present a safety hazard by *driving too fast or recklessly* near other golfers or natural hazards, such as cliffs, water, steep inclines or sharp turns.” *Id.* at 1:40–44. Those types of actions are logically attributable to a driver of the cart. A riderless cart, on the other hand, being much lighter in weight and slower in speed, does not raise those same groundskeeping and safety concerns, as even Yamaha’s expert acknowledges. *See, e.g.*, Ex. 2016, 46:24–47:20 (confirming a rideable cart is “a lot heavier” than a caddy cart), 49:13–22 (testifying that a caddy cart has a “smaller” footprint than a rideable cart), 69:16–70:4 (testifying that the “speed” of a caddy cart is “walking pace; so you’re talking at most five miles an hour”).

⁹ The dependent claims include similar references to a driver of the cart, for example, “driver input,” “driver interface unit,” and “driver of the golf cart.”

Indeed, the only depiction of a golf cart in the '965 patent is figure 1, which shows a rideable cart equipped with a steering wheel, an accelerator pedal, and a seat for a driver and passenger. Ex. 1002, Fig. 1. As described, the golf cart moves “in response to driver inputs,” which include, for example, “throttle settings input through an accelerator pedal.” *Id.* at 3:66–4:2, 5:11–12. Furthermore, the specification refers to a “driver” for the cart in describing the limited access areas where the cart cannot be driven: “areas in which *driving a golf cart* causes damage to the golf course grounds, and areas in which *driving a golf cart* presents a danger to *the driver* or others, such as sharp turns, steep hills and crowded parking areas.” *Id.* at 4:9–14 (emphases added). Those descriptions, along with the only depiction of a golf cart in the '965 patent, suggest a golf cart that is under the control of an onboard driver capable of steering and accelerating the cart in a manner that risks harm to the course, himself, and others.

Moreover, while not conclusive, the fact that the specification is silent as to any remote operation or other autonomous control for the cart would indicate that the claimed “golf cart” is not directed to a riderless cart, such as a “caddy” cart. Indeed, the only golf carts exemplified in the '965 patent are rideable carts that carry a driver. For instance, the specification describes the claimed invention in terms of the following types of carts:

Alerts of a limited access area violation are provided to the marshal and pro shop *based on the type of golf cart* that is violating the limited access area. ... In alternative limited access areas, different types of defined areas, such as greens and driving ranges, may have different selections for *different types of golf carts*. For instance, the *marshal and utility carts* may be permitted to cross the driving range whereas other types of carts, such as *player or beverage carts*, are limited from such movement for safety reasons. As another example, *a handicap*

vehicle and *a mower* are allowed on a green while all other types of vehicles are prohibited.

Ex. 1002, 7:10–24 (emphases added). Yamaha’s expert confirms that each of the above-described golf carts is a “ridable cart” that “conveys a person or persons.” See Ex. 2016, 62:4–65:22, 67:21–25. Indeed, Yamaha’s expert acknowledges “there is no mention of a caddy cart” in the ’965 patent, which he defines as “a vehicle that only carries clubs” and “is not a rideable golf cart.” *Id.* at 76:6–8, 144:8–12.

Nonetheless, Yamaha argues at length that the term “golf cart” is a genus for two species of carts, namely, a “golf car” that carries a person and a “riderless cart,” such as a “caddie cart,” that carries only a golf bag. Pet. Reply 11–17. Yamaha contrasts the purportedly generic use of the term “golf *cart*” in the ’965 patent to the purportedly more specific term “golf *car*” in the provisional application to which the ’965 patent claims priority, and contends that “if the Patent’s inventors had wanted to restrict “golf cart” to only a riding cart (i.e., a golf *car*), they knew how to do so.” *Id.* at 15. In other words, Yamaha would have us believe that the change from “golf car” to “golf cart” between the provisional application and the actual application proves the inventors’ intent to capture both species of carts—rideable and riderless—within the scope of the claimed invention.

But what Yamaha overlooks is that the ’965 patent itself uses the terms “golf cart” and “golf car” interchangeably. In particular, Figures 3 and 4 of the ’965 patent use the terms “golf cart” and “golf car” without ever drawing a distinction between the two. Ex. 1002, Figs. 3, 4. Figure 3 even uses both terms interchangeably in the same screen alert. *Id.*, Fig. 3 (“your *cart* has been slowed . . . [y]our *car* will continue to slow”) (emphases

added). Thus, we are not persuaded by Yamaha’s argument that the inventors intended one term to be more specific than the other. And because the ’965 patent uses the terms interchangeably and uses them in the specific context of a cart that carries a driver, as already discussed, we are not persuaded by Yamaha’s argument that the term “golf cart” would have been understood to be a generic term encompassing more than just a rideable cart.

The extrinsic evidence cited by both parties, while helpful, does not persuade us to deviate from the meaning of “golf cart” as derived from the intrinsic record. Yamaha cites several patents and brochures that use the term “golf cart” to describe a riderless cart that carries a golf bag (Pet. Reply 9–10) and use the term “golf car” to describe a rideable cart (*id.* at 13–14). We note, however, that the National Highway Transportation Safety Administration (NHTSA) uses those terms interchangeably to mean “passenger-carrying vehicles,” or, as defined in the glossary, a vehicle meant “to carry one or more people.” Ex. 2007, 1, 1 n.1, 2. Indeed, the NHTSA explains that “states from California to Florida” use the term “golf cart” (*id.* at 1), and notes California’s definition of “golf cart” as “a motor vehicle . . . designed to carry golf equipment and not more than two persons, including the driver” (*id.* at 3 n.5). See *Mars, Inc. v. H.J. Heinz Co.*, L.P., 377 F.3d 1369, 1374, n.3 (Fed. Cir. 2004) (“regulations issued by regulatory agencies can be helpful to a claim construction analysis if they are probative of an industry-specific meaning for a disputed claim term.”); *AquaTex Indus., Inc. v. Techniche Sols.*, 419 F.3d 1374, 1381 (Fed. Cir. 2005) (finding that a U.S. Customs Service regulation, as well as a U.S. International Trade Commission ruling, “lend support” to proper construction of the term “fiberfill”).

