

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

NINTENDO CO., LTD. and
NINTENDO OF AMERICA INC.,
Petitioners,

v.

GAMEVICE, INC.,
Patent Owner.

PTAB Case No. IPR IPR2023-00643

Patent No. 10,391,393

**PETITION FOR *INTER PARTES* REVIEW
OF U.S. PATENT NO. 10,391,393**

(Claims 1-7)

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EXHIBIT LIST

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- Ex. 1002 Declaration of Garry Kitchen (“Kitchen”)
- Ex. 1003 U.S. Patent Application Publication No. 2001/0045938 A1 (“Willner”)
- Ex. 1004 Translation of Korean Patent No. 10-2011-0116892 (“Park”) with Korean Version and Translation Certification
- Ex. 1005 U.S. Patent No. 9,539,507 B2 (“Schoenith”)
- Ex. 1006 International Patent Application No. WO 2014/079264 A1 (“Kessler”)
- Ex. 1007 U.S. Patent Application Publication No. US 2012/0271967 A1 (“Hirschman”)
- Ex. 1008 U.S. Provisional Patent Application No. 61/477,387
- Ex. 1009 File History for U.S. Patent No. 10,391,393
- Ex. 1010 *Nintendo Co. v. Gamevice, Inc.*, IPR2018-01521, Paper 34 (PTAB Mar. 10, 2020)
- Ex. 1011 *Nintendo Co. v. Gamevice, Inc.*, IPR2018-01522, Paper 34 (PTAB Mar. 10, 2020)
- Ex. 1012 U.S. Patent No. 9,126,119 (“’119 patent”)
- Ex. 1013 File History for U.S. Patent No. 9,855,498
- Ex. 1014 Commission Determination, *Certain Portable Gaming Console Systems with Attachable Handheld Controllers and Components Thereof*, ITC Inv. No. 337-TA-1111, 84 Fed. Reg. 54640 (Oct. 16, 2019)

- Ex. 1015 Nintendo's First Supplemental Response to Gamevice Interrogatory Concerning Nintendo's Invalidity Contentions, *Portable Gaming Console Systems with Attachable Handheld Controllers and Components Thereof II*, ITC Inv. No. 337-TA-1197 (June 23, 2020)
- Ex. 1016 Excerpts of Gamevice's Supplemental Objections and Responses to Nintendo of America Inc.'s First and Third Sets Interrogatories, *Portable Gaming Console Systems with Attachable Handheld Controllers and Components Thereof II*, ITC Inv. No. 337-TA-1197 (July 2, 2020)
- Ex. 1017 Rule 36 Notice Affirming Commission Opinion, *Gamevice, Inc. v. ITC*, No. 20-1264 (Fed. Cir.), ECF No. 63 (May 20, 2021)
- Ex. 1018 Initial Determination, *Certain Portable Gaming Console Systems with Attachable Handheld Controllers and Components Thereof II*, ITC Inv. No. 337-TA-1197 (July 2, 2021)
- Ex. 1019 Commission Determination, *Certain Portable Gaming Console Systems with Attachable Handheld Controllers and Components Thereof II*, ITC Inv. No. 337-TA-1197, 86 Fed. Reg. 50744 (Sept. 3, 2021)
- Ex. 1020 Gamevice Inc.'s Unopposed Motion to Dismiss, *Gamevice Inc. v. U.S.I.T.C.*, Appeal No. 22-1120 (Fed. Cir.), ECF 16 (Feb. 10, 2022)
- Ex. 1021 Gamevice Inc's Case Management Conference Report, *Gamevice Inc. v. Nintendo Co., Ltd.*, No. 3:19-cv-1942-RS (N.D. Cal.), ECF 206 (Jan. 27, 2022)
- Ex. 1022 Nintendo's Notice of Motion and Motion for Rule 11 Sanctions, *Gamevice Inc. v. Nintendo Co., Ltd.*, No. 3:19-cv-1942-RS (N.D. Cal.), ECF 216 (Mar. 30, 2022)
- Ex. 1023 Further Case Management Scheduling Order, *Gamevice Inc. v. Nintendo Co., Ltd.*, No. 3:19-cv-1942-RS (N.D. Cal.), ECF 219 (Apr. 11, 2022)

- Ex. 1024 Order Denying Motion for Rule 11 Sanctions, *Gamevice Inc. v. Nintendo Co., Ltd.*, No. 3:19-cv-1942-RS (N.D. Cal.), ECF 225 (May 18, 2022)
- Ex. 1025 Memorandum from Katherine K. Vidal to Members of the Patent Trial and Appeal Board on Interim Procedure for Discretionary Denials in AIA Post-Grant Proceedings with Parallel District Court Litigation (June 21, 2022), *available at* https://www.uspto.gov/sites/default/files/documents/interim_proc_discretionary_denials_aia_parallel_district_court_litigation_memo_20220621.pdf
- Ex. 1026 Federal Judicial Center, United States District Courts, National Judicial Caseload Profile (June 30, 2022)
- Ex. 1027 *Code200, UAB v. Bright Data Ltd.*, IPR2022-00861, Paper 18 (PTAB Aug. 23, 2022) (Director Decision)
- Ex. 1028 Order Construing Claims and Requesting Supplemental Briefing Regarding Motion for Summary Judgment, *Gamevice, Inc. v. Nintendo Co., Ltd.*, No. 18-cv-1942-RS (N.D. Cal.), ECF 241 (Jan. 19, 2023)
- Ex. 1029 Gamevice, Inc.’s Supplemental Opposition to Nintendo’s Motion for Summary Judgment, No. 18-cv-1942-RS (N.D. Cal.), ECF 244 (Feb. 23, 2023)
- Ex. 1030 Appendix A (Claim Listing for Challenged Claims of ’393 Patent)

I. INTRODUCTION

The challenged claims (claims 1-7) of U.S. Patent 10,391,393 (“’393 patent”) recite nothing more than a conventional, well-known combination of commonplace elements—a game controller used with a conventional smartphone or tablet. This combination is manifestly unpatentable.

Skilled artisans knew, long before the earliest possible priority date for the challenged claims, that gaming on smartphones or tablets is inherently limited. Games on smartphones or tablets are controlled by touching the screen, which blocks portions of the screen. Touchscreens also do not allow for precise game control, and holding smartphones or tablets while controlling games on the screen can be uncomfortable. Thus, long before the purported 2015 priority date for the challenged claims, companies began designing game controllers that could be attached to a smartphone or tablet to add physical controls (buttons, joysticks, etc.) for game play, and then be removed from the smartphone or tablet to return the device to normal operation.

The Board confirmed that such a well-known combination of conventional elements is not patentable. In IPR2018-01521 and IPR2018-01522 (the “’119 IPRs”), the Board considered claims of U.S. Patent 9,126,119 (the “’119 patent”). The Board found that the ’119 patent recited nothing more than a conventional

combination of a game controller and smartphone or tablet, and, accordingly, cancelled the challenged claims.

The '393 patent is a continuation-in-part of the '119 patent, and is not materially different from the now-cancelled claims of the '119 patent. Indeed, the claims at issue here recite the same embodiment (shown in Figure 16) that was added to the specification and recited by the '119 patent, and Patent Owner (“Gamevice”) filed terminal disclaimers from the '393 patent, ultimately, to the '119 patent, effectively conceding that the claims of the '393 patent are not patentably distinct from the claims of the '119 patent. In fact, the only patentably significant difference between the cancelled claims of the '119 patent and the challenged claims before the Board now is that the claims before the Board now *eliminated* an element—“fastening mechanism”—making them effectively broader versions of the cancelled claims of the '119 patent.

The International Trade Commission (the “ITC”) agreed with the Board that the combination of a game controller and conventional smartphone or tablet is obvious. Following a complaint filed by Gamevice, the ITC instituted an investigation of Nintendo for alleged infringement of the '393 patent. Nintendo challenged the validity of the '393 patent in that proceeding—based on much of the same art that was at issue in the '119 IPRs and is at issue again here—and, like the Board in the '119 IPRs, the ITC found, under a clear and convincing

standard, that the recited combination of a game controller and conventional smartphone or tablet is obvious, and held the claims before it to be invalid. That ITC’s finding is now final.

Although Nintendo previously petitioned for the Board to cancel the claims of the ’393 patent, the Board did not substantively address the merits of that petition. Instead, the Board accepted Gamevice’s representation that the ITC would “resolve” Nintendo’s “asserted invalidity grounds,” and denied institution without addressing the merits of the petition. This petition, therefore, represents the Board’s first opportunity to address the merits of Nintendo’s unpatentability arguments with respect to the ’393 patent—arguments with which both the Board (in the ’119 IPRs) and the ITC agreed. The Board should, thus, act on the merits of Nintendo’s petition, institute this IPR, and issue a final written decision that claims 1-7 of the ’393 patent are unpatentable.

II. MANDATORY NOTICES

A. Real Party-in-Interest

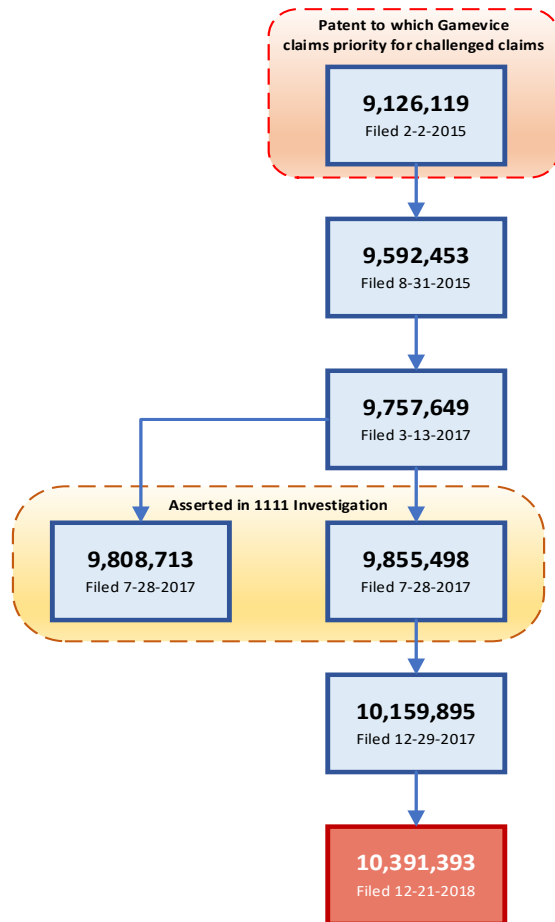
Petitioners Nintendo Co., Ltd. and Nintendo of America Inc. (collectively, “Nintendo”) are the only real parties in interest.

B. Related Matters

There are several related matters.

In 2017, Gamevice filed its first case against Nintendo,¹ alleging that the Nintendo Switch infringed the '119 patent. That case was frivolous, and after being so informed, Gamevice dismissed the complaint before serving it. Nintendo then successfully challenged the patentability of claims 1-10 and 13-21 of the '119 patent in two IPRs: IPR2018-01521 and IPR2018-01522 (before APJs Cocks, DeFranco, and Kinder). Ex. 1010; Ex. 1011. Gamevice did not appeal the Final Written Decisions resulting from those IPRs, conceding the Board's conclusions.

In 2018, Gamevice sued Nintendo, alleging infringement of U.S. Patent Nos. 9,808,713 ("713 patent") and 9,855,498 ("498 patent"), in the Northern District of California² and simultaneously in the ITC.³ The '498 patent is a child to the '119 patent, and a parent to the '393 patent, as shown in the partial history to the right.



¹ *Gamevice, Inc. v. Nintendo Co., Ltd.*, No. 2:17-cv-05923 (C.D. Cal.).

² *Gamevice, Inc. v. Nintendo Co., Ltd.*, No. 3:18-cv-01942 (N.D. Cal.).

Gamevice’s district court case was stayed pending the ITC investigation. The investigation proceeded to a noninfringement and invalidity finding before the Administrative Law Judge (“ALJ”) and review by the Commission. *See* Ex. 1014. Gamevice appealed, and the Federal Circuit summarily affirmed the ITC’s determination. Ex. 1017.

In March 2020, Gamevice asserted the ’393 patent against Nintendo in a second ITC investigation.⁴ The second investigation—the ’1197 Investigation—proceeded to a final hearing in December 2020. Seven months later, the ALJ issued an Initial Determination that the Nintendo Switch did not infringe the ’393 patent, and that claims 1-4 and 6-7 of the ’393 patent were invalid over several prior art references, including the art raised here.⁵ Ex. 1018, 354-363, 381-399. The Commission adopted the ALJ’s findings of noninfringement and invalidity, and those findings are now final. Exs. 1019, 1020.

In January 2022, Gamevice submitted a notice to the U.S. District Court for the Northern District of California in Case No. 3:18-cv-01942 (“District Court”)

³ No. 337-TA-1111 (“1111 Investigation”).

⁴ No. 337-TA-1197 (“1197 Investigation”).

⁵ Claim 5 of the ’393 patent was not at issue in the ’1197 Investigation, although it is challenged here.

concerning the status of the '1111 and '1197 ITC Investigations. Gamevice asked the District Court to lift the stay of proceedings and stated that it intended to “seek leave to amend the complaint to add allegations that the same accused products infringe various claims of the '393 patent. Ex. 1021. Gamevice filed a motion for leave to amend in March 2022, which the court granted. Gamevice filed its amended complaint on March 7, 2022, asserting the '393 patent for the first time in federal court.

The Northern District of California litigation remains pending. In January 2023, the District Court issued a claim construction order, construing certain claims of the three Gamevice patents asserted there, Ex. 1028, but the court has not set a trial date or any other relevant deadlines, Ex. 1023.

C. Notice of Counsel and Service Information

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Nintendo consents to electronic service in this matter, and the following email address is for service and all communications:

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Nintendo is concurrently filing Powers of Attorney for the above counsel.

III. GROUNDS FOR STANDING

Pursuant to 37 C.F.R. §42.104(a), Nintendo certifies that the '393 patent is available for IPR. Nintendo is not barred or estopped from requesting an IPR challenging claims of the '393 patent.

IV. IDENTIFICATION OF CHALLENGE AND RELIEF REQUESTED

Nintendo requests cancellation of claims 1-7 on the following grounds:

Ground	References	Basis	Challenged Claims
1	Willner and Park	§103	1-7
2	Schoenith and Park	§103	1-7
3	Schoenith and Kessler	§103	1-7
4	Hirschman	§§102, 103	1-4, 6-7

Nintendo relies on the Declaration of Garry Kitchen (Ex. 1002, “Kitchen”), and the evidence in its Exhibit List.

V. BACKGROUND

A. The '393 Patent

The '393 patent describes and claims a game controller that attaches to a computing device, shown in the specification as a smartphone or tablet. Ex. 1001, Fig. 1, 4:12-16. The '393 patent is a continuation-in-part of the '119 patent (*id.*, (63)). Figures 1-25 and accompanying text are common between the '393 and '119 patents. *Compare* Ex. 1001, Figs. 1-25, 1:30-11:17 *with* Ex. 1012, Figs. 1-25, 1:14-9:62. The '393 patent's specification also includes Figures 26-44 and accompanying text. Ex. 1001, 11:18-17:37.

Figures 1 thru 12 show one embodiment of the game controller: a three-sided or u-shaped game controller in which a tablet or other computing device “nests” (annotated yellow at right). *E.g., id.*, 5:22-31. The left and right sides contain controls, which may include buttons, triggers, and switches. *E.g., id.*, 5:49-67, Figs. 1, 3-5.