Thus, both the intrinsic and extrinsic record support a construction that limits the meaning of “golf cart,” particularly in the context of the ’965 patent, to *a motorized, rideable cart for carrying golfers or other passengers over a golf course*. As such, we are not persuaded by Yamaha’s argument that a skilled artisan would have understood the term “golf cart” to refer to both a rideable cart and a riderless cart.

2. “driver”

Intertwined with our construction of “golf cart” is the meaning of “driver,” as also recited in the challenged claims. Yamaha contends the term “driver” is “an individual who inputs movement-related commands to a golf cart.” Pet. 6 (citing Ex. 1002, 3:65–4:2). Club Car, in turn, proposes that it means “a person that rides in or on a motor vehicle while controlling its direction and speed.” PO Resp. 11. In our institution decision, we observed that, “under a broad but reasonable interpretation,” the term “driver” as used in the context of the ’965 patent does not contemplate a “remote operator.” Inst. Dec. 9. We maintain that view and further clarify that the claimed “driver” is onboard the cart.

As discussed above with respect to the claimed “golf cart,” the specification of the ’965 patent provides no suggestion of a remote operator for the golf cart, or, for that matter, that the driver is ever not physically present in the cart. Indeed, Yamaha’s own expert confirms that the ’965 patent does not describe a riderless cart:

Q [Counsel] There is no example anywhere in the ’965 patent specifically disclosing an unmanned or unriden vehicle; right?

A [Petr.’s Expert] Not in those terms, no . . .

* * *

Q [Counsel] And there is no mention of a caddy cart; right?

A [Petr.'s Expert] Not by those words, no.

Ex. 2016, 66:11–18, 76:6–8; *see also id.* at 62:4–65:22, 67:21–25. That testimony is consistent with the '965 patent's description of "driver inputs" for the cart as encompassing "throttle settings input through *an accelerator pedal.*" Ex. 1002, 5:11–12 (emphasis added). The '965 patent depicts accelerator pedal 28 *on the cart.* *Id.*, Fig. 1.

Furthermore, the '965 patent's characterizations of the "driver" and the "golf cart" are indicative of a person onboard the cart. *See, e.g., id.*, Abstract ("inputs by the golf cart's driver to the golf cart's motor"), 1:30–31 ("golf carts for golfers to drive"), 1:41 ("malicious golf cart drivers . . . driving too fast or recklessly"), 2:28 ("overriding driver accelerator commands"), 2:63 ("without substantial interference with a golf game or driver duties"), 3:58–59 ("prevent injury to golfers and golf cart drivers"), 4:13 ("driving a golf cart presents a danger to the driver or others"), 4:53 ("the speed selected by the driver"), 5:38 ("restricts driver inputs through accelerator 28"). The figures in the '965 patent likewise give rise to a person onboard the cart by describing the golf cart in terms of a "car." *Id.*, Figs. 3, 4 (referencing "Smart Car," "Your car," "Golf Cars," "All Cars"). It is undisputed in the industry that a "golf car" is defined in terms of having a person onboard. *See, e.g.,* Ex. 2009, 7 (defining "golf car" as "[a] vehicle used to convey a person or persons and equipment to play the game of golf") (emphasis added); Ex. 2007, 2 (essentially same).

Given this evidence, we are not persuaded by Yamaha's position that a "driver" of the golf cart is a person who merely "inputs movement-related commands." Pet. 6. Rather, reading the '965 patent as a whole, we

understand the driver to be a person who steers and accelerates the cart while actually onboard the cart. Thus, consistent with the specification, we construe the term “driver” to mean “a person onboard the cart who controls the speed and direction of the cart.”

B. Yamaha’s Anticipation Challenge of Claims 1, 3–5, 7, 11, 12, and 16

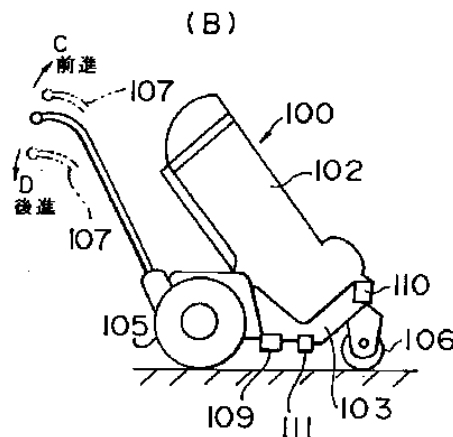
Yamaha challenges claims 1, 3–5, 7, 11, 12, and 16 under 35 U.S.C. § 102(a) as anticipated by the ’053 Application. Pet. 24–34. Our analysis focuses on independent claims 1 and 11, from which all other challenged claims depend. Claim 1 recites, in pertinent part, a system for controlling a “golf cart” that includes “a limited access controller . . . operable to override a driver command.” Ex. 1002, 8:3–6. Claim 11 similarly recites a method for controlling “golf cart” movement that includes “restricting the performance of golf cart driver commands.” *Id.* at 8:52–54. We begin our analysis with a brief overview of the ’053 Application and then address the parties’ contentions.

1. The ’053 Application (Ex. 1003)

The ’053 Application describes a “golf cart” for “enabling play wherein [a] caddy or golfer *places a golf bag* in [the cart] to move about the golf course.” Ex. 1003 ¶ 2 (emphasis added). As described, the golf cart includes two modes of operation: “a function for unmanned travel following a guidance line” and “a function for traveling away from the guidance line through manual operation.” *Id.* ¶ 1; *see also id.* ¶¶ 6, 34 (describing same). For the unmanned travel mode, “a prescribed path [is] provided for the golf cart to travel through the golf course” by means of “a guidance line [] installed in the path so that the golf cart travels following the guidance line.” *Id.* ¶ 2. The golf cart will run along this guidance line at a “prescribed speed

that has been set in advance” and may be prohibited from further movement when it “detects a Stop command function, which is provided at a prescribed location along the guidance line.” *Id.* ¶ 19. The golf cart follows the guidance line “using a guide sensor that is installed toward the bottom of the front side of the golf cart.” *Id.* ¶ 12.

Notably, the 053 Application also provides that, “*in moving the golf bag to a location that is convenient for the play by the golfer, having the golf cart travel only following the guidance line that has been formed in advance is inconvenient.*” *Id.* ¶ 2 (emphasis added). In these circumstances, the golf cart may be “operated through manual operation.” *Id.* To that end, the golf cart includes a “grip lever,” which the ’053 Application describes as the type “disclosed in Japanese Unexamined Patent Application Publication H6-288588” (“the ’588 Application”). *Id.* ¶ 3. A figure depicting the “grip lever” of the ’588 Application is reproduced below.