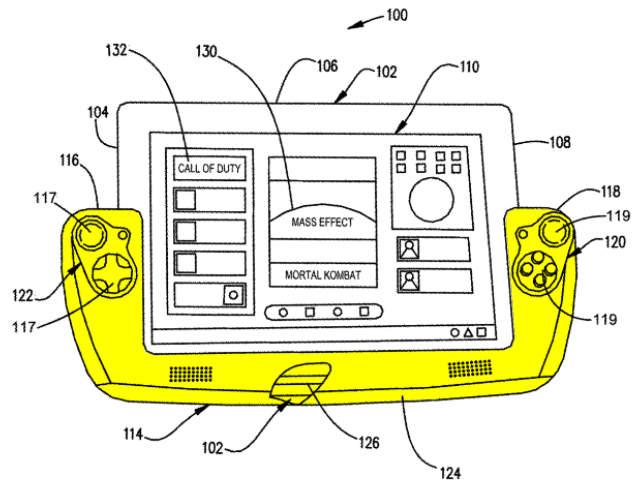


FIG. 1

Figures 13 and 14 show another embodiment: a game controller with control modules (252) connected by a “structural bridge” (258) (annotated blue at

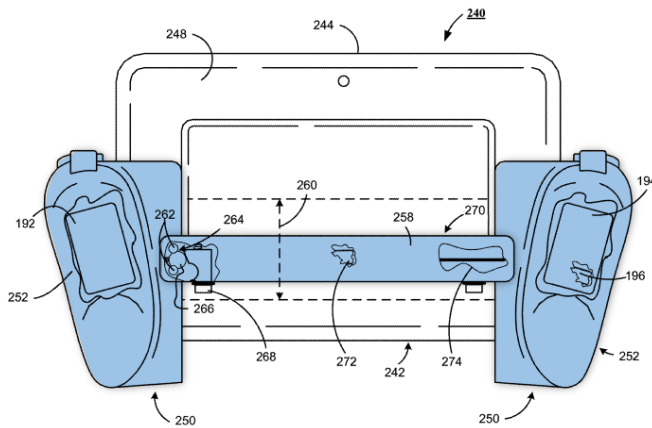


FIG. 14

left). The structural bridge spans across the exterior back surface of the computing device. *Id.*, 8:31-37. The control modules “provide a confinement boss 262 [that] provides a fastening detent 264.” *Id.*, 8:38-40. The fastening

detent 264 “interacts with a retention member 266” of the structural bridge to secure the control modules to the bridge. *Id.*, 8:40-42.

Figures 16 thru 25 show a third embodiment. This is the embodiment added to the specification by the '119 patent. In this embodiment, a “communication port” interacts with the computing device. The communication port preferably includes a “communication link” (wired or wireless connection), “confinement structures” (316), and a “structural bridge” (322)

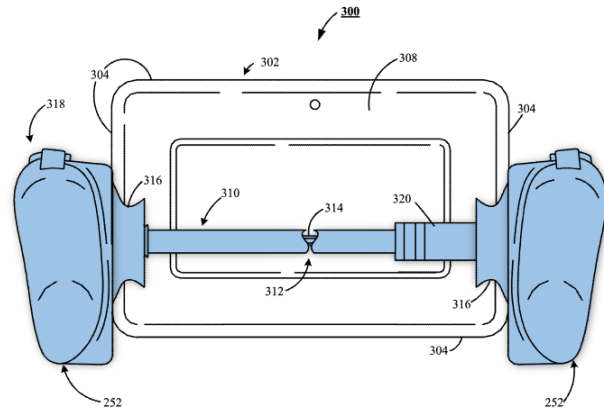


FIG. 16

(annotated blue above). *Id.*, 9:21-38, 9:60-67. The structures “confine” the computing device on two sides, are secured together by the bridge, and can be compressed onto the sides of the computing device and then removed. *Id.*, 10:9-20. “Control modules” connect to the confinement structures. *Id.*, 9:21-38.

Figures 26-44 disclose an embodiment in which the described control

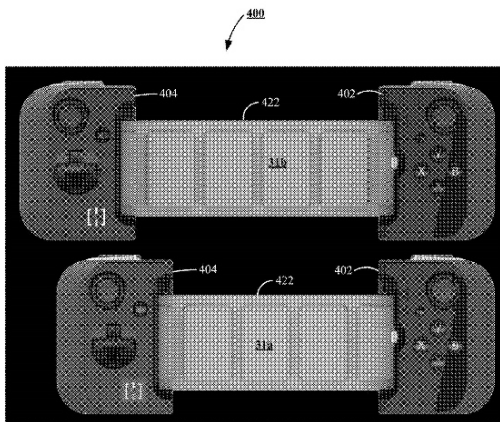


FIG. 31

modules and structural bridge accommodate different widths of computing devices. See Figure 31 (left) for an example.

B. The Challenged Claims

The challenged claims recite the same core limitations as the '119 patent's now

cancelled claims—*structural bridge, control modules, confinement structures, passageway, and communication links*. Claim 1 of the '393 patent is set forth below.

A combination comprising:

a computing device;

a pair of confinement structures, the pair of confinement structures interacting with the computing device and adjacent at least two opposing sides of the computing device, but not more than three sides of the sides of the computing device, each of the pair of confinement structures comprising a communication link, each of the communication links configured for electronic communication with the computing device;

a rigid structural bridge disposed between and secured to the pair of confinement structures, the rigid structural bridge comprising a passageway between the pair of confinement structures, the passageway promotes electrical communication between the communication link of a first confinement structure of the pair of confinement structures and the computing device, the passageway further promotes electrical communication between the communication link of a second confinement structure of the pair of confinement structures and the computing device; and

a pair of electronic game control modules, each electronic game control module of the pair of electronic game control modules is secured to and interacts with a corresponding confinement structure of the pair of confinement structures, each electronic game control module in electronic communication with the communication link of its corresponding confinement structure, wherein each electronic game control module is a separate and distinct structure from each of their corresponding confinement structures, forming no

structural portion of their corresponding confinement structures, and in which each of the pair of confinement structures are separate and distinct structures from the structural bridge, forming no structural portion of the structural bridge.

Appendix A (Ex. 1030) is a table that correlates the language of the challenged claims with the designations used in this petition.

C. Prosecution History

Gamevice filed the '393 patent application on December 21, 2018, three months after Nintendo filed its '119 IPR petitions. Although Gamevice submitted to the Examiner the prior art used in Nintendo's '119 IPR petitions (the same art relied upon here), Gamevice never disclosed the existence of the '119 IPRs, that the art had been cited in those IPRs (against a related patent), or that the IPRs were instituted in March 2019.

The Examiner issued a double-patenting rejection based on the '498 patent—which itself had been rejected on double-patenting grounds over its parent, the '119 patent. Ex. 1009, 73-80; Ex. 1013, 164-69. Gamevice filed a terminal disclaimer, and the Examiner issued a notice of allowance, finding the claims patentable over Wu and Willis, neither of which are relied on here. Ex. 1009, 20-30, 44-46, 58-59. During prosecution, the Examiner did not evaluate any other prior art, including, specifically, the art relied on here.

D. Level of Skill in the Art

A person of ordinary skill in the art as of the time of the alleged invention of the '393 patent application ("POSITA") would have had an undergraduate degree in mechanical, electrical, or computer engineering or other technical training in product design or equivalent work experience in the development of interactive products. Such a person would have possessed at least one year of experience in developing and/or evaluating interactive products.

E. Priority

A claim in a continuation-in-part application is entitled to the priority date of a parent application only if the parent's specification satisfies the requirements of §112 ¶1 for that claim. *Kennecott Corp. v. Kyocera Int'l, Inc.*, 835 F.2d 1419, 1421 (Fed. Cir. 1987).

For claims 1-7, the earliest possible priority date is February 2, 2015—the '119 patent application's filing date because that application added Figures 16-25. Those figures provide the earliest possible disclosure of *confinement structures* separate from a *structural bridge*, and *game control modules* separate from *confinement structures*, as recited in claims 1. Ex. 1012, 7:56-9:61. In the '1197 Investigation, Gamevice did not dispute this. Ex. 1016, 2 (contending claims 1-7 are entitled to an effective filing date of February 2, 2015).

F. Proposed Constructions

In an IPR, claim terms are construed “in accordance with the ordinary and customary meaning of such claim[s] as understood by one of ordinary skill in the art and the prosecution history pertaining to the patent.” 37 C.F.R. §42.100. Nintendo addresses the construction of certain claim terms below. The District Court in the Northern District of California case issued a claim construction opinion on January 19, 2023. Ex. 1028. Where the District Court has entered a construction, Nintendo applies that construction below.⁶ In other instances noted below, Nintendo applies the parties’ agreed-upon constructions from the Northern District of California case. Nintendo otherwise gives terms in the challenged claims their plain and ordinary meaning.

1. *Computing device (claim 1)*

The District Court applied the same construction as the ITC: “electronic equipment controlled by a CPU.” Ex. 1028, 5-6.

2. *A pair of confinement structures (claim 1)*

In the ’119 IPRs, the Board did not construe this term in its final written decisions, but noted that the term “encompasses a ‘three-sided structure’ in which

⁶ By applying the District Court’s constructions, Nintendo does not concede that the District Court’s constructions are correct and preserves its objections to those constructions.

the computing device ‘is fully nested’ ... as well as structures that serve as a ‘cradle’ to ‘securely hold’ the computing device.” Ex. 1010, 11; Ex.1011, 11.

In the Northern District of California case, the District Court construed the term as: “physical component(s) that hold(s) a computing device,” like the construction entered in the previous ITC investigations. Ex. 1028, 10-12. The District Court’s construction is consistent with the Board’s remarks in the ’119 IPRs.

3. *Passageway (claim 1)*

The District Court applied the same construction as the ITC: “a space that accommodates a communication wire.” *Id.*, 12-13.

4. *Communication link (claim 1)*

The District Court construed “communication link” as “a component for reception and transmission of data.” *Id.*, 13-14.

5. *Structural bridge (claim 1)*

The District Court construed “structural bridge” as “a physical apparatus that secures two or more components to each other across a distance.” *Id.*, 14-15. This construction is similar to the construction provided by the ITC, which was “a physical apparatus that connects other components.” Ex. 1018, 87.

6. *Electrical communication (claim 1)*

The District Court construed “electrical communication” as “the flow of information between two components represented by the use of electricity.”

Ex. 1028, 16-18.

7. *Electronic communication (claim 1)*

The District Court construed “electronic communication” as “the flow of information between two components represented by the use of electricity controlled by and/or mediated through an electron device, such as a vacuum, gas, transistor, or semiconductor.” *Id.*, 18.

VI. THE CHALLENGED CLAIMS ARE UNPATENTABLE

A. Prior Art

1. Willner

Willner was published November 29, 2001. Ex. 1003, (43). It is prior art under 35 U.S.C. §102(a)(1), (2).⁷ Willner disclosed a game controller, as shown in Figure 4 at right.

Id. ¶50.

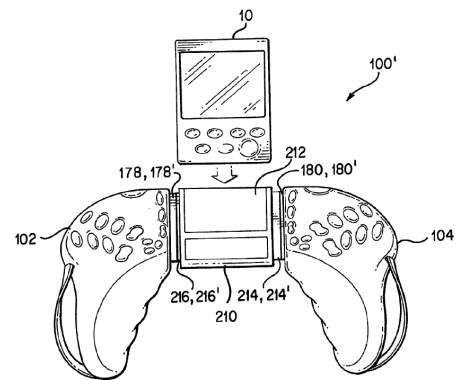


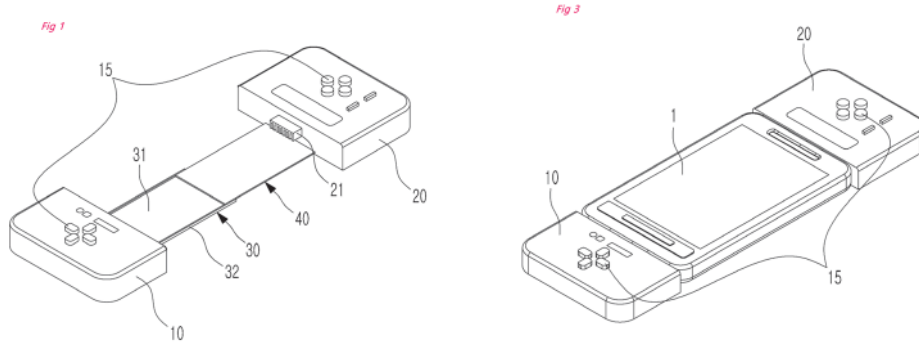
FIG. 4

2. Park

Park was published October 26, 2011. Ex. 1004, (22), (43). It is prior art under 35 U.S.C. §102(a)(1), (2). Park disclosed two game pads confining a

⁷ The '393 patent is subject to AIA §§102-103 as one or more of its claims is not entitled to a priority date before February 2, 2015. M.P.E.P. §2159.02.

mobile phone. *Id.* ¶13. Figures 1 and 2 below show Park's device with and without a phone.



3. Schoenith

Schoenith was filed July 11, 2014, and published on January 15, 2015. Ex. 1005, (22), (65). It is prior art under 35 U.S.C. §102(a)(1), (2). Schoenith disclosed a game controller removably attached to a tablet, as shown in Figure 9 below. *Id.*, 4:35-39.

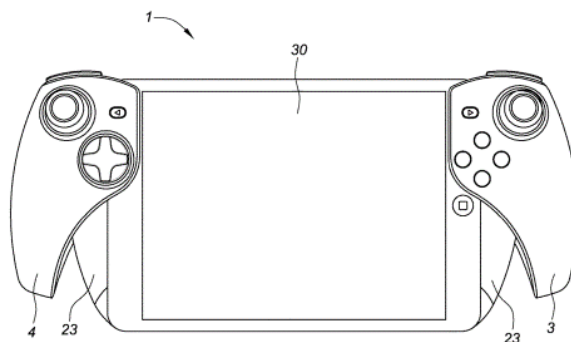


FIG. 9

4. Kessler

Kessler was filed on September 13, 2013 with a U.S. designation. Ex. 1006, (22), (43). It claims priority to a foreign application filed November 23,

2012. *Id.*, (30). Kessler is prior art under 35 U.S.C. §102(a)(1), (2). Kessler disclosed a game controller confining a handheld device. *Id.*, Abstract. Figures 10 and 11 below show the controller with and without the handheld device.

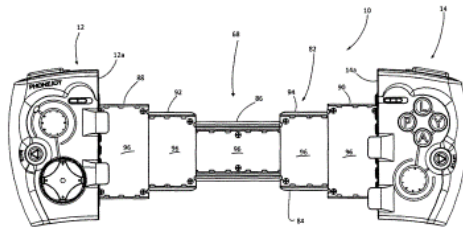


Figure 10

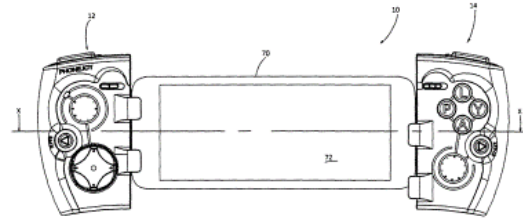
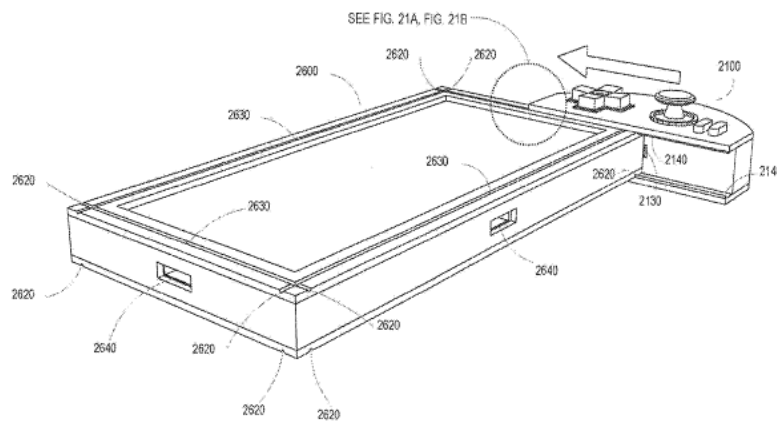


Figure 11

5. Hirschman

Hirschman was filed April 12, 2012, and published on October 25, 2012. Ex. 1007, (22), (43); Ex. 1008. Hirschman is prior art under 35 U.S.C. §102(a)(1), (2). Hirschman disclosed a tablet computer interfacing with gaming controllers, as shown in Figure 20C below. Ex. 1007 ¶52.



B. Ground 1: Willner and Park render claims 1-7 obvious

1. Issue preclusion prevents Gamevice from contesting several limitations and motivation to combine

Issue preclusion prevents “relitigation in a second suit of issues actually litigated and determined in the first suit.” *In re Freeman*, 30 F.3d 1459, 1465 (Fed. Cir. 1994) (citation omitted). Issue preclusion applies to previous final decisions of the Board. *Papst Licensing GMBH & Co. KG v. Samsung Elecs. Am., Inc.*, 924 F.3d 1243, 1251 (Fed. Cir. 2019) (“[T]he issue preclusion doctrine can apply in this court to the Patent Trial and Appeals Board’s decision in an IPR once it becomes final.”).

Issue preclusion applies where (1) the prior action presents an identical issue, (2) the issue was “actually litigated and adjudged,” (3) the judgment in the prior action “necessarily required determination of the identical issues,” and (3) the estopped party had “full representation” in the prior action. *VirnetX Inc. v. Apple, Inc.*, 909 F.3d 1375, 1377 (Fed. Cir. 2018) (citations omitted).

In the ’119 IPRs, the Board made several findings that were necessary to its final written decisions that the challenged claims of the ’119 patent are unpatentable, and are, thus, binding on Gamevice now. The Board found that the challenged art disclosed or rendered obvious: (1) “a computing device”; (2) “a pair of control modules”; (3) “a [rigid] structural bridge” that is disposed between and secured to the pair of confinement structures; (4) “a pair of confinement

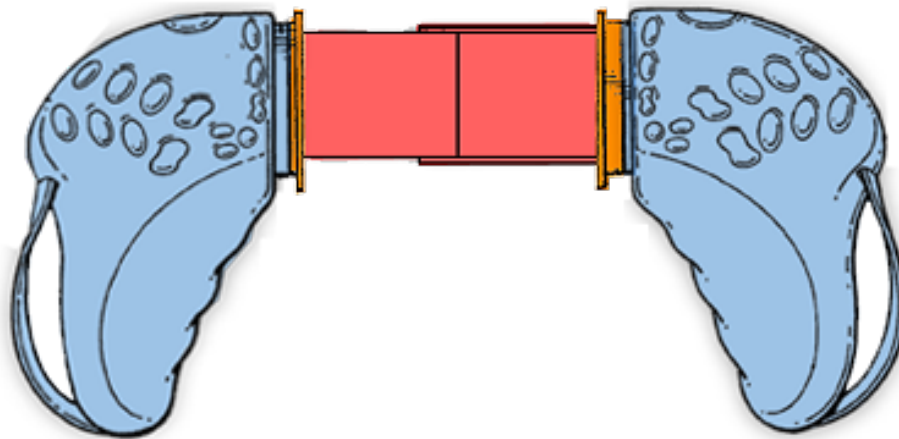
structures, the pair of confinement structures adjacent to and confining the computing device on at least at least two opposing sides ...”; and (5) a “conduit between the pair of control modules,” which Gamevice has contended is an “example[] of ‘passageway.’” Ex. 1010, 12-13, 18, 19; Ex. 1012, 12-13, 15-16, 20, 21; Ex. 1018, 99. Each of those findings is binding here. The Board also found that a POSITA would have been motivated to combine Willner with Park and Schoenith with Park to reach the “structural bridge” element. Ex. 1010, 13-14; Ex. 1011, 13. That finding is also binding now. Nintendo discusses the preclusive effect of the Board’s determinations in more detail below at 20-23, 25, 28-29, 31, 41-44, 46-47, 48, 56, 57.

2. Motivation to combine

The Board has already determined that a POSITA would have improved Willner’s device by adding Park’s adjustable bridge. Ex. 1011, 13, 19-20. Issue preclusion applies to this finding. *VirnetX*, 909 F.3d at 1378 (issue preclusion applied to Board determination). In any event, Gamevice cannot meaningfully dispute the straightforward motivation to combine Willner and Park. As the Board previously noted, Park’s adjustable bridge “would greatly expand the number of devices that [Willner’s] product would support, leading to the predictable result of having a larger base of customers.” Ex. 1011, 19 (citations omitted); Ex. 1018, 185; Kitchen ¶¶133-139, 150-157, 241-247, 327-33. The ITC

also agreed that a POSITA would have been motivated to combine Willner and Park. Ex. 1018, 185.

Park explained that a user could adjust the bridge as desired to accommodate a phone. Ex. 1004 ¶¶39-46. Incorporating Park's bridge into Willner's device would have accomplished Willner's stated objective of having controllers that could be used with both palm- and tablet-sized devices. Ex. 1003 ¶50. As part of the combination, a POSITA would have retained the left and right sidewalls of Willner's adaptor 210 (orange) to hold and secure the sides of the computing device, but would have replaced the main body of the adaptor with Park's adjustable bridge (red), as shown in the annotated example below. Kitchen ¶¶150-157; Ex. 1011, 19.



3. Claim 1:

a. 1[pre]: *A combination comprising:*

Willner and Park disclosed a *combination* as described below.

b. 1[a]: *a computing device;*

The Board previously found that “the combination of Willner and Park discloses ‘a computing device.’” Ex. 1011, 12. That finding binds Gamevice. *VirnetX*, 909 F.3d at 1378.

In any event, the Willner/Park combination rendered obvious a *computing device*. Willner disclosed computing device 10, which is described as a “palm/tablet sized computing device” that can have “a wireless data link, such as by radio frequency, utilizing the ‘blue tooth’ standard” and hard wire “connectors.” Ex. 1003 ¶50. Park likewise disclosed a “touchscreen type mobile phone for gaming.” Ex. 1004, ¶1. A POSITA would have understood that Willner’s computing device 10 and Park’s mobile phone included a central processing unit (CPU) and electronic equipment controlled by the CPU, such as a (touch)screen, memory, Bluetooth module, and connectors. Kitchen ¶144.

c. 1[b][1]: *a pair of confinement structures, the pair of confinement structures interacting with the computing device and adjacent at least two opposing sides of the computing device, but not more than three sides of the sides of the computing device,*

The Board previously held—and issue preclusion now dictates—that the sidewalls of Willner’s adaptor 210 are *confinement structures* “‘adjacent to and confining’ opposite sides of the computing device.” Ex. 1011, 14-16; *see also* Ex. 1018, 386. Moreover, *interacting*, as recited in the ’393 patent, is broader

than “confining” as recited in the ’119 patent, meaning issue preclusion dictates that this entire claim element is rendered obvious by the Willner/Park combination. *See, e.g., Ohio Willow Wood Co. v. Alps, LLC*, 735 F.3d 1333, 1341 (Fed. Cir. 2013) (collateral estoppel applies if differences between claims are not material).

But even if Gamevice is not estopped, the sidewalls of the Willner/Park combination *interact* with the *computing device* and are *adjacent*⁸ *at least two opposing sides of the computing device*. Adaptor 210 receives device 10 (*computing device*), and its sidewalls are nearby (*adjacent*) the two opposing sides of computing device 10 when the device is inserted into the adaptor. The sidewalls are, therefore, not adjacent more than three sides of the computing device.⁹ Ex. 1003, Fig. 4, ¶50; Kitchen ¶¶146-156. Annotated Figure 4 below shows the left and right sidewalls (orange). Ex. 1003 ¶51.

⁸ Nintendo applies the parties’ agreed-upon construction for *adjacent*: “nearby but not necessarily next to.” Ex. 1028, 5 n.2.

⁹ The ’393 patent refers to the “sides of the computing device” as outer portions between a screen and a back. *E.g.*, Ex. 1001, Abstract, 1:32-38, 4:61-5:2, 7:37-44, 8:13-19, 9:21-26, 14:62-15:4.

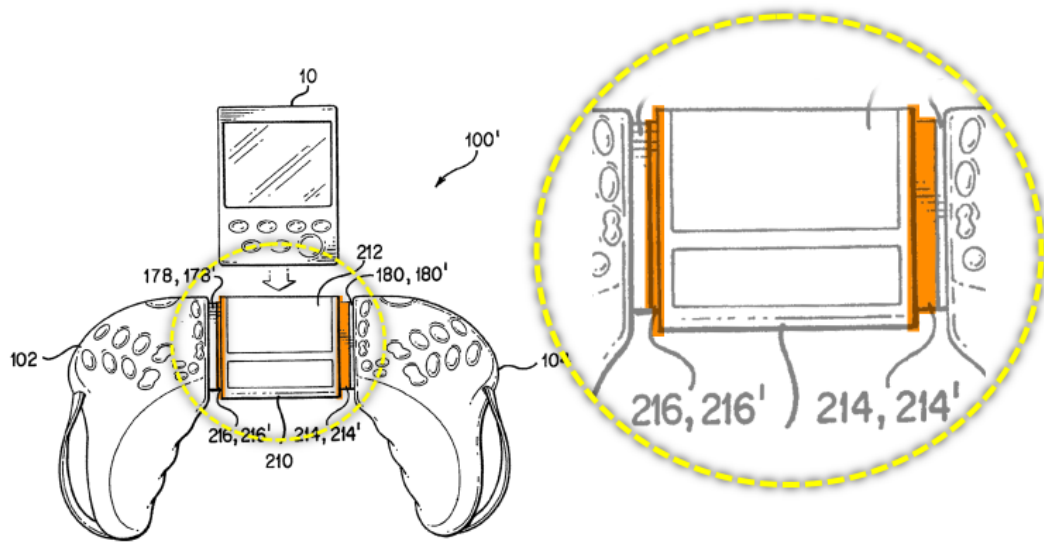
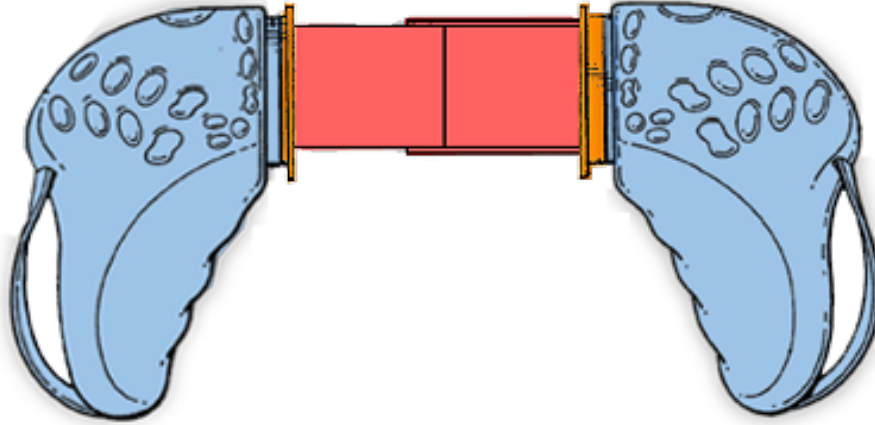


FIG. 4

The Willner/Park combination includes Park's adjustable bridge (red) that connects left and right sidewalls (orange), as shown in the annotated figure below. Ex. 1011, 15-16. When a user adjusts the bridge, the sidewalls apply pressure to and receive resistance from the *computing device*—thereby physically *interacting with the computing device*. Additionally, the left and right sidewalls contain connectors 214' and 216' that electrically *interact* with the computing device through the reception and transmission of data to the computing device, as described below regarding limitation 1[b][2][b] at (26-28). Kitchen ¶¶156-157. To the extent Gamevice contends that the “interacting” must be on *at least two opposing sides of the computing device, but not more than three sides of the sides of the computing device*, the adaptor sidewalls *interact with the computing device*

on only two opposing sides when the computing device is inserted between the sidewalls.



- d. 1[b][2][a]: *each of the pair of confinement structures comprising a communication link,*

The Board previously found that Willner disclosed *communication links*, Ex. 1011, 12, which the '393 patent describes as “facilitating communication” between game modules and a *computing device*. Ex. 1001, 1:41-43, 15:19-25. Issue preclusion applies to that finding. *See also* Ex. 1018, 388-89 (finding limitation obvious).

Even if Gamevice is not estopped, Willner disclosed adaptor sidewalls (*confinement structures*) (orange) that include connectors 214' and 216' (yellow), as shown in annotated Figure 4 below. Ex. 1003 ¶51. Each connector “receiv[es] the keystroke signals from each hand grippable unit” and “transfers” them to device 10 via connector 226. *Id.*, Fig. 8, ¶51. Connector 214' or 216' are thus

communication links (“a component for reception and transmission of data”).

Kitchen ¶¶159-162.

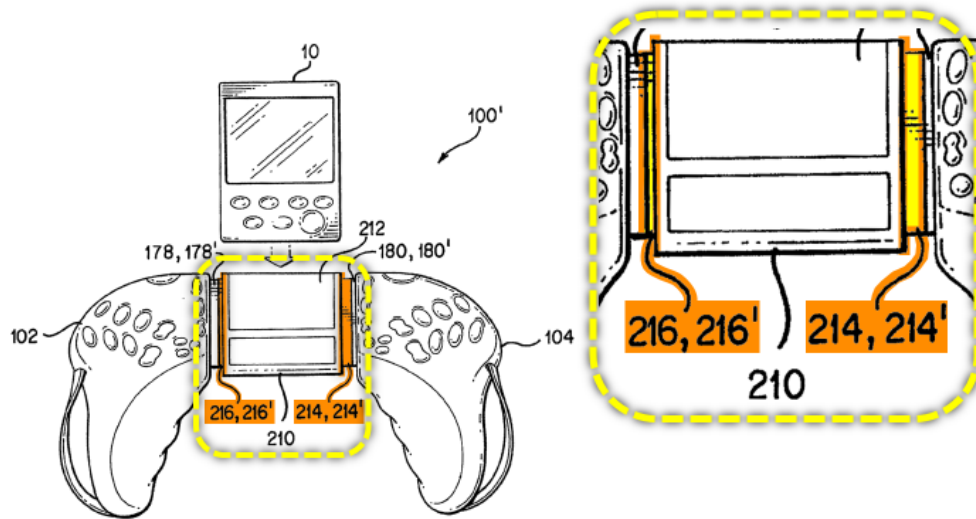


FIG. 4

- e. 1[b][2][b] *each of the communication links configured for electronic communication with the computing device; and*

Willner disclosed that sidewall connectors 214' and 216' receive and transfer data from housings 102 and 104 “to a docking connector within adaptor 210 which mates with a corresponding connector of the computing device 10.” Ex. 1003, ¶51. Connectors 214' and 216' are “provided” as part of adaptor 210. *Id.*, ¶51.

Willner further disclosed that switch 218 is included in adaptor 210 and “provid[es] an enabling signal to gate circuitry 230 responsive to coupling of the adaptor 210 to respective housing 102, 104” Ex. 1003, ¶52. Based on those disclosures, a POSITA would have understood Willner to teach including switch

218 in the sidewalls of the Willner/Park combination as part of connectors 214' and 216'. Kitchen ¶¶166-170.

In such an arrangement, sidewall connectors 214' and 216' are *configured for electronic communication* (“the flow of information between two components represented by the use of electricity controlled by and/or mediated through an electron device, such as a vacuum, gas, transistor, or semiconductor”). Kitchen ¶¶163-172. Switch 218 is an “electron device” that provides electronic “enabling signal[s],” such as to “gate circuitry 230.” Ex. 1003, ¶52. Gate circuitry 230 controls or mediates (*e.g.*, enables) the flow of information represented by the use of electricity between housings 102 and 104 and computing device 10. More specifically, switch 218 provides an enabling signal to gate circuitry 230 that causes the flow of data sent over bus 222 to be rerouted from output interface circuit 224 in housings 102 and 104 (which may transmit information wirelessly to a computer, but is “disabled when gate circuitry 230 is enabled”), through gate circuitry 230 to connectors 178' and 180', which, in turn, communicate the data to connectors 214' and 216'. Ex. 1003, Fig. 6, ¶¶45, 46, 52; Kitchen ¶166. In any event, a POSITA would have understood that for the sidewall connectors 214' and 216' to receive and transfer data, the connectors would have included associated electronic circuitry, such as switches. Kitchen ¶165.

Further, sidewall connectors 214' and 216' of the Willner/Park combination receive and transfer data to computing device 10, by receiving data from housings 102, 104 and transferring it to device connector 226, which sends the data to computing device 10. Ex. 1003, ¶51, Fig. 8; Kitchen ¶¶163-164. As disclosed in Willner, device connector 226 communicates with both sidewall connectors 214' and 216'. Ex. 1001, ¶51, Fig. 8. In the Willner/Park combination, regardless of the physical location of device connector 226 (*i.e.*, whether at the sidewall with connector 214' or at the sidewall with connector 216'), a cable in Park's bridge would have allowed communication between the sidewall connectors (and their corresponding housings) and between each sidewall connector (and housing) and device 10. Kitchen ¶171. The '393 patent similarly describes "interface feature 338" in a confinement structure that allows communications with a computing device. Ex. 1001, 10:21-29. Accordingly, because the flow of information between the sidewall connectors and the computing device is controlled and/or mediated by electron devices, including switch 218, the *communication links* (sidewall connectors) are *configured for electronic communication with the computing device*.