As described in the ’053 Application, the “grip lever” has a “manned/unmanned switching switch,” which, when switched to manned mode, permits the golf cart “to travel away from the guidance line to an arbitrary location through a rotational operation on the grip lever.” *Id.* ¶ 3. To move the cart manually, the golfer rotates the lever “to the left or right”

to steer the cart “in a left-turning or right-turning direction” or presses the lever “to the front or back” to “enable control of speed of travel in the forward or reverse direction.” *Id.* To stop the cart, the golfer simply “returns” the grip lever “to the neutral position.” *Id.* ¶ 20.

2. The '053 Application Does Not Disclose a “Golf Cart”

As discussed above, we construe the term “golf cart” in the context of the '965 patent as limited to “a motorized, rideable cart for carrying golfers or other passengers over a golf course.” During the hearing, and to its credit, Yamaha conceded that the '053 Application does not explicitly disclose a golf cart as we have construed that term. Tr. 28:4–7 (“[Judge Cocks]: . . . If we conclude that golf cart requires the carrying of a golfer or other passengers[,] is that shown in the '053 prior art? [Petr.’s Counsel]: Our position is that it’s not expressly, explicitly shown in that there’s no preferred embodiment that shows a riding cart.”).

Nonetheless, Yamaha maintains that the '053 Application teaches a rideable cart because the terms “golf cart” and “electric vehicle” as used in the '053 Application infer a meaning that encompasses both a riderless cart and a rideable cart. Pet. 24–25 (citing Ex. 1003 ¶¶ 1, 2); Pet. Reply 22 (citing Ex. 1003 ¶ 43; Ex. 1047 ¶¶ 102–107); *see also* Tr. 30. In support, Yamaha points to the '965 patent’s disclosure of those same terms and contends the '053 Application’s use of those terms is no different. Pet. Reply 25. In essence, Yamaha would have us believe that the '053 Application’s use of the terms “golf cart” and “electric vehicle” *alone* is conclusive of anticipation, and any closer scrutiny of the '053 Application—such as to “focus on the preferred embodiment” or “minute details”—would be improper. *See id.*

Club Car responds that our construction of “golf cart” as a rideable cart is controlling, and that the ’053 Application discloses “an entirely different vehicle, with functionality that does not read on the challenged claims.” PO Resp. 22–23. According to Club Car, “only one type of vehicle—a ‘caddie cart’” is described in the ’053 Application. PO Sur-Reply 16–17. And because a caddie cart is riderless, Club Car contends a skilled artisan would not have understood the ’053 Application to disclose a “golf cart” as that term is used in the ’965 patent, which requires a rideable cart. PO Resp. 24; PO Sur-Reply 16–18.

We find Club Car’s position to be the more persuasive one. Yamaha overemphasizes the ’053 Application’s use of the terms “golf cart” and “electric vehicle.” Nowhere does the ’053 Application support the disclosure of a rideable cart. Rather, it describes a golf cart that, when read in the context of the reference as a whole, is a riderless cart, or more specifically, a “caddie cart.” This is evidenced by the fact that the ’053 Application incorporates by reference a caddie cart, as discussed above, in which the only mechanism for actually operating the cart is a “grip lever,” which Yamaha’s own expert acknowledges is not something found in a rideable cart. *See* Ex. 2016, 94:16–95:11 (conceding “there is no such thing as a rideable golf cart, in [his] experience or in 2003, that has a grip lever”); *see also* 54:5–12 (essentially same testimony).

Further evidence that the ’053 Application contemplates only a riderless caddie cart is its description of the golf cart as “*moving the golf bag* to a location that is convenient for the play by the golfer.” Ex. 1003 ¶ 2. Nowhere does it describe the cart as moving a golfer or caddy. Even Yamaha’s expert agrees that, while the ’053 Application “does describe a

caddy cart,” it “does not describe putting a person in the seat.” Ex. 2016, 92:18–93:1; 88:11–15. And to the extent Yamaha’s expert qualifies that testimony by saying that the ’053 Application “doesn’t exclude the possibility of a riding cart” and “doesn’t preclude putting a person in the seat either,” that qualification is irrelevant to our analysis of anticipation, which depends on what a reference actually discloses, not what possibilities it could have disclosed.

Moreover, the fact that the ’053 Application describes the “unmanned travel” mode for the cart in terms of “following a guidance line” (Ex. 1003 ¶ 1) or “traveling in a straight line” (*id.* ¶ 21) further persuades us that the only golf cart contemplated is a riderless one. That is because Yamaha’s expert confirms that providing a guidance line for a golf cart is not typical of a rideable cart:

Q [Counsel] You don’t have any examples of a rideable golf cart that would follow a line of some kind buried in the ground?

A [Petr.’s Expert] A rideable cart?

Q [Counsel] Yes.

A [Petr.’s Expert] That would follow a guideline, no.

Q [Counsel] They would all let the driver of the rideable golf cart decide where to turn or drive the cart; right?

A [Petr.’s Expert] In general, yes.

Ex. 2016, 55:2–13; *see also id.* at 93:14–17 (Yamaha’s expert reaffirming he had never heard of a rideable cart following a guidance line)

Despite strong indicators from the ’053 Application that the disclosed golf cart is a riderless, caddy cart, Yamaha nonetheless contends that a rideable cart is inherently taught by paragraph 43 of the ’053 Application. Pet. Reply 22 (citing Ex. 1047 ¶ 107). Paragraph 43 provides that “there

may be appropriate modifications corresponding to the method of use for the applicable electric vehicle, the conditions in the environment, and the applications, usage, structures, functions controlling functions, driving mechanisms, driving functions, and various other conditions.” Ex. 1003

¶ 43. That boilerplate language, however, is of no help to Yamaha. While Yamaha relies on its expert’s testimony that the use of the term “an electric vehicle” in paragraph 43 shows that the disclosed golf cart is “not limited to a non-riding cart,” we find this testimony unpersuasive, for it fails to specify what modifications might be made, how they would be made, and perhaps most important, why a skilled artisan would have made them. Ex. 1047

¶¶ 106, 107. And in focusing on paragraph 43, Yamaha’s expert overlooks paragraph 12 of the ’053 Application, which makes clear that the “electric vehicle” to which the “guided travel” method is being applied is the “grip lever” caddy cart disclosed in the ’588 Application that is described earlier in the reference. See Ex. 1003 ¶ 12 (stating that, with respect to *all* embodiments, “[t]his golf cart is an electric vehicle that is able to perform so-called guided travel, . . . along with enabling traveling or stopping through operation of a grip lever, *as disclosed in the aforementioned [‘588] Application.*”) (emphasis added).