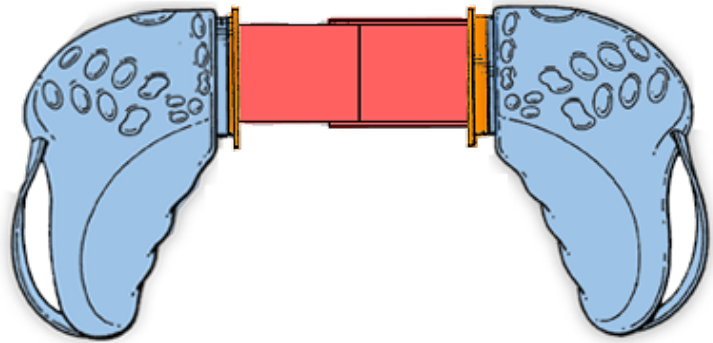
- f. 1[c][1]: *a rigid structural bridge disposed between and secured to the pair of confinement structures,*

The Board held that the Willner/Park combination rendered obvious a *rigid structural bridge*. Ex. 1011, 21 ('119 patent, claims 9, 10). Issue preclusion

applies to that holding. *See also* Ex. 1018, 386-387 (“Park’s structural bridge is rigid because it supports the computing device”).

Even if Gamevice is not estopped, the Willner/Park combination rendered this limitation obvious. The combination includes Park’s adjustable bridge (*structural bridge*). Ex. 1004, Fig. 2, ¶¶9, 31-35. As shown below, the bridge is between and attached to (*secured to*) Willner’s adaptor sidewalls (*confinement structures*). *Id.*, ¶¶33, 35.

Park’s adjustable bridge is thus “a physical apparatus that secures two or more components to each other across a distance.” Kitchen ¶173.



Additionally, Park’s bridge is *rigid* in order to hold game pads together and support a “mounted” phone and internal connecting cable. Ex. 1004 ¶¶30, 32, 36, 40; Kitchen ¶¶174-175. In any event, a POSITA would have made the bridge from rigid material to “secure accommodation of a smart device.” Ex. 1005, 8:43-60; Kitchen ¶175.

- g. 1[c][2][a]: *the rigid structural bridge comprising a passageway between the pair of confinement structures,*

The Board in the ’119 IPRs found that the *rigid structural bridge* of the Willner/Park combination included a “conduit” Ex. 1011, 19-20 (“[W]e find that

Willner's adaptor, as modified by Park's teaching of an adjustable bridge with a connecting cable running therethrough, satisfies the claim limitation of 'the structural bridge comprising: a conduit between the pair of control modules.'"). A "conduit," according to Gamevice, is merely an example of a "passageway." Ex. 1018, 99. Collateral estoppel, thus, applies. *Ohio Willow Wood*, 735 F.3d at 1341.

Even if Gamevice is not estopped, the combination of Willner/Park rendered this limitation obvious. Park's adjustable bridge (*structural bridge*) contains a "certain portion ... inside of the bridge" (*passageway*) that accommodates a "cable" to "electrically join[]" Willner's adaptor sidewalls (*between the pair of confinement structures*). Ex. 1004 ¶¶26, 36; Kitchen ¶¶177-180.

- h. 1[c][2][b]: *the passageway promotes electrical communication between the communication link of a first confinement structure of the pair of confinement structures and the computing device, the passageway further promotes electrical communication between the communication link of a second confinement structure of the pair of confinement structures and the computing device; and*

As described above (at 22-25) regarding limitation 1[b][1], Willner disclosed connectors 214' and 216' (*communication links*) in the left and right sidewalls of adaptor 210 (*confinement structures*) to allow electrical signals to be received and transferred from housings 102 and 104 to computing device 10 (*computing device*). Ex. 1003, Figs. 4, 8, ¶¶24, 50, 51. Thus, the Willner/Park

combination rendered obvious *electrical communication* (“the flow of information between two components represented by the use of electricity”) between the *communication links* and *computing device*. As the Board previously found, the conduit in Park’s adjustable bridge (*passageway*) *promotes* electrical communication because the conduit protects the integrity of the cable that connects the communication links and the computing device and passes through the passageway. Ex. 1011, 20; Kitchen ¶182. The ITC reached the same conclusion. Ex. 1018, 387 (Park disclosed recited *passageway*).

i. 1[d][1]: *a pair of electronic game control modules*,

As the Board previously held, Willner taught “game control units.” Ex. 1011, 12. Issue preclusion applies to that finding as no patentable distinction exists between “a pair of control modules,” as recited in the ’119 patent, and *a pair of electronic game control modules*. *Ohio Willow Wood*, 735 F.3d at 1341.

Additionally, Gamevice cannot meaningfully dispute this limitation. Willner disclosed housings 102 and 104 (*electronic game control modules*) (blue) that are used for “gaming ... functions” and shown in annotated Figure 4 below. Ex. 1003 ¶¶25-29, 32, 40, 51; Kitchen ¶184.

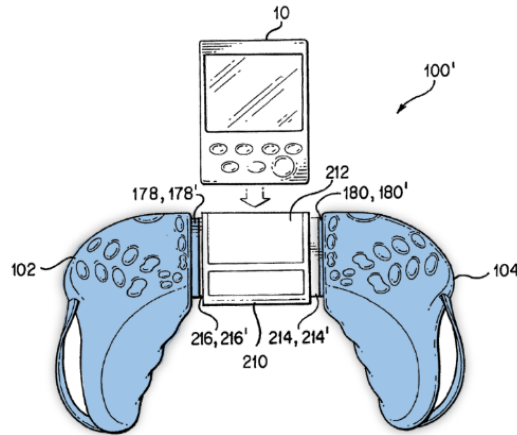


FIG. 4

- j. 1[d][2]: *each electronic game control module of the pair of electronic game control modules is secured to and interacts with a corresponding confinement structure of the pair of confinement structures,*

In the Willner/Park combination, Willner's housings 102 and 104 (*electronic game control modules*) attach to (*secure to*) adaptor sidewalls (*confinement structures*) via "connectors 214' and 216'." Ex. 1003 ¶¶46, 51.

The housings also *interact* with a *corresponding confinement structure*. For example, adjusting Park's bridge to retain a device applies pressure to the adaptor sidewalls (*confinement structures*), which in turn apply pressure to and encounter resistance from the housings, thereby physically *interacting* with the housings. The sidewalls and housings also contact one another using pins and sockets. Ex. 1003 ¶¶50-51; Kitchen ¶¶186-190.

Further, the two housings electrically *interact with* the sidewalls, for example, by sending "keystroke signals" from connectors 178' and 180' to connectors 214' and 216'. These signals are then transferred by connectors 214'

and 216' to computing device 10, through combining gate circuitry 228 and device connector 226. *Id.* ¶¶46, 51; Kitchen ¶191. The '393 patent describes similar electrical interactions. Ex. 1001, 6:1-6.

- k. 1[d][3]: *each electronic game control module in electronic communication with the communication link of its corresponding confinement structure,*

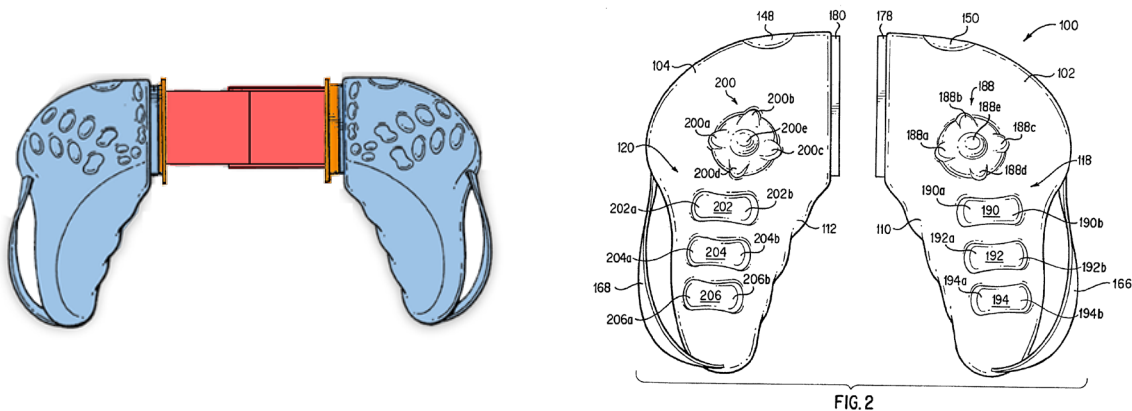
The Willner/Park combination rendered this limitation obvious, as described above (at 26-28, 30-31, 32-33) regarding limitations 1[b][2][b], 1[c][2][b], and 1[d][2]. More specifically, housings 102 and 104 send “keystroke signals” through gate circuitry 230 to connectors 178' and 180', which pass those signals to corresponding connectors 214' and 216' (*communication links*). Ex. 1003, ¶¶46, 51, 52. Further, switch 218, which a POSITA would have understood Willner to teach as includable in connectors 214' and 216', provide an “enabling signal” to gate circuitry 230. In response, gate circuitry 230 causes “keystroke signals” to be sent to connectors 214' and 216', as described above. Ex. 1003, ¶52. In any case, for connectors 214' and 216' to receive and transmit data, a POSITA would have understood that the connectors included some electronic circuitry (*i.e.*, electron devices). Kitchen ¶¶193-198.

Because gate circuitry 230 and switch 218 (or other circuitry) are electron devices that mediate the flow of data between the housings 102 and 104 and the corresponding connectors 214' and 216', each housing is *in electronic*

communication with the communication link of its corresponding confinement structure. Kitchen ¶¶195-197.

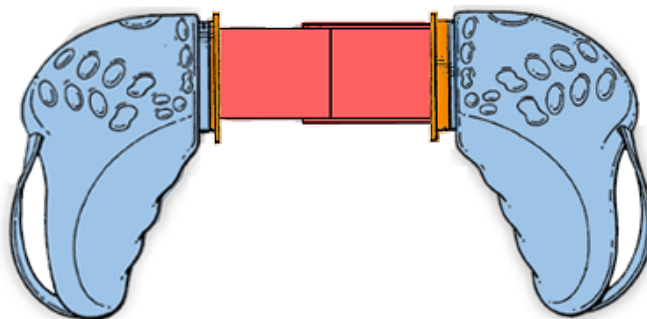
- I. 1[d][4]: wherein each electronic game control module is a separate and distinct structure from each of their corresponding confinement structures, forming no structural portion of their corresponding confinement structures, and

Each of Willner's housings (*electronic game control modules*) (blue) is detachable from a corresponding adaptor sidewall (*confinement structures*) (orange), as shown below. Ex. 1003, Abstract, ¶¶50, 51; Kitchen ¶¶199-200. The Willner/Park combination incorporates this feature. The ITC found this limitation rendered obvious for the same reason. Ex. 1018, 387-388 ("Willner's control modules are detachable from the sidewalls of its adaptor Hence, Willner's control modules are separate and distinct from the sidewalls of its adaptor.").



- m. 1[d][5]: *in which each of the pair of confinement structures are separate and distinct structures from the structural bridge, forming no structural portion of the structural bridge.*

In the Willner/Park combination shown in the annotated figure below, Park's bridge (*structural bridge*) (red) is *separate and distinct* from Willner's adaptor sidewalls (*confinement structures*) (orange), with the sidewalls *forming no structural portion of the structural bridge*. Kitchen ¶¶201-212. Park taught a bridge (30, 40) that is separate from and connects to first and second bodies (10 and 20) that hold a mobile device. Ex. 1004, Figs. 3-4, ¶¶26-30. Following those teachings, a POSITA would have connected Park's bridge and Willner's adaptor sidewalls (*separate and distinct structures*) as part of the combination. Kitchen ¶¶202-203. Regardless, whether the sidewalls are *separate and distinct* from the bridge is a mere design choice, including, for example, where the sidewalls are detachably connected to the bridge. Kitchen ¶203. Separate structures were well-known in the art, and the substitution of separate sidewalls for non-separate sidewalls would do no more than yield predictable results. *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 416 (2007) ("[W]hen a patent simply arranges old elements with each performing the same function it had been known to perform and yields no more than one would expect from such an arrangement, the combination is obvious.").



Gamevice contends that components screwed together are *separate and distinct* for purposes of this limitation. Ex. 1018, 153. Nintendo does not agree with Gamevice’s understanding—and nothing herein should be understood as a concession that Gamevice’s application is correct, *see 10X Genomics Inc. v. Bio-Rad Labs. Inc.*, No. IPR2020-00086, Paper 8 at 17-22 (PTAB Apr. 27, 2020) (“[37 C.F.R. § 42.104(b)] does not prohibit Petitioner from submitting a claim construction it believes is incorrect and relying on that construction to show how the claim is unpatentable.”)—but a POSITA would have recognized screws as a known mechanism for affixing Willner’s sidewalls to Park’s bridge. Kitchen ¶¶208-210. A POSITA would have known that by attaching Willner’s sidewalls to Park’s bridge by way of removable screws, Willner’s sidewalls would have been replaceable or repairable in case of damage or malfunction. *Id.* Moreover, the pertinent embodiment in the ’393 patent (shown in Figures 16-25) discloses only a slip fit connection 326 and a solid connection 324 between the structural bridge and the confinement structures. Ex. 1001, 9:60-10:8. A POSITA would

have understood that one known option for a “solid connection” was screwing the components together. Kitchen ¶211.

A POSITA would, thus, have been motivated to attach Willner’s sidewalls to Park’s bridge in the very manner that would result in what Gamevice contends renders the sidewalls separate and distinct from the bridge. This is an arrangement of old elements, yielding predictable results. *KSR*, 550 U.S. at 416. Thus, the Willner/Park combination rendered this limitation obvious under Gamevice’s understanding.

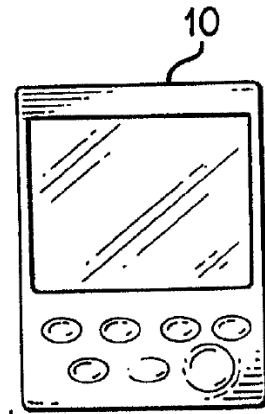
The ITC also found this limitation rendered obvious by the Willner/Park combination. Ex. 1018, 386-388 (combination of Willner’s sidewalls and Park’s adjustable bridge rendered limitation invalid by clear and convincing evidence).

4. Claim 2: *The combination of claim 1, in which the rigid structural bridge supports electronics associated with the computing device.*

In Willner/Park combination, a computing device is “mounted” on the bridge, and the bridge *supports* the device and electronics within it (*electronics associated with the computing device*). Ex. 1004, (57), ¶¶8, 38-39, Fig. 3; Ex. 1003 ¶50, Fig. 4; Kitchen ¶213. The ITC found the same thing. Ex. 1018, 388 (“Park’s rigid structural bridge supports the computing device, where the computing device contains electronics.”).

5. **Claim 3:** *The combination of claim 2, in which the computing device further comprising a back, the back provides an internal surface, an external surface and cooperates with the at least two opposing sides of the computing device.*

A POSITA would have understood that Willner's computing device (shown in Figure 4 excerpt below) had a *back*. Kitchen ¶¶215-220. A POSITA would have further understood the device contains space for electronics within it, and so the *back* would have had an *internal surface* and an *external surface*. *Id.* ¶¶217-218. The *back* would have *cooperated with* (worked with) *at least two opposing sides* of the computing device to form a device housing. *Id.* ¶2019. A POSITA would have understood the same thing about Park's mobile phone. Kitchen ¶225.



The ITC likewise found claim 3 obvious. Ex. 1018, 388-389 (“Park’s computing device comprises a back with an internal surface and external surface that cooperates with at least two opposing sides.”).

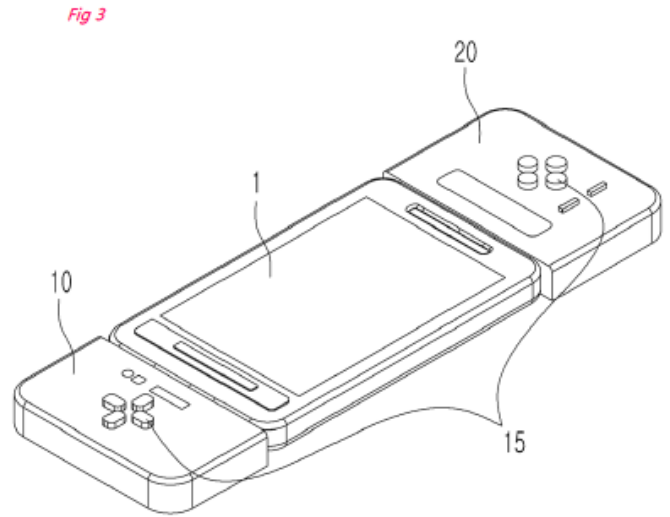
6. **Claim 4:** *The combination of claim 3, in which the rigid structural bridge cooperates with the back of the computing device.*

In the Willner/Park combination, Park's bridge (*rigid structural bridge*) “seat[s]” a *computing device* and *cooperates with* (works with) the *back* of that device by supporting it. Ex. 1004, ¶¶8, 38-39, Fig. 3; Kitchen ¶¶221-224;

Ex. 1018, 388 (“Park’s rigid structural bridge cooperates with the back of the computing device.”).

7. **Claim 5:** *The combination of claim 4, in which the rigid structural bridge cooperating with the back of the computing device is adjacent to the external surface of the back of the computing device.*

As part of the Willner/Park combination, Park’s bridge is nearby (adjacent) the back of computing device 10. Kitchen ¶225. Park taught the external surface of the back of a computing device is “mounted on” the bridge, as shown in Figure 3 (right).



Ex. 1004 ¶¶23, 38, 40.

8. **Claim 6:** *The combination of claim 4, in which the computing device comprises an electronic display screen, and wherein at least one electronic game control module of the pair of electronic game control modules passes signals through its corresponding communication link to the computing device, the signals passed to the computing device controlling images displayed on the electronic display screen of the computing device.*

The Willner/Park combination rendered obvious the claimed communication links and signals as described above (at 25-28, 30-31) regarding limitations 1[b][2][a], [b] and 1[c][2][b]. Willner disclosed housings having

switches, D-pads, etc. that send signals. Ex. 1003, Figs. 1-3A, ¶¶26-29, 51. In a “game controller mode,” the switches “provide directional inputs to the game software” that “control the firing of weapons and/or provide control of particular maneuvers of the game icons, such as jumping, flying, and the like” in a game on a screen (*controlling images displayed on the electronic display screen*). *Id.* ¶40; Kitchen ¶¶227-232.

In the combination, one or both housings *pass the signals* to connectors 214’ and 216’ (*corresponding communication links*), where the signals would be received and transferred to the *computing device* at least through device connector 226, as described above (at 26-28) regarding limitation 1[b][2][b]. Kitchen ¶229.

The ITC agreed. Ex. 1018, 388 (“Willner’s control modules generate signals representing game control codes that are converted into a format understood by a computing device and control movement of objects on the display screen.”).

9. **Claim 7:** *The combination of claim 2, in which the electronics supported by the rigid structural bridge is a communication module associated with the computing device.*

The Willner/Park combination rendered obvious *electronics supported by the rigid structural bridge* as described above (at 28-29, 37) regarding limitation 1[c][1] and claim 2. As Willner described, computing device 10 can have a “wireless data link, such as by radio frequency, utilizing the ‘blue tooth’

standard.” Ex. 1003, ¶51. In that case, the *electronics supported by the rigid structural bridge* includes a *communication module associated with the computing device* (Bluetooth module). Kitchen ¶233; Ex. 1018, 388 (“Park’s structural bridge supports communication modules within a computing device.”).

C. Ground 2: Schoenith and Park render claims 1-7 obvious

1. Motivation to Combine

The Board has already found that a POSITA would have improved Schoenith’s gaming apparatus by incorporating Park’s adjustable bridge. Ex. 1010, 13-14, 16-17. Issue preclusion applies to that finding. *VirnetX*, 909 F.3d at 1378.

Even if not estopped, Gamevice cannot seriously dispute this motivation to combine. As the Board explained, an adjustable bridge “would greatly expand the number of devices that [Schoenith’s] product would support, leading to the predictable result of having a larger base of customers,” which is consistent with Schoenith’s teachings. *Id.*, 16-17 (citations omitted). Further, the adjustment to Schoenith “would have involved the use of known components, as they were designed to be used, to reach the predictable benefit of accommodating different-sized smart devices and reducing the number of products a designer had to produce and consumers had to purchase.” *Id.*, 14; Kitchen ¶¶239-245.

2. Claim 1

a. 1[pre]

Schoenith and Park disclosed a *combination* as described below.

b. 1[a]

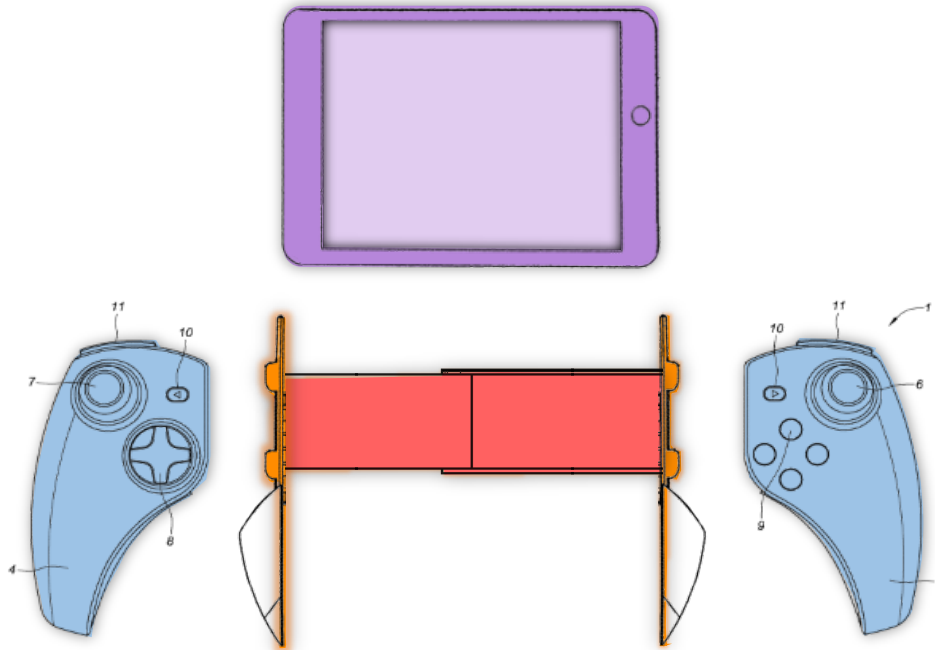
The Board previously found that “the combination of Schoenith and Park discloses ‘a computing device.’” Ex. 1010, 12. That finding binds Gamevice now.

In any event, Schoenith disclosed “a smart device, such as iPhone®, iPad®, iPad Mini, or the like.” Ex. 1010, 12; Ex. 1005, 6:15-19. A POSITA would have understood that the smart device includes a CPU that controlled associated electronics. Kitchen ¶237; Ex. 1018, 362 (“Schoenith’s computing device”). Park likewise disclosed the recited computing device, as described above (at 22) in Ground 1 regarding limitation 1[a].

c. 1[b][1]

The Board previously held that Schoenith’s raised sidewalls are *a pair of confinement structures* “‘adjacent to and confining’ opposite sides of the computing device.” Ex. 1010, 12-13. Issue preclusion prevents Gamevice from contesting this for the reasons set forth above (at 19-20, 41).

Even if not so, the Schoenith/Park combination rendered this limitation obvious. The Schoenith/Park combination includes Schoenith’s “raised walls” (*confinement structures*) (orange) and Park’s bridge (red), as shown in the annotated figure below.



In such an arrangement, Schoenith’s “raised walls” are *adjacent* to two opposing sides of the smart device (*computing device*) but not more than three sides of the device. Ex. 1005, Fig. 3, 6:15-50, 9:65-67. When a user adjusts Park’s bridge, the adaptor sidewalls apply pressure to and receive resistance from—thereby physically *interacting with* the *computing device*. Additionally, the “raised walls” can contain connectors such as an Apple Lightning® connector, *id.*, 7:42-48, that electrically *interact* with the smart device. For example, those connectors would receive data from Schoenith’s panels and transmit it to the computing device through a separate device connector. Kitchen ¶¶239-248.

To the extent Gamevice contends that the “interacting” must be on *at least two opposing sides of the computing device, but not more than three sides of the*

sides of the computing device, the raised walls interact with the computing device on only two opposing sides when the computing device is between the sidewalls.

d. 1[b][2][a]

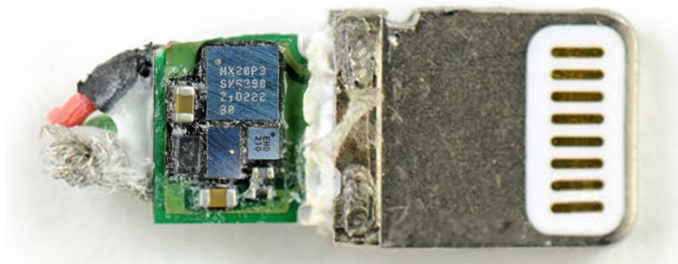
The Board found that Schoenith disclosed *confinement structures* and *communication links*. Ex. 1010, 12-13. Issue preclusion applies to those findings. The ITC likewise found that Schoenith rendered this limitation obvious. Ex. 1018, 360-61 (citing Ex. 1005 at 7:42-48)).

In any case, Schoenith disclosed that the right and left side panels can be connected to the cradle through a device “power connector” such as an Apple Lightning® connector. Ex. 1005 at 7:42-48 (“The controller may include at least one power connector to provide a wired connection ... in the right side panel, left side panel, the cradle, or a combination thereof. The at least one power connector may be ... [an] Apple Lightning® connector.”). Such a connector is a *communication link* (“a component for reception and transmission of data”). Kitchen ¶¶250-251. A POSITA would have understood, based on Schoenith’s teachings, that both “raised walls” can include those connectors, and thus that *each of the confinement structures comprise communication links*. *Id.* ¶¶252-253.

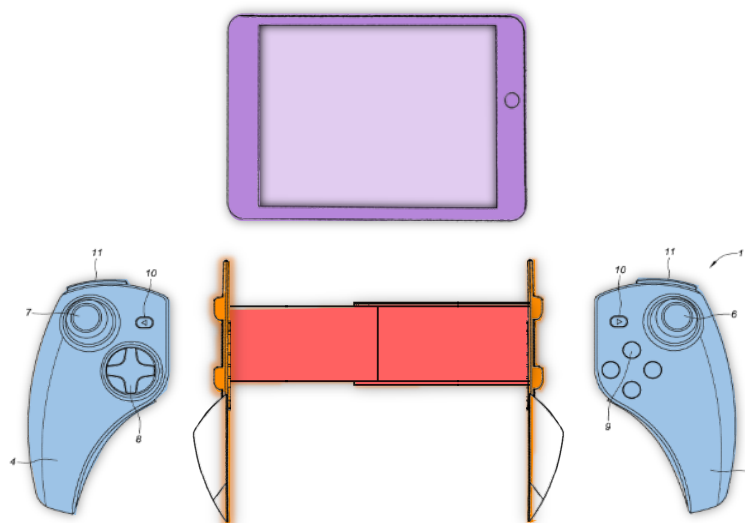
e. 1[b][2][b]

An Apple Lightning® connector contains multiple pieces of circuitry (electron devices) that control and/or mediate the flow of data, as shown below.

Kitchen ¶¶258-260.



In the Schoenith/Park combination, “data” is communicated from Schoenith’s panels (blue in the annotated figure below) to “power connectors” (e.g., Lightning® connector) in the “raised walls” (orange), and then to the smart device (purple) through another “power connector” or Park’s connecting terminal 21. Ex. 1004, ¶¶26, 28; Ex. 1005, 7:42-48.



In the Schoenith/Park combination, regardless of the physical location of the device “power” connector (*i.e.*, whether at the sidewall with the connector to left side panel 4 or at the sidewall with the connector to right side panel 3), a cable in Park’s bridge would have allowed communication between the sidewall connectors (and their corresponding panels) and between each sidewall connector (and panel) and smart device 30. Kitchen ¶257. The ’393 patent similarly describes “interface feature 338” in a confinement structure that allows communications with a computing device. Ex. 1001, 10:21-29. Because the flow of information between the “power connectors” (Lightning® Connectors) and smart device is controlled and/or mediated by electron devices, including at least those in the disclosed Lightning® connectors, the connectors (*communication links*) to the panels are *configured for electronic communication with the computing device*.

f. 1[c][1]

The Board held that the Schoenith/Park combination rendered obvious a *rigid structural bridge*. Ex. 1010, 19 (’119 patent, claims 9, 10). Issue preclusion applies to that holding. Even if not, a POSITA would have understood that Park’s adjustable bridge (*structural bridge*) is attached to (*secured to*) Schoenith’s raised walls (*confinement structures*) and is *rigid*, as described above (at 28-29) in Ground 1 regarding limitation 1[c][1]. Kitchen ¶¶262-264.

g. 1[c][2][a]

The Board previously found that the *rigid structural bridge* of the Schoenith/Park combination included a “conduit.” Ex. 1010, 18. Issue preclusion applies as described above (at 19-20). Even if not, this limitation is rendered obvious for the reasons described above (at 29-30) in Ground 1 regarding limitation 1[c][2][a].

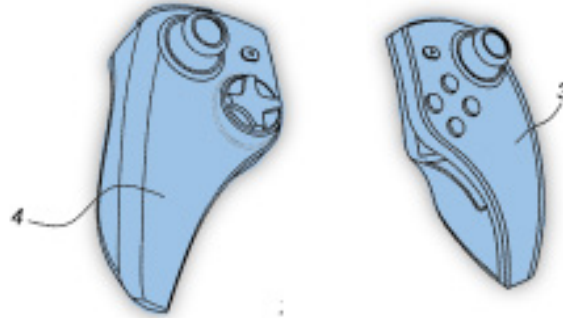
h. 1[c][2][b]

As described above (at 44) regarding limitation 1[b][1][a], a POSITA would have understood Schoenith to teach including Lightning® connectors in both of Schoenith’s raised walls to allow electrical signals (data) to be communicated to the smart device. Park’s conduit (*passageway*) promotes *electrical communication* (“the flow of information between two components represented by the use of electricity”) because it protects the integrity of the cable passing through the passageway that connects the Lightning Connectors, as the Board previously found. Ex. 1010, 17-18; Kitchen ¶¶270-272. Schoenith and Park thus render this limitation obvious.

i. 1[d][1]

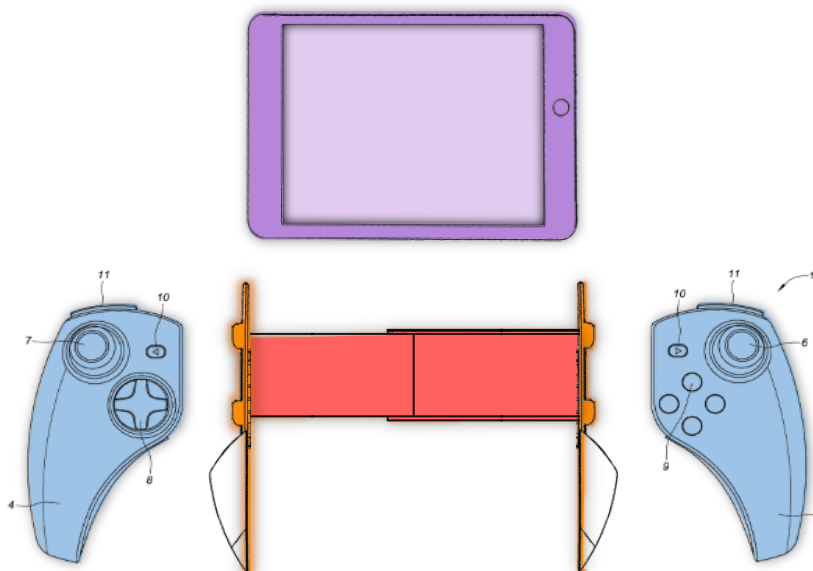
As the Board previously held, Schoenith and Park taught “game control units.” Ex. 1011, 12, 13. Issue preclusion applies. No patentable distinction exists between “a pair of control modules,” as recited in the ’119 patent, and *a pair of electronic game control modules*. *Ohio Willow Wood*, 735 F.3d at 1341.