In the end, we are not persuaded that the ’053 Application’s disclosure of a “golf cart” and an “electric vehicle” infers anything more than a riderless caddy cart operated manually through a “grip lever” or automatically via a “guidance line.” Because, as properly construed, the claimed “golf cart” is a rideable cart that carries a golfer, and that limitation is found in each of claims 1, 3–5, 7, 11, 12, and 16, we determine that

Yamaha has not demonstrated by a preponderance of the evidence that these claims, as challenged in the petition, are anticipated by the '053 Application.

3. *The '053 Application Does Not Disclose “Overrid[ing] a Driver Command” or “Restricting . . . Driver Commands”*

Yamaha also relies on the '053 Application for disclosing the “override” and “restricting” limitations of claims 1 and 11, respectively. Pet. 26–27, 32–33. In support, Yamaha points to an “unmanned operating mode” for the cart in the '053 Application in which a controller (or “CPU”) activates “a warning function . . . that a travel-prohibited region exists in the direction of straight travel.” *Id.* (citing Ex. 1003 ¶ 34). The '053 Application then states “[g]iven this, travel is stopped or prohibited.” Ex. 1003 ¶ 34 (emphasis added). But this passage from the '053 Application does not describe *how* the cart’s travel is stopped or prohibited once the warning is given. To the extent Yamaha surmises “*the CPU* [] will stop the cart or inhibit selection of unmanned operation mode,” we note that Yamaha provides no support for this conclusion, aside from relying on the same vague passage, paragraph 34 of the '053 Application, from which it drew the unsupported conclusion in the first instance, and another equally vague description in paragraph 10, which merely states that “selection of the unmanned operating mode is disabled” without explaining *how* it is disabled. See Pet. 26–27 (citing Ex. 1001 ¶¶ 10, 34) (emphasis added).

That is not to say that the '053 Application lacks explanation of how the cart is stopped or disabled when traveling in the unmanned operating mode. What Yamaha overlooks in asserting that the CPU performs this function is the '053 Application’s express disclosure that, “in the unmanned operating mode,” the straight-line travel of the cart “is stopped *when the grip*

lever [] is manually returned back from the locked state to the neutral state.” Ex. 1003 ¶ 13 (emphasis added). Elsewhere the ’053 Application likewise describes the operation of the grip lever—“When the grip lever [] returns to the neutral position, this is interpreted as a Stop command [], and the golf cart is stopped.” *Id.* ¶ 20. In other words, the golfer deactivates the cart’s prescribed state of traveling in a straight line by manually turning the grip lever on the handle of the cart back to a neutral position.

A person manually deactivating the unmanned operating mode to stop the cart is the antithesis of the claimed invention in which the controller automatically overrides or restricts a command from the driver. Moreover, that the cart in the ’053 Application is already in an *unmanned* operating mode means there is no “*driver* command” in need of “override” or “restricting,” as called for by claims 1 and 11. Thus, we are not persuaded that the ’053 Application disclosure of manually deactivating or disabling the unmanned operating mode to stop the cart anticipates the limitations of “the controller operable to override a driver command” and the “restricting the performance of golf cart driver commands” required by claims 1 and 11.¹⁰

¹⁰ In its reply, Yamaha relies on an entirely different operating mode in the ’053 Application—“the ‘manned’ mode of operation”—in an effort to meet the “override” and “restricting” limitations of the challenged claims. Pet. Reply 23–24. In its petition, however, Yamaha deliberately chose *not* to rely on the ’053 Application’s manned operating mode in arguing those same limitations. See Pet. 26–27 (relying repeatedly on the “unmanned mode operation,” and in quoting from paragraph 34 of the ’053 Application, showing ellipsis “. . .” where the manned operating would have been discussed). Yamaha cannot switch positions midstream and raise an entirely new argument in its reply that reasonably could have been made in its petition. See *Acceleration Bay, LLC v. Activision Blizzard Inc.*, 908 F.3d

Alternatively, Yamaha argues that the '053 Application's disclosure of a golfer selecting a destination on an LCD display "inherently teaches" the ability of "overriding a driver command." Pet. 27–28 (citing Ex. 1003 ¶ 37). We disagree. The ability to select a travel destination on an LCD display is not the same as the ability to "override" or "restrict" a previous command to travel to a certain destination. As argued by Club Car, "[t]he selection of a point on a map is just that—a selection to travel to a point on the map, *not to take a particular route to that point.*" PO Resp. 33 (citing Ex. 2015 ¶¶ 33–38, 150–153). Nowhere does the '053 Application say that the selected point on the display will be disregarded if it is within a prohibited area. Thus, we are not persuaded by Yamaha's argument that the '053 Application inherently teaches the ability to "override" or "restrict" a driver command.¹¹

765, 775 (Fed. Cir. 2018) ("Blizzard, as petitioner, had an opportunity to present this argument in its petition, but chose not to."). A reply may only respond to arguments raised in the corresponding patent owner response. See 37 C.F.R. § 42.23(b). In its patent owner response, however, Club Car notes that the '053 Application's manned operating mode is "*not relied upon by Petitioner,*" and, thus, does not address it. PO Resp. 28. Because Yamaha's assertion in its reply of the '053 Application's manned operating mode constitutes new argument outside the scope of a proper reply, we decline to consider it.