Gamevice cannot dispute that the Schoenith/Park combination rendered this limitation obvious. Schoenith taught “game controller[]” panels (*electronic game control modules*) (blue), as shown below. Ex. 1005, Fig. 3, 1:6-8, 5:45-50.



j. 1[d][2]

In the Schoenith/Park combination, Schoenith’s panels (*electronic game control modules*) (blue in annotated figure below) attach to (*secure to*) the cradle’s raised walls (*confinement structures*) (orange). “[C]onnection parts” allow “easy and frequent assembly and disassembly of the controller.” Ex. 1005, 7:14-29. One example of such connection parts is a “magnetic connection” with the panels and walls *interacting* through magnetic forces. *Id.*; Kitchen ¶277. The panels would also contact the walls when connected, thereby physically *interacting*. *Id.*



Schoenith also disclosed wired connections between the cradle and the panels that include a “power connector ... such as a 30-pin dock connector or Apple Lightning® connector.” Ex. 1005, 7:42-48. This connector was used to communicate data from the panels to computing device, as well as power from the computing device to the panels. *Id.*, 7:61-67. In that case, the panels would *interact* electrically with the cradle walls. Kitchen ¶278.

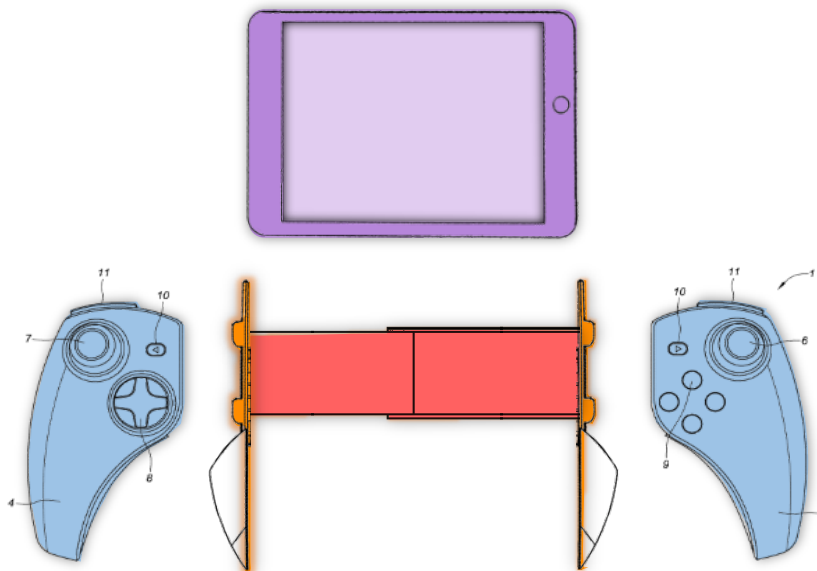
k. 1[d][3]

The Schoenith/Park combination rendered this limitation obvious, as described above (at 45-46, 47, 48) regarding limitations 1[b][2][b], 1[c][2][b], and 1[d][2]. Schoenith’s panels are game “controller accessor[ies]” for use with a smart device, and “exchang[e] data between the smart device and the controller.” Ex. 1005, 4:32-49, 7:34-41. Because the Lightning® connectors (*communication links*) in both of Schoenith’s raised sidewalls (*confinement structures*) use

electron devices to control and/or mediate the flow of data with the panels (*electronic game control module*), each panel is *in electronic communication with the communication link of its corresponding confinement structure*. Kitchen ¶¶280-282.

l. 1[d][4]

The Schoenith/Park combination includes panels (*electronic game control modules*) (blue) that are detachable (*separate and distinct*) from the cradle walls (*confinement structures*) (orange). Ex. 1005, Fig. 3, 9:57-10:3.



m. 1[d][5]

In the Schoenith/Park combination, as shown in the annotated figure above, Schoenith's cradle walls (*confinement structures*) (orange) are *separate and distinct* from Park's adjustable bridge (*structural bridge*) (red), with the cradle walls *forming no structural portion of the structural bridge*. Kitchen ¶¶286-297.

Park taught a bridge (30, 40) that connects to sidewalls (10 and 20) and hold a mobile device. Ex. 1004, Figs. 3-4, ¶¶26-30. Following those teachings, a POSITA would have connected Park's bridge and Schoenith's cradle walls (*separate and distinct structures*), as part of the combination. Kitchen ¶¶287-288. Furthermore, whether the sidewalls are *separate and distinct* is a mere design choice, including, for example, where the cradle walls are detachably connected to the bridge. Kitchen ¶288.

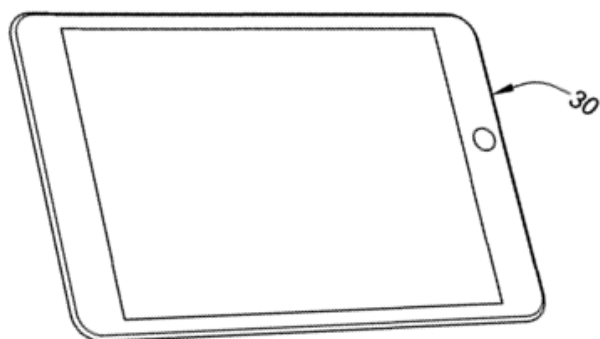
Additionally, Gamevice contends that components screwed together are *separate and distinct* for purposes of this limitation. Ex. 1018, 153. Nintendo does not agree, but a POSITA would have recognized screws as known mechanisms for affixing Schoenith's sidewalls to Park's bridge, and would have been motivated to use removable screws to affix the sidewalls and bridge for the reasons discussed above (at 36-37) regarding Ground 1, limitation 1[d][5]. Kitchen ¶¶293-296. Thus, the Schoenith/Park combination rendered this limitation obvious under Gamevice's understanding.

3. Claim 2

In the Schoenith/Park combination, a computing device is "mounted" on the bridge, and the bridge *supports* the device and electronics within it (*electronics associated with the computing device*). Ex. 1004, (57), ¶¶8, 38-39, Fig. 3; Ex. 1005, 6:15-29, Fig. 4; Kitchen ¶¶288-299.

4. Claim 3

A POSITA would have understood that the smart devices disclosed by Schoenith (e.g., iPhone, iPad (as shown in the Figure 3 excerpt below), and iPad Mini) had a *back*, where *the back* would have had *an internal surface and an external surface*. Ex. 1005, Fig. 3, 6:15-19. Kitchen ¶¶301-305. A POSITA would also have understood that the back would have *cooperated with* (worked with) *at least two opposing sides* of the device to form its housing. *Id.* ¶304; *see also* Ex. 1018, 362.



5. Claim 4

The Schoenith/Park combination rendered this claim obvious for the reasons stated above (at 38-39) in Ground 1 regarding claim 4. Park's adjustable bridge "seat[s]" a computing device and thus cooperates with the back of that device by supporting it. Kitchen ¶¶306-308.

6. Claim 5

The Schoenith/Park combination rendered this claim obvious for the reasons stated above (at 39) in Ground 1 regarding claim 5. Park taught the

external surface of the *back* of a computing device is “mounted on” the bridge. Ex. 1004 ¶¶23, 38, 40.

7. Claim 6

The Schoenith/Park combination rendered obvious the claimed *communication links* and *signals* as described above (at 44-45, 47) regarding limitations 1[b][2][a], [b] and 1[c][2][b]. Schoenith also disclosed a smart device with *an electronic display screen*, as well as panels (*electronic game control modules*) with sticks, directional pads, and buttons. Ex. 1005, Fig. 3, 5:45-50, 6:15-19.

As the Board held, the purpose of Schoenith’s device was to “improve the experience of playing video games on [a] smart phone.” Ex. 1010, 12. The panels communicate with a smart device (*computing device*) and send signals used to *control* a game application. *E.g.*, Ex. 1005, 1:41-45, 2:6-10, 2:60-3:5, 5:45-55. Game applications provide *images* (such as characters, vehicles, or icons) on the device’s screen (*display*), while the panels communicate with the device (and related application software), including through a Lightning® connector (*communication link*), to control the images. *Id.* Kitchen ¶¶313-318.

8. Claim 7

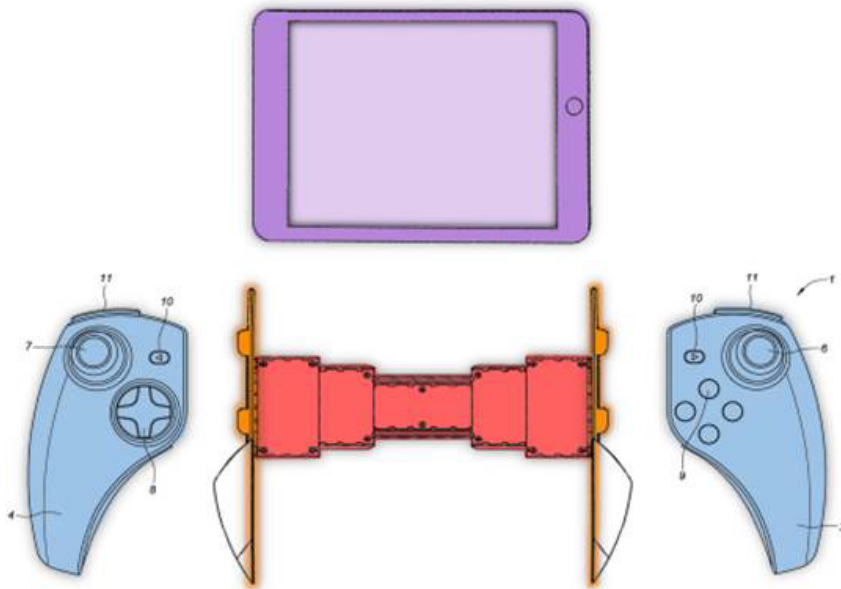
The Schoenith/Park combination rendered obvious *electronics supported by the rigid structural bridge* as described above (at 46, 51) regarding limitation

1[c][1] and claim 2. As Schoenith described, smart device can have “Bluetooth® connectivity.” Ex. 1005, 7:34-48. If so, the *electronics supported by the rigid structural bridge* include a *communication module associated with the computing device* (Bluetooth module).

D. Ground 3: Schoenith and Kessler render claims 1-7 obvious

1. Motivation to Combine

The Board’s motivation to combine the raised walls of Schoenith’s cradle and Park’s adjustable bridge applies equally to Schoenith and Kessler. Ex. 1010, 18; Kitchen ¶¶133-139, 239-245, 325-331. As Kessler explained, an adjustable bridge “can be used with a range of different sized handheld information processing devices.” Ex. 1006 ¶¶17-18. The bridge would have improved Schoenith’s apparatus, which was intended for use with devices of different sizes (e.g., iPhones, iPads). Ex. 1005, 4:36-39. The combination would have made Schoenith’s apparatus compatible with devices of many sizes, without requiring multiple cradles to suit those devices. Kitchen ¶¶328, 330. A POSITA would have replaced the main body of the cradle with Kessler’s bridge (red), as shown in the annotated example below, to allow for adjustment. *Id.* ¶¶328-332. A POSITA would have retained the left and right cradle walls from Schoenith (orange) because the walls “enhance secure accommodation of a smart device.” Ex. 1005, 6:30-43; Kitchen ¶¶325-332.



The ITC likewise held a POSITA would have been motivated to combine Schoenith and Kessler in this manner: “A skilled artisan would be motivated to substitute Kessler’s adjustable bridge for Schoenith’s non-adjustable cradle to have a single-controller that is compatible with different-sized computing devices.” Ex. 1018, 359.

2. Claim 1

a. 1[pre]

The Schoenith/Kessler combination is a *combination*, as described below.

b. 1[a]

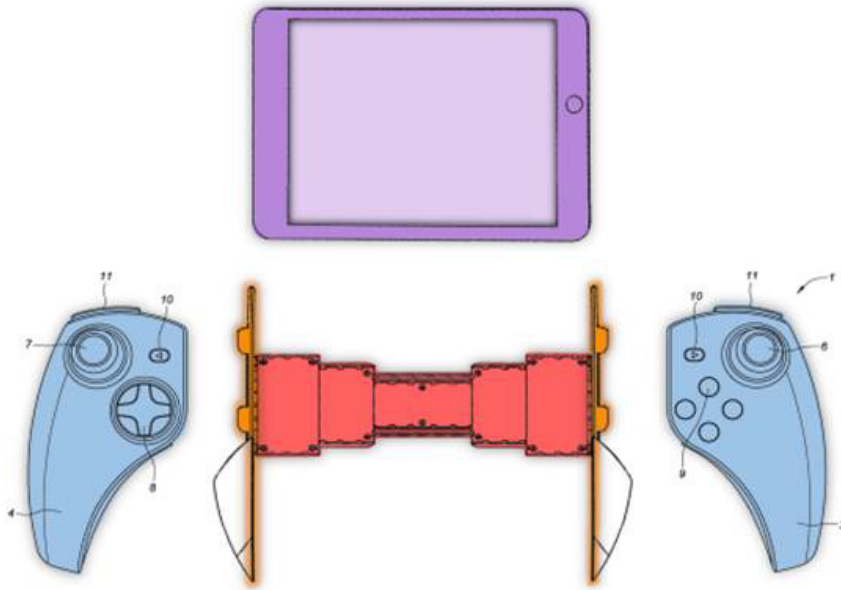
Schoenith rendered this limitation obvious for the reasons described above (at 42) in Ground 2 regarding limitation 1[a].

c. 1[b][1]

The Board previously found that Schoenith rendered obvious *confinement structures*, and so issue preclusion applies to that finding, as set forth (at 42) in Ground 2 regarding limitation 1[b][1].

The ITC found the same thing for Schoenith/ Kessler: “[Schoenith’s] raised walls may extend along the right and left sides of the smart device’s perimeter and may accommodate different-sized smart devices satisfying the claim 1 limitation of ‘a pair of confinement structures interacting with and adjacent at least two opposing sides of the computing device, but not more than three sides of the computing device.’” Ex. 1018, 360.

Even if Gamevice is not estopped, the Schoenith/Kessler combination rendered this limitation obvious. As shown in the annotated figure below, the combination includes left and right cradle walls (orange) and Kessler’s adjustable bridge (red). That bridge contracts around a device, causing the cradle walls to contact with, apply pressure to and receive resistance from (*interact with*) the two opposing sides of a computing device (*at least two opposing sides, not more than three sides*). Ex. 1006 ¶101; Kitchen ¶¶325-332.



Additionally, the left and right cradle walls contain wired connections that electrically *interact* with the computing device, such as for communication of data, as described above (at 44) in Ground 2 regarding limitation 1[b][2][a].

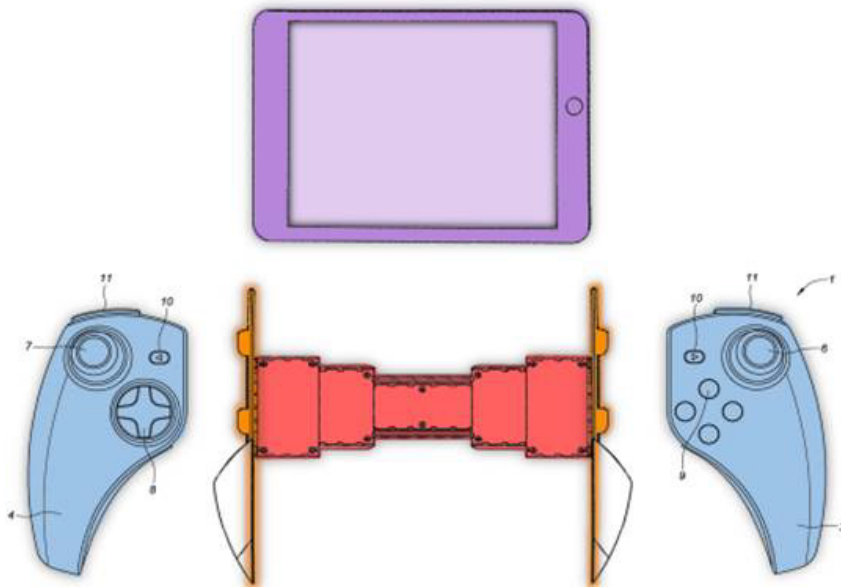
d. 1[b][2][a]

Schoenith rendered this limitation obvious as described above (at 44) in Ground 2 regarding limitation 1[b][2][a], and as the Board previously found. Ex. 1010, 12-13. Issue preclusion applies to the Board’s finding. The ITC likewise found that the Schoenith/Park combination rendered this limitation obvious. Ex. 1018, 360-61 (a POSITA “would understand that Schoenith’s raised walls can each comprise a communication link.”). Kitchen ¶¶335-340.

e. 1[b][2][b]

Schoenith rendered obvious *communication links configured for electronic communication* as described above (at 45-46) in Ground 2 regarding limitation 1[b][2][b].