¹¹ Yamaha also argues, for the first time in its reply, that the challenged claims are directed to a "feature set" for the golf cart and that the '053 Application "discloses many of the 'feature set.'" See Pet. Reply 19–21, 23, 25–26. We note that this is the second time Yamaha raises a new argument outside the scope of a proper reply. See *supra* n.10 (addressing the first instance). In any event, we disagree with Yamaha's broad characterization of the claimed invention as a "feature set." The scope of the claimed invention is defined specifically in terms of a "golf cart" having the capability to "override" or "restrict" commands by the golf cart's driver to

In sum, we determine that Yamaha fails to demonstrate by a preponderance of the evidence that the '053 Application discloses the “override” and “restricting” limitations of claims 1 and 11. Yamaha’s anticipation challenges against dependent claims stemming from claims 1 and 11 suffer the same deficiency. *See* Pet. 28–31, 34–35. As such, Yamaha also fails to demonstrate by a preponderance of the evidence that dependent claims 3–5, 7, 12, and 16 are anticipated by the '053 Application.

C. Yamaha’s Challenge of Claims 4, 13, 16, 18, and 19 as Obvious Over the '053 Application

Yamaha challenges dependent claims 4, 13, 16, 18, and 19 under 35 U.S.C. § 103 as obvious over the '053 Application. Pet. 35–38. However, Yamaha does not make any additional arguments as to why a skilled artisan would have understood the '053 Application to satisfy the claimed “golf cart,” “override a driver command,” and “restricting . . . driver commands” limitations recited in independent claims 1 and 11, relying instead on its anticipation analysis for those limitations. *Id.* Without any separate analysis of those key limitations, Yamaha’s obviousness challenge based on the '053 Application suffers the same deficiency as its anticipation challenge. And we do not discern any discussion in this obviousness challenge of how a skilled artisan would have modified the riderless cart of the '053 Application in a manner that would have resulted in the claimed invention. Thus, Yamaha has not proven by a preponderance of the

move the cart into a restricted area of the course. Neither the specification nor the claims describe or suggest the broader, and more nondescript, capability of a “feature set” for the cart.

evidence that dependent claims 4, 13, 16, 18, and 19 would have been obvious over the '053 Application.

D. Yamaha's Obviousness Challenge of Claims 1–19 Over Variant Combinations of the '053 Application, the '918 Publication, the '496 Application, and the '605 Application

Yamaha challenges the patentability of claims 1, 3–5, 7, 11–13, 16, 18, and 19 of the '965 patent under 35 U.S.C. § 103 as obvious over the combination of the '053 Application and the '918 Publication. Pet. 38–39. Yamaha relies on the same combination, along with other references, to challenge claims 2, 6, 8–10, 14, 15, and 17. *Id.* at 39–51.

As discussed above, the '053 Application fails to disclose the claimed “golf cart,” “override” and “restricting” limitations of claims 1 and 11. Presumably, in seeking to combine the '053 Application and the '918 Publication, Yamaha would address that deficiency. It does not. The entirety of Yamaha's obviousness analysis based on the '053 Application and the '918 Publication, as set forth in its petition, is reproduced below.

1. Motivation to Combine

The '053 Unexamined Application and the '918 Publication are both directed to golf course management and, in particular, the management and operation of golf carts. Ex. Y1003, Abstract; *cf.* Ex. Y1006, ¶¶8–10, 22. Moreover, both disclose electric golf carts equipped with displays for presenting information about the course. Ex. Y1003, ¶¶1, 37; Ex. Y1006 ¶24. Thus, a person of ordinary skill in the art would have been motivated to consider the '053 Unexamined Application alongside the '918 Publication. See Ex. Y1001, ¶¶178–181.

2. Claims 1, 3–5, 7, 11–13, 16, 18, and 19

As shown above in Sections VI.A and VI.B, *supra*, each of these claims is anticipated by (Claims 1, 3–5, 7, 11, 12, and

16) and/or obvious in view of (Claims 4, 13, 16, 18, and 19) the '053 Unexamined Application.

However, in the event the Board disagrees that these claims are anticipated or rendered obvious by the '053 Unexamined Application alone, each of these claims would have been obvious to one of ordinary skill in the art in view of the '053 Unexamined Application and the '918 Publication. See Ex. Y1001, ¶¶183–186.

Pet. 38–39.

Yamaha's obviousness analysis is facially deficient and ultimately conclusory. The most glaring omission is Yamaha's failure to address the particular teachings of the '918 Publication that would have been combined with the '053 Application, or vice versa. Granted, Yamaha notes that both references are "directed to golf course management" and "disclose electric golf carts equipped with displays for presenting information about the course." Pet. 38. But simply noting that two references are in the same field of technology says nothing about what one reference lacks that the other reference teaches to fill the gap. And Yamaha's conclusion that there would have been motivation "to consider" one reference "alongside" the other reference falls short of specifying *how or why* a skilled artisan would have undertaken the combination once the references were alongside each other.

More specifically, just because both references speak of "golf carts" does not mean their teachings would have been combinable. Indeed, as discussed above, we have already found that the '053 Application discloses a riderless cart. And our review of the '918 Publication indicates it teaches a passenger-carrying cart. Ex. 1006, Figs. 6, 7. Even assuming Yamaha acknowledged this difference, which it does not, Yamaha's obviousness analysis is lacking in several other key respects. For example, there is no

mention of the level of skill in the art or the specific mode from the '053 Application that presumably would have been incorporated into the golf cart of the '918 Publication. Nor is there any mention of why a skilled artisan would have modified the GPS monitoring capability of the golf cart in the '918 Publication with whatever mode was chosen from the '053 Application. Nor does Yamaha explain where the '918 Publication teaches the function of overriding or restricting a driver command that we have already found is lacking in the '053 Application.

Recognizing the deficiencies in the petition with its obviousness challenges, Yamaha attempts to cure them by submitting new argument and evidence in its reply. *See* Pet. Reply 27–28. Yamaha's analysis in the reply consists of a single paragraph, as reproduced below.

C. The Challenged Claims are Obvious

A further corroboration of the obviousness of the challenged claims, in view of Mr. Andrews' admissions at his deposition, is presented in the Reply Breen Declaration and will not be repeated here due to word-count limitation. [See Breen ¶¶ 144–174].

Pet. Reply 28 (citing Ex. 1047 (Breen Reply Dec.)).