In the Schoenith/Kessler combination, “data” is communicated from Schoenith’s panels (blue in the annotated figure below) to “power connectors” (e.g., Lightning® connector) in the “raised walls” (orange), and then to the smart device (purple) through another “power connector.” Ex. 1005, 7:42-48.



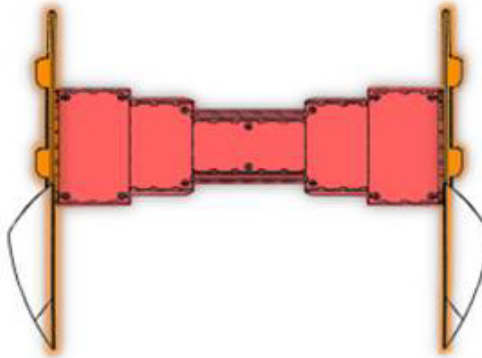
In the Schoenith/Kessler combination, regardless of the physical location of the device “power connector” (*i.e.*, whether at the sidewall with the connector to left side panel 4 or at the sidewall with the connector to right side panel 3), a circuit in Kessler’s bridge would have allowed communication between the

sidewall connectors (and their corresponding panels) and between each sidewall connector (and panel) and smart device 30. Ex. 1006 ¶¶93, 104; Kitchen ¶343. The '393 patent similarly describes “interface feature 338” in a confinement structure that allows communications with a computing device. Ex. 1001, 10:21-29. Because the flow of information between the “power connectors” (Lighting® Connectors) and smart device is controlled and/or mediated by electron devices, the connectors (*communication links*) to the panels are *configured for electronic communication with the computing device*.

The ITC likewise found this limitation rendered obvious by the Schoenith/Kessler combination. Ex. 1018, 360-61.

f. 1[c][1]

The Schoenith/Kessler combination includes Kessler’s “interconnection device” (*structural bridge*). As shown in the annotated figure below, the bridge (red) is between and attached to (*secured to*) the cradle walls (*confinement structures*) (orange). Kitchen ¶¶348-349. Kessler’s bridge is made from *rigid* plastics and metal (steel). Ex. 1006 ¶89.



The ITC likewise found that Kessler discloses a *rigid structural bridge*. Ex. 1018, 361 (Kessler’s adjustable bridge “is made of rigid sheet steel.”).

g. 1[c][2][a]

In the Schoenith/Kessler combination, Kessler’s interconnection device (*rigid structural bridge*) includes a flexible circuit within a “conduit” (*passageway*). Ex. 1006 ¶¶93, 104; Kitchen ¶¶351-354.

Flexible circuit 114 is shown in annotated Figure 19 from Kessler below and would electrically connect Schoenith’s raised walls and power connectors. Schoenith disclosed “a wired connection between the smart device and the controller in the right side panel, left side panel, the cradle, or a combination thereof.” Ex. 1005, 7:42-45.

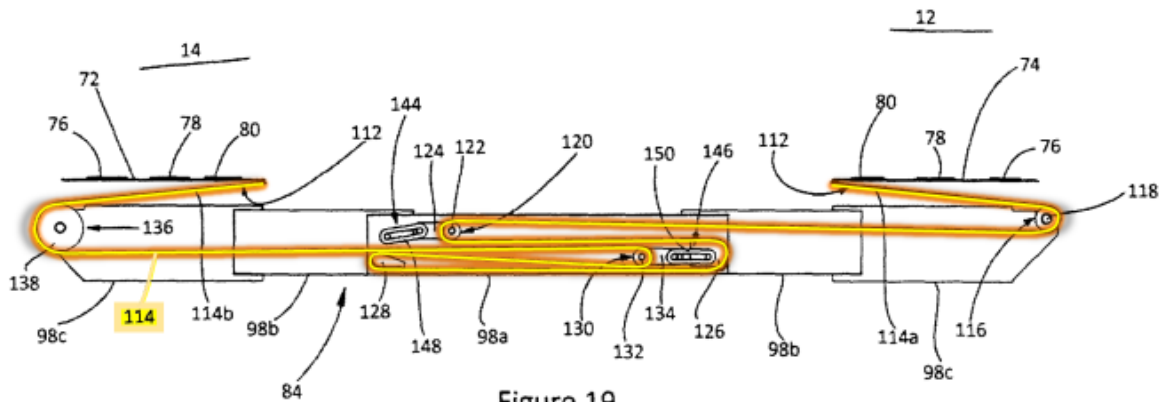


Figure 19

The conduit “provides some protection for said electrical connection,” Ex. 1006 ¶93, and in the combination, the conduit thus promotes electrical communication between the sidewall power connectors (*communication links*) and smart device 30 (*computing device*).

The ITC likewise found that this conduit is a “passageway” that “promotes electrical communication” as recited. Ex. 1018, 361.

h. 1[c][2][b]

As described above (at 57) regarding limitation 1[b][2][a], a POSITA would have understood Schoenith to teach including Lightning® connectors in both of Schoenith’s raised walls to allow electrical signals (data) to be communicated to the smart device. Kessler’s conduit (*passageway*) *promotes* this *electrical communication* because it “provides some protection for [the] electrical connection” (flexible circuit) and passes electrical signals between the

Lightning® connectors. Ex. 1006 ¶¶26, 93; Kitchen ¶¶355-357. The ITC concurred. Ex. 1018, 361.

i. 1[d][1]

The Schoenith/Kessler combination rendered this limitation obvious as described above (at 47-48) in Ground 2 regarding limitation 1[d][1].

j. 1[d][2]

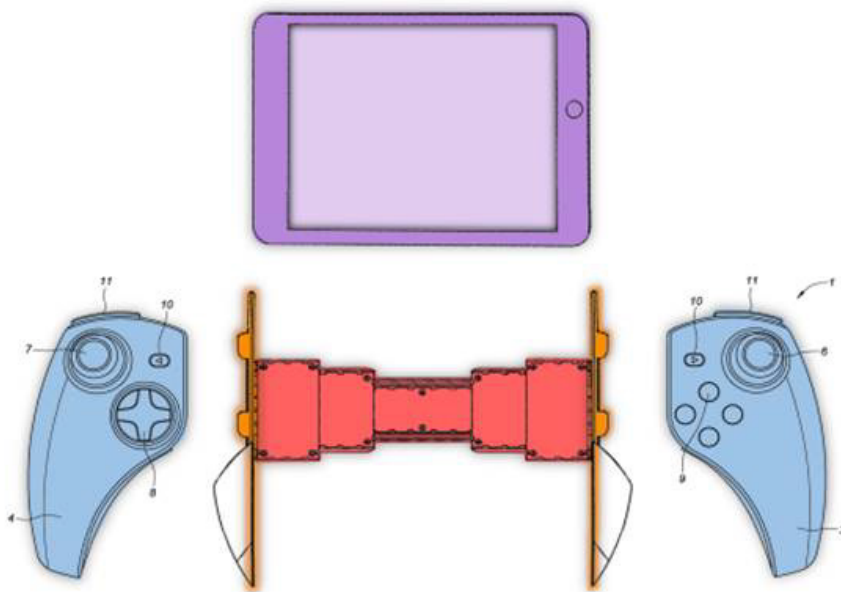
The Schoenith/Kessler combination rendered this limitation obvious as described above (at 48-49) in Ground 2 regarding limitation 1[d][2]. Schoenith’s panels (*electronic game control modules*) connect to the cradle’s raised walls (*confinement structures*), including via “magnetic connection” (*secured to and interacts*), and the raised walls also can include a connector such as an Apple Lightning® connector, allowing the panels and raised walls to *interact* electrically.

k. 1[d][3]

The Schoenith/Kessler combination rendered this limitation obvious as described above (at 49-50) in Ground 2 regarding limitation 1[d][3].

l. 1[d][4]

The Schoenith/Kessler combination includes panels (*electronic game control modules*) (blue) that are detachable (*separate and distinct*) from the cradle walls (*confinement structures*) (orange), as shown in the annotated figure below. Ex. 1005, Fig. 3, 9:57-10:3.



m. 1[d][5]

In the Schoenith/Kessler combination, Schoenith's cradle walls (*confinement structures*) (orange) are *separate and distinct* from Kessler's interconnection device (*structural bridge*) (red), with the cradle walls *forming no structural portion of the structural bridge*. Kitchen ¶¶370-381. Kessler disclosed its interconnection device, as shown in Figure 14 below, is a *separate and distinct* component attached to its left and right handle housings. Ex. 1006, Figs 13-18, ¶83.

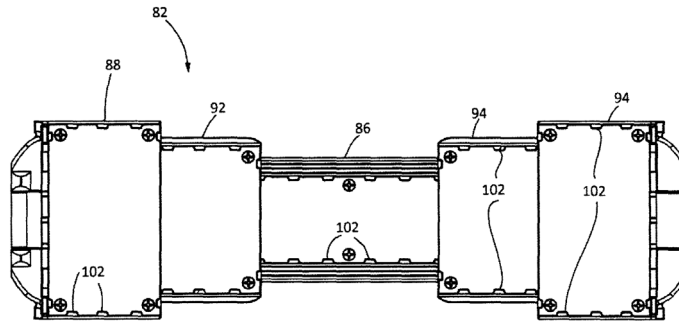


Figure 14

Additionally, Gamevice contends that components screwed together are *separate and distinct* for purposes of this limitation. Ex. 1018, 153. Nintendo does not agree, but a POSITA would have recognized screws as known mechanisms for affixing Schoenith's sidewalls to Kessler's interconnection device, and would have been motivated to use removable screws to affix the sidewalls and bridge for the reasons discussed above (at 36-37) regarding Ground 1, limitation 1[d][5]. Kitchen ¶¶377-380. Thus, the Schoenith/Kessler combination rendered this limitation obvious under Gamevice's understanding.

The ITC also concluded this limitation was rendered obvious: "Kessler's structural bridge is separate and distinct from the other components disclosed in Kessler...." Ex. 1018, 362.

3. Claim 2

The Schoenith/Kessler combination includes Kessler's interconnection device (*rigid structural bridge*). That bridge supports any smart device and the electronics inside it (*electronics associated with the computing device*). Ex. 1006

¶¶42, 106; Ex. 1005, 6:15-19; Kitchen ¶¶382-383; Ex. 1018, 362 (“Kessler’s rigid structural bridge supports a computing device, which contains electronics.”). The combination thus rendered this claim obvious.

4. Claim 3

The Schoenith/Kessler combination rendered this claim obvious as described above (at 52) in Ground 2 regarding claim 3. The ITC likewise found claim 3 obvious in view of Schoenith and Kessler. Ex. 1018, 362 (“Schoenith’s computing device comprises a back with an internal surface and external surface that cooperates with at least two opposing sides of the computing device.”).

5. Claim 4

The Schoenith/Kessler combination rendered this claim obvious. Kessler’s interconnection device (*rigid structural bridge*) “support[s]” and therefore *cooperates with* (works with) the *back* of any *computing device*. Ex. 1006 ¶¶42, 106; Kitchen ¶¶390-394; Ex. 1018, 362 (“Kessler’s rigid structural bridge cooperates with the back of a computing device.”).

6. Claim 5.

The Schoenith/Kessler combination rendered this claim obvious. Kessler’s bridge (red) “support[s]” the *external surface* of the *back* of phone 70 (purple), and is nearby (*adjacent*) to the *back*, as shown in annotated Figure 12 below. Ex.1006 ¶¶42, 106; Kitchen ¶¶395.

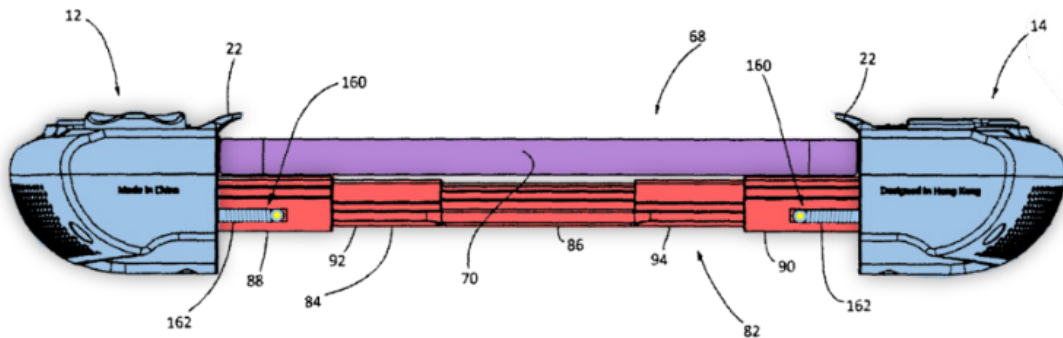


Figure 12

7. Claim 6

The Schoenith/Kessler combination rendered this claim obvious as described above (at 57-59, 61-62) regarding limitations 1[b][2][a], [b] and 1[c][2][b], and as described above (at 53) in Ground 2 regarding claim 6.

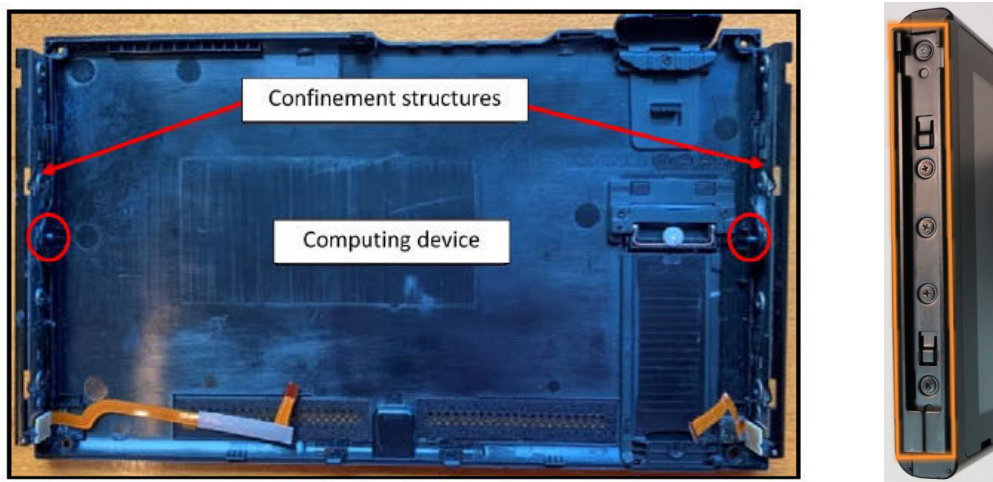
The ITC likewise found that the Schoenith/Kessler combination rendered obvious claim 6: “Schoenith and Kessler render claim 6 obvious because Schoenith’s control modules pass signals through their communication links and through a wired connection to the computing device, where the signals control images on the display screen.” Ex. 1018, 362.

8. Claim 7

The Schoenith/Kessler combination rendered this claim obvious as described above (at 58, 64-65) regarding limitation 1[c][1] and claim 2, and as described above (at 54-55) in Ground 2 regarding claim 7. Ex. 1005, 7:34-48; Ex. 1006 ¶106; Kitchen ¶403; Ex. 1018, 362 (“Schoenith and Kessler render claim 7 obvious because computing devices contain communication modules that are supported by Kessler’s rigid structural bridge.”).