Like Yamaha's analysis in the petition, this additional analysis in the reply falls short of what is required to prove obviousness. First, we note that Yamaha relies on new expert testimony as “further corroboration of the obviousness of the challenged claims.” Pet. Reply 28 (citing Ex. 1047 ¶¶ 144–174). From our review, that new testimony amounts to over forty (40) paragraphs addressing key factors that were missing from Yamaha's original analysis, including level of skill in the art (Ex. 1047 ¶¶ 148–149), state of the art (*id.* ¶¶ 83–99, 146–154), and motivation to combine (*id.* ¶¶ 155–173). In other words, rather than mere “corroboration,” Yamaha

attempts to craft a new obviousness challenge by piggybacking on the one in the petition that was clearly wanting. This is the third instance in which Yamaha raises new argument and evidence in its reply that reasonably could have been addressed in its petition. *See supra* n.10 (first instance), n.11 (second instance). And by improperly incorporating by reference into the reply its expert's substantial new testimony, Yamaha fails to explain the significance of that testimony. Pet. Reply 28 (citing Ex. 1047 ¶¶ 144–174).

We decline to consider citations to the record unaccompanied by any explanation, especially given the string citation here to some thirty odd paragraphs of new expert testimony. A petition must contain a “full statement of the reasons for the relief requested, including a detailed explanation of the significance of the evidence” 37 C.F.R. § 42.22(a)(2). Plus, testimony from an expert declaration cannot be incorporated by reference into the petition without some explanation of its relevance. *Id.* § 42.6(a)(3). Accordingly, we will not undertake to fathom an obviousness challenge that is lacking in merit from both a procedural and substantive standpoint.

Yamaha also attempts, in its reply, to summon a motivation to combine from the deposition testimony of Club Car's expert. Pet. Reply 27 (citing Ex. 1039, 27:8–20, 29:25–30:3). But the testimony on which Yamaha relies simply concerns the expert's recollection of an automotive manufacturer's research work on a “test car.” *See* Tr. 21:14–22:3, 75:10–76:7. That research work, however, is neither in the record before us nor shown to have been known to ordinarily skilled artisans. Even if was, Yamaha fails to explain, with any particularity, how or why the purported

knowledge of this research work would have provided a reason to combine the asserted references.

In the end, given the wholly inadequate and conclusory nature of Yamaha's obviousness challenges, in both the petition and the reply, we determine that Yamaha fails to demonstrate by a preponderance of the evidence that claims 1–19 would have been obvious over any of the asserted combinations relying on the '053 Application, the '918 Publication, the '496 Application, and/or the '605 Application.

E. Yamaha's Challenges Based on the '388 Patent

Yamaha asserts five challenges based on the '388 Patent. Pet. 4. First, Yamaha contends claims 21, 22, and 28 are unpatentable under 35 U.S.C. § 102, as anticipated by the '388 Patent. *Id.* at 51–56. Yamaha also contends that claim 23 would have been unpatentable under 35 U.S.C. § 103, as obvious over the '388 Patent. *Id.* at 56–57. Yamaha also urges that claims 21–28 and 31–33 would have been unpatentable under 35 U.S.C. § 103, as obvious over the '388 Patent in combination with various other references that include the '918 Publication, the '053 Application, the '496 Application, and the '605 Application. *Id.* at 57–67.

Each of claims 22–28 and 31–33 depend, directly or indirectly, from base claim 21, and, thus, require its limitation of

a limited access controller associated with each golf cart . . . *the limited access controller operable to limit the performance of driver commands to move an associated golf cart in a limited access area* based at least in part on a GPS position of the associated golf cart.

Ex. 1002, 9:39–44 (emphasis added). In each of the five challenges based on the '388 Patent, Yamaha relies only on the '388 Patent for teaching this

limitation. We originally denied institution of these challenges because Yamaha failed to show a reasonable likelihood that the '388 Patent discloses this limitation. Inst. Dec. 18–22.

Despite our initial determination that Yamaha's challenges based on the '388 Patent did not meet the threshold for institution, Yamaha chose not to reply to Club Car's arguments against those challenges. See Tr. 85:14–19, 86:16–18, 103:8–13 (counsel confirming that Yamaha's reply fails to address the '388 Patent). Nonetheless, we consider Club Car's response in which Club Car bolsters its arguments against the '388 Patent-based challenges with additional expert testimony and cross examination testimony. See PO Resp. 48–62; Ex. 2015 ¶¶ 213–259; Ex. 2016, 154:18–161:17; 162:15–24. Yamaha, in turn, offers no rebuttal to that additional evidence. See Pet. Reply 22–28 (no mention of the '388 Patent for either anticipation or obviousness). We begin our analysis with an overview of the '388 Patent.

1. The '388 Patent (Ex. 1008)

The '388 Patent is directed to an “autonomous, robotic, walking, golf caddy” that includes a “drive assembly” for “unattended movement” of the caddy, and an “operations program” for controlling the cart's movement and navigation. Ex. 1008, 1:10–15, 2:31–39. The robotic golf caddy is depicted in figure 1 of the '388 Patent, reproduced below.

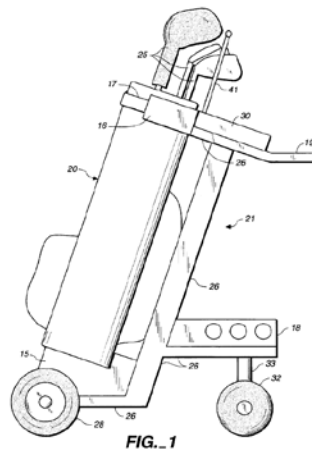


Figure 1 of the '388 Patent above is a schematic side view of the “autonomous robotic walking golf caddy.” *Id.* at 3:16–19. The '388 Patent states that “many of the principles” described in connection with the robotic golf caddy also “could be used to drive a riding golf car.” *Id.* at 3:44–49.

The robotic golf caddy of the '388 Patent has a “position determination apparatus,” which may use GPS to orient the golf caddy “with respect to mapped major boundaries and elements.” *Id.* at 4:36–41; *see also id.* at 2:39–49 (describing use of “GPS” for position determination). The operation of the robotic golf caddy is “unattended movement” or computer-assisted autonomous navigation based on “stored rules of navigation and the combination of mapped data and sensed data.” *Id.* at 2:31–34, 2:49–54. The robotic golf caddy” is “programmed to follow [a] golfer between the tee and the green at a predetermined and/or selected distance behind the golfer.” *Id.* at 7:9–12. In one embodiment, the robotic golf caddy is designed to service two golfers. *Id.* at 9:3–6. Each golfer carries a “beacon or transmitter” that allows the golfer to “summon” the caddy to herself (switch 1) or “release” the caddy (switch 2) such that it may be “summoned” by the golfer’s playing partner. *Id.* at 8:66–9:6.

When the robotic golf caddy is being “summoned” or automatically following a golfer, it operates under certain stored “navigational rules” or “logic criteria.” *Id.* at 7:4–31. These navigational rules may include prohibiting the robotic caddy from entering certain areas, or tracking a golfer at a minimum distance. For instance, “[w]hen the golfer stops, the robotic caddy will also stop.” *Id.* at 7:12–13. “When the golfer goes into a hazard such as a sandtrap . . . the robotic caddy can wait at the edge of the hazard until the golfer returns to the fairway.” *Id.* at 7:13–16, 10:27–32. Similarly, “[w]hen the golfer goes onto the green, the robotic caddy can move to a holding position proximate [to] the next tee.” *Id.* at 7:16–18.

In addition to the autonomous mode, the ’388 Patent contemplates that “a manual controller 87 can be provided at handle 19 . . . to enable override of the powered automatic navigation of the robotic device.” *Id.* at 8:8–11. In this mode, a user “still obtains power-assisted” operation of the caddy, while actively steering the caddy via a “handle,” which “sense[s] pulling, pushing and right and left hand pressure for steering.” *Id.* at 8:11–18. “Thus, when the golfer decides to pull the robotic assembly 21 . . . controller 87 allows the automatic navigation functions to be overridden and yet the golfer still obtains power-assisted operation from drive assembly 27.” *Id.*

2. The ’388 Patent Does Not Disclose the Claimed “Controller Operable to Limit the Performance of Driver Commands”

Yamaha contends the ’388 Patent discloses the claimed “controller operable to limit the performance of driver commands to move an associated golf cart in a limited access area,” as recited by independent claim 21. In its anticipation challenge based on the ’388 Patent, Yamaha argues:

The limited access controller (*i.e.*, CPU 22) is operable to limited performance of driver commands to move a cart into a limited access area based in part on the GPS position of the cart. For example, the invention of the '388 Patent includes a remote carried by the golfer that can be used to "summon" the cart, whereby the cart will navigate to the position of the golfer. *Id.*, 8:66–9:2. When the system detects that the golfer is in a limited access area, such as a sandtrap, the cart *will not perform a "summon" command to enter the sandtrap. Id.* 10:27–32.

Pet. 54 (emphasis added).

In its obviousness challenges based on the '388 Patent, Yamaha relies on this same anticipation analysis of base claim 21 to teach the limitation of a "controller operable to limit the performance of driver commands." *See* Pet. 57 (citing Ex. 1008, 10:27–32), 61 (referencing "Section VI.G.1.d, *supra*"). Yamaha does not cite, or rely upon, any additional reference to teach this limitation. *See* Pet. 51–67. As explained below, Yamaha has not sufficiently shown on the record before us that an ordinarily skilled artisan would have understood the '388 Patent's "summon" command to teach the "controller operable to limit the performance of driver commands" limitation of claim 21.

With respect to Yamaha's '388 Patent-based challenges, Club Car counters that "[t]he '388 Patent does not disclose the ability to 'limit' or 'restrict' a driver command 'to move an associated golf cart in a limited access area,' as required by all challenged claims." PO Resp. 50. Club Car argues that "the 'robotic golf caddy' of the '388 Patent can go anywhere under manual control, which is never overridden." *Id.* We find Club Car's position persuasive, for, indeed, the '388 Patent provides a "manual controller" on the robotic caddy's handle that "allows the automatic navigation function to be overridden" so that the golfer can then "pull" or

“manually guide” the cart “as a matter of convenience and/or safety.” Ex. 1008, 8:8–25.

According to Club Car, Yamaha’s anticipation argument is built “entirely upon functionality that occurs when the ‘robotic golf caddy’ is operating autonomously (either in a follow or ‘summon’ mode).” *Id.* at 51. Club Car first contends that using a “beacon or transmitter” to “summon” the robotic golf caddy, and then the caddy subsequently avoiding a hazard, does not disclose the ability to “limit” or “restrict” driver commands because “[e]ntering ‘summon’ mode is not the same as entering a ‘driver command’ to accelerate, brake, or steer the vehicle.” *Id.* In other words, from Club Car’s perspective, summoning an autonomous vehicle is not the same as driving a passenger vehicle. *Id.* at 47–48. We agree.

When the robotic golf caddy in the ’388 Patent is operating in the automatic follow or “summon” mode, it operates under particular navigational restrictions, but it does not receive driver commands to move in any particular manner. Club Car’s expert confirms as much, testifying that “merely defining the destination does not generate any control actions” and “[t]he user input is to travel to a particular point (i.e., a destination), *not to take a particular route to that point*, and the system then pilots itself to that point by generating movement inputs on its own.” Ex. 2015 ¶¶ 217–218. That testimony indicates that the summon feature of the ’388 Patent does not equate to a “drive” command.

Club Car elaborates further on the distinction between the “summoning” of an autonomous vehicle, as described in the ’388 Patent, and “driving” a vehicle. PO Resp. 52–53. The ’388 Patent, Club Car argues, “contemplates an automatic follow or ‘summon’ mode, as well as a manual

operation mode,” and “[i]n the manual operation mode, a golf cart user actively steers the caddy via the ‘handle,’ which senses ‘pulling, pushing and right and left hand pressure.’” *Id.* at 52 (quoting Ex. 1008, 7:4–31, 8:8–18). Nothing in the ’388 Patent, according to Club Car, “suggest[s] that the navigational restrictions that occur in the automatic follow or ‘summon’ mode also occur in ‘manual’ mode,” such that the autonomous mode may somehow override the manual mode. *Id.* We agree. Even Yamaha’s expert acknowledges that nowhere does the ’388 Patent describe overriding *manual* operation of the caddy cart:

Q [Counsel] . . . I’m asking you, in the manual mode that is described in Column 8, line 8, as we discussed, . . . or anywhere in the patent, there is no description of manual operation being overridden in any circumstance, is there?

A [Petr.’s Expert] No, there is not.

Ex. 2016, 162:15–24.