E. Ground 4: Hirschman anticipates and rendered obvious claims 1-4 and 6-7

Gamevice has accused the Nintendo Switch of infringing claims 1-4 and 6-7 in the District Court, by adopting incorrect interpretations of the claims. For example, Gamevice accuses side rails on the Nintendo Switch console as satisfying *a pair of confinement structures*. See Ex. 1018, 118, 120 (ITC rejecting infringement theory for “computing device”); Ex. 1023, 2 (“Specifically, the infringement contentions set forth in Gamevice’s expert reports submitted during the ITC cases will be treated as initial infringement contentions under L. Pat. R. 3-1.”).



Gamevice also contends that the Nintendo Switch includes a *computing device* by pointing to an arbitrary assortment of electronics within the Switch console—and not the console itself. Ex. 1018, 114 (“The administrative law judge finds that one of ordinary skill in the art would not understand a ‘computing device’ to be a selection of parts, as Gamevice asserts.”).

To the extent Gamevice's interpretation of the claims applies, however, claims 1-4 and 6-7 are anticipated and rendered obvious by Hirschman. Thus, the below analysis of Hirschman applies Gamevice's interpretation of the scope of the claims. Nintendo does not agree with that interpretation, and nothing herein should be understood as a concession that Gamevice's interpretation is correct. *10X Genomics Inc. v. Bio-Rad Labs. Inc.*, No. IPR2020-00086, Paper 8 at 17-22 (PTAB Apr. 27, 2020).

1. Claim 1

a. 1[pre]

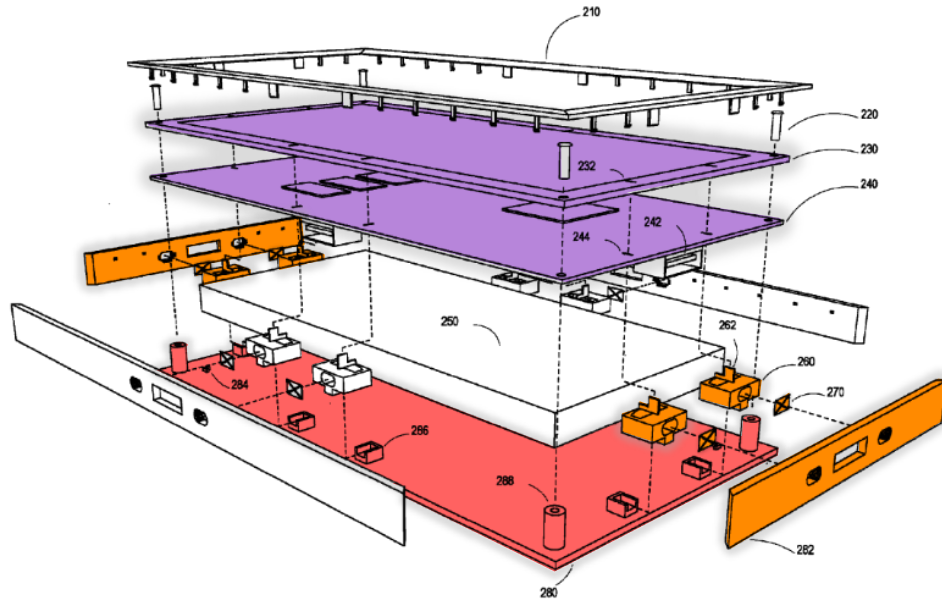
Hirschman is a *combination* of components, as described below.

b. 1[a]

Hirschman disclosed a portable computer system 100 and portable computer system 2600. Ex. 1007, Figs. 1-3, 5, 9A-10C, 12-15, 19A-19C, 20A-20C, 22, 24A-B, ¶¶ 52-53, 80-82. Gamevice contends that arbitrary electronics and non-electronic parts associated with the Nintendo Switch's CPU (shown right) constitute the recited *computing device*. Ex. 1018, 108-110. Nintendo disagrees with Gamevice's apparent understanding of this limitation, but if deemed proper, this limitation is disclosed by Hirschman.



Hirschman disclosed circuit board 240 and touch-screen 230 (purple in the annotated figure below). Circuit board 240 “may contain various components of a portable computer device, such as a CPU,” and is “electrically mated with” and controls touch-screen 230. *Id.*, Fig. 3, ¶¶56-58; Kitchen ¶414.



c. 1[b][1]

Confinement structures, under a proper understanding, do not include components that are a part of a unitary computing device, such as the retention structures and sidewalls of Hirschman’s portable computer system. Such structures cannot not hold a computing device because they are an integrated part of the device. Yet Gamevice nonetheless contends that integrated components of the Nintendo Switch console—namely, the side rails—are *confinement structures*.

Hirschman disclosed *confinement structures*, under Gamevice's improper understanding of the scope of the claim, in the form of sidewalls 282 and retention structures 260, which are shown in the annotated figure above (orange). The sidewalls 282 and retention structures 260 “secure the touch screen 230 and circuit board 240” (purple) (*computing device*). Ex. 1007, Fig. 3, ¶¶57-58. “The retention structures may have a ‘dorsal fin’ structure 262, which may fit into slots 232 and 244.” *Id.*, ¶ 58. A POSITA would also have understood that the sidewalls and retention structures are connected, including to prevent intrusion of dust or other substances that could damage the electronics within the retention structures. Kitchen ¶¶416-422.

The sidewalls 282 with retention structures 260 (collectively, *confinement structures*) physically *interact* with the circuit board 240 and touch-screen 230 (*computing device*). For example, the sidewalls and retention structures contact with, apply pressure to, and receive resistance from two opposing sides of the circuit board and touch-screen, including when a user inserts retention posts 162 of game accessory modules 140 and 520 into retention structures 260. Ex. 1007, ¶¶61-64; Kitchen ¶¶423-425. Retention structures 260 also electrically *interact* with the *computing device* through “communication signals.” Ex. 1007, ¶60; Kitchen ¶¶426-427.

Sidewalls 282 and retention structures 260 are also *adjacent* (nearby) *two opposing sides* of the circuit board 240 and touch-screen 260. Hirschman expressly disclosed that “port groups 120”—which comprise retention ports 122, as shown in Figure 5— “may be located on all four sides,” but “port groups 120 may be included on fewer sides,” *e.g.*, two or three sides. Ex. 1007, Fig. 1, ¶¶52, 56, 57-58. In such an arrangement, retention structures 260 would not have been provided on a side without a port group, thereby reducing the cost to make the device. Kitchen ¶¶427-430. A POSITA would also have understood that where port groups are on two or three sides, the port groups (and thus associated retention structures) would be on two opposing sides of the device. Kitchen ¶¶431-433. Hirschman, thus, disclosed or rendered obvious retention structures 260, and therefore *confinement structures*, on *at least two opposing sides* of the computing device, *but not more than three sides*, under Gamevice’s understanding of the limitation.

To the extent Gamevice also contends that the “interacting” must be on *at least two opposing sides of the computing device, but not more than three*, Hirschman disclosed this for the reasons described immediately above, *i.e.*, sidewalls with “ports groups” (including retention structures 260) need not be provided on all four sides of the portable computer system.

d. 1[b][2][a]

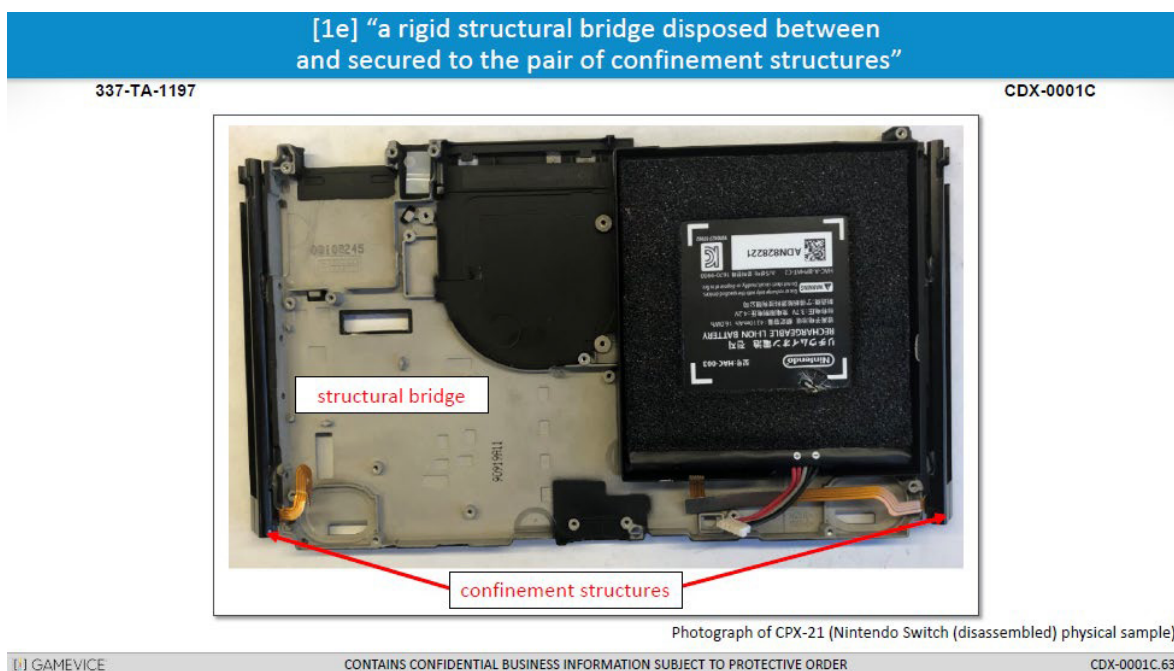
Hirschman disclosed that sidewalls 282 “may contain cutouts in the shape and size to receive retention posts 162” Ex. 1007, ¶57. Retention posts 162 are received into retention structures 260, and “[e]lectrical power or signals may flow via retention structures 260 and retention posts 160 as illustrated in FIG. 2A,” including “communication signals,” such as for “low-bandwidth signaling of information.” *Id.*, ¶¶59-60. Accordingly, Hirschman’s retention structures 260 are “a component for reception and transmission of data,” and so each of Hirschman’s *confinement structures* (under Gamevice’s improper understanding of the term) includes a *communication link*. Kitchen ¶¶436-437.

e. 1[b][2][b]

Gamevice contends that a “flexible printed circuit” in each of the Switch’s side rails satisfies this limitation, Ex. 1018, 125-27. Under Gamevice’s improper interpretation, Hirschman disclosed *communication links* that are *configured for electronic communication with the computing device*. As described above (at 69-72) regarding limitations 1[b][1] and 1[b][2][a], retention structures 260 can send “communication signals” to circuit board 240, including for “low-bandwidth signaling of information.” Ex. 1007, ¶¶58-60; Kitchen ¶439.

f. 1[c][1]

Gamevice contends an “upper frame” assembly within the Nintendo Switch is the recited *rigid structural bridge*, as shown below (grey portion). Ex. 1018, 132.

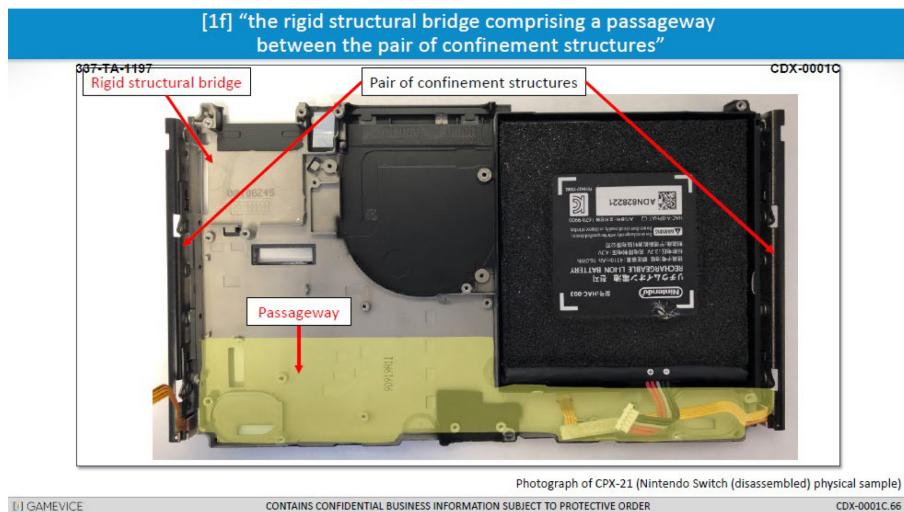


This is incorrect, but under Gamevice’s improper understanding, Hirschman disclosed *a structural bridge* (“a physical apparatus that secures two or more components to each other across a distance”) *disposed between and secured to* retention structures 260 and sidewalls 282. Chassis 280 serves as a structure on which the “components [of the portable computer system] may be mounted.” Chassis 280 also secures retention structures 260, “which are received into and secured by the brackets 286.” Ex. 1007, Fig. 3, ¶¶57; Kitchen ¶¶441-442.

Additionally, chassis 280 is *rigid*. For example, Hirschman disclosed that its portable computer system is designed to have “structural integrity” to withstand torsion, flex, and other physical stresses, to avoid damage to the internal electronics, and to provide a “sufficiently rigid and secure” attachment between the portable computer system and game accessories. Ex. 1007, ¶¶61; Kitchen ¶443.

g. 1[c][2][a]

Gamevice contends any arbitrary space that contains a communication wire can be a *passageway*. For instance, with respect to the Nintendo Switch, Gamevice says that the below indicated space in the upper frame constitutes the recited *passageway* because a communication wire can be found in some portions of this space.



This is incorrect, but under Gamevice’s improper understanding, Hirschman disclosed *a passageway between the pair of confinement structures*

(“a space that accommodates a communication wire”). A POSITA would have understood that Hirschman necessarily disclosed, or rendered obvious, a space on chassis 280 accommodating wired connections between *the pair of confinement structures* (which include retention structures 260) and the *computing device* (which includes circuit board 240). Ex. 1007, Fig. 3, ¶60; Kitchen ¶¶445-446. Because Hirschman disclosed wired connections, those connections are necessarily found in a space on chassis 280 that accommodates them, those connections are, in turn, necessarily in *a passageway* under Gamevice’s apparent (and incorrect) understanding.

h. 1[c][2][b]

Under Gamevice’s improper interpretation, Hirschman’s *passageway* (a space on chassis 280 accommodating wired connections between retention structures 260 and circuit board 240) *promotes electrical communication between* each of *the communication links* and the *computing device*. According to Gamevice, simply allowing a wire to pass through a space “promotes” electrical communication. *See* Ex. 1018, 143-145. A POSITA would have understood that the wired connection in Hirschman allowed a wire to pass through that space, thereby *promoting electrical communication* as understood by Gamevice. Ex. 1007, ¶61; Kitchen ¶447.

i. 1[d][1]

Hirschman disclosed game accessory modules 140 and 520 (*a pair of electronic game control modules*), as shown in the annotated figure below (blue). These accessories “feature[] common physical controls 522, including buttons, a joystick, and a d-pad.” Ex. 1007, Fig. 6, ¶67; Kitchen ¶449.

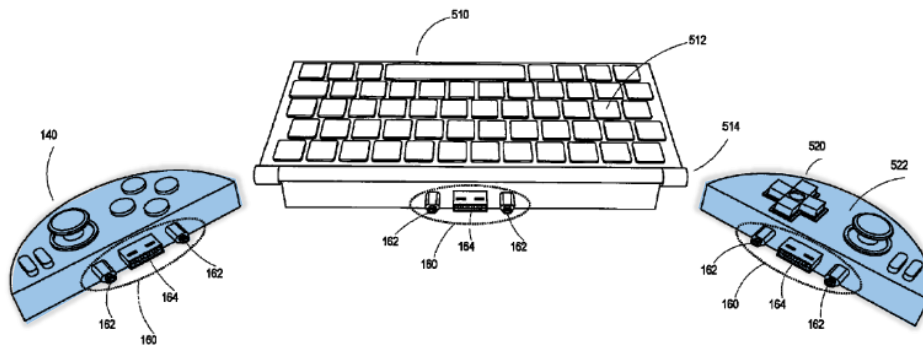


FIG. 6

j. 1[d][2]

Hirschman disclosed that game accessories 140 and 520 (*electronic game control modules*) attach to (*secure to*) sidewalls 282 and retention structures 260 (*confinement structures*) using retention posts. Ex. 1007, Fig. 2, 4A-4C, ¶¶