After reviewing the record before us, we are not persuaded that Yamaha has shown by preponderant evidence that the controller described in the ’388 Patent is capable of limiting a drive command from the golfer. To the contrary, the “manual operation” mode of the caddy cart in the ’388 Patent, which is the only disclosure akin to a driver command, cannot be overridden, as even Yamaha’s expert concedes. Ex. 2016, 162:15–24 (addressing the disclosure in Ex. 1008, 8:8–18). In the summon mode, pressing a button to summon the robotic caddy cart of the ’388 Patent triggers an autonomous mode that is “programmed” in the caddy cart’s memory, but no specific driving commands are ever provided by the golfer to the robotic golf caddy when in that autonomous mode. Ex. 1008, 7:4–30; *see also* Ex. 2015 ¶ 218 (“As the robotic caddy cart is operating

autonomously at that point, the user does not input these movement commands.”). We agree with Club Car’s expert that the summon command could not be considered a driver command because “merely defining the destination does not generate any control actions.” *Id.* ¶ 217.

Indeed, the ’388 Patent’s “summon” mode for the robotic golf caddy would not be a driver command because, when in the summon mode, the golfer has no direct control over the speed or direction of the robotic caddy or its ability to drive into a restricted area. That is so because the “computerized, autonomous, robotic caddy” is programmed to make decisions “apart from the direct commands of the golfer.” Ex. 1008, 1:60–65. More specifically, as described in the ’388 Patent, the robotic caddy pilots itself to a point near the golfer as determined by “navigational rules and golf etiquette rules” that are “stored” in the cart’s memory device, not by any directives from the golfer. *Id.* at 7:4–9. Should the system detect that the golfer is in a limited access area, such as a tee, sandtrap, or green, the golfer will not be able to summon the robotic caddy into that prohibited area. *See id.* at 7:9–21. This prohibition is not a driver command being limited because the summon command simply activates internal logic to move the caddy cart near the golfer, while precluding movement of the cart into the prohibited area. *Id.* In fact, when operating in autonomous mode, the robotic caddy can never enter such limited access areas, but will simply “wait at the edge . . . [in] a holding position” until the golfer returns to a permitted area of travel. *Id.* at 7:13–18. That disclosure parallels the testimony of Club Car’s expert that the summon command cannot be overridden or limited in the ’388 Patent because the robotic golf caddy will always come as close as is allowable under the programmed parameters of

the robotic caddy itself. *See* Ex. 2015 ¶ 219. Thus, the summon command in the '388 Patent is never overridden, but instead is carried out completely. *See id.*

In sum, we find that '388 Patent fails to disclose or suggest the claimed “controller operable to limit the performance of driver commands to move an associated golf cart in a limited access area,” which is a requirement of all the challenged claims. As such, Yamaha has not proven by preponderant evidence that any of claims 21–28 and 31–33 would have been unpatentable based on the '388 Patent, either alone or in combination with the other asserted references.

III. MOTIONS TO EXCLUDE

Yamaha seeks to exclude improperly certified translations of the '053 Application offered into evidence by Club Car and marked as Exhibits 2001 and 2003. Paper 53, 10–11 (citing 37 C.F.R. § 42.63(b)). Club Car concedes that it no longer relies on the uncertified translations and that it will not face any prejudice if we exclude these exhibits. *See* Tr. 63:15–64:9 (“To be clear, we haven’t tried to rely on it We went on Petitioner’s translation.”); Tr. 64:5–9 (“[Judge] So there’s no prejudice to [Club Car] if we exclude those [uncertified translations]? [PO Counsel] “No”). Given those concessions, we grant Yamaha’s motion to exclude Exhibits 2001 and 2003.

Yamaha also moves to exclude certain expert testimony from Club Car’s experts in their respective declarations, Exhibits 2013 and 2015, because of their presumed reliance on the uncertified translations in Exhibits 2001 and 2003. Paper 53, 12–15. First, we do not rely on the testimony in Exhibit 2013 in any respect. Nor do we rely on, or give any weight to, the

testimony in Exhibit 2015 that even plausibly relies on or otherwise relates to the uncertified translations. Indeed, the expert whose testimony is the subject of Exhibit 2015, Mr. Andrews, states expressly that he relies on *Yamaha*'s translation in forming his opinions so as to maintain consistency with *Yamaha*'s expert, Mr. Breen. Ex. 2015 ¶ 81 (“For the sake of clarity and consistency with my analysis of Mr. Breen’s arguments concerning the teachings of the ’053 Application, I will cite to disclosures in Petitioner’s translation of the ’053 Application (Y1003).”); *see also id.* ¶¶ 81–98. Because we do not rely on the testimony of either of Club Car’s experts that may concern the uncertified translations, and *Yamaha* does not otherwise persuasively explain another reason for excluding their testimony, we deny as moot *Yamaha*’s motion to exclude the expert testimony in Exhibits 2013 and 2015.

Club Car, in turn, moves to exclude Exhibits 1030, 1045, and 1046 as submitted into evidence by *Yamaha*. Paper 52, 1. We do not rely on any of these exhibits. Thus, we deny as moot Club Car’s motion to exclude Exhibits 1030, 1045, and 1046.

IV. CONCLUSION

We determine that *Yamaha* has *not* demonstrated by a preponderance of the evidence that claims 1, 3–5, 7, 11, 12, and 16 of the ’965 patent are unpatentable as anticipated by the ’053 Application, or that claims 1–19 are unpatentable as obvious over the ’053 Application, either alone or in combination with the ’918 Publication, the ’496 Application, and/or the ’605 Application. We also determine that *Yamaha* has *not* demonstrated by a preponderance of the evidence that claims 21, 22, and 28 are unpatentable as anticipated by the ’388 Patent, or that claims 21–28 and claims 31–33 are

unpatentable as obvious over the '388 Patent, either alone or in combination with the '918 Publication, the '053 Application, the '496 Application, and/or the '605 Application. Finally, we do not address claim 20 of the '965 patent, 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 1–19, 21–28, and 31–33 of the '965 patent are unpatentable;

FURTHER ORDERED that Yamaha's motion to exclude (Paper 53) is *granted-in-part* and *denied-in-part*;

FURTHER ORDERED that Club Car's motion to exclude (Paper 52) is *denied*; 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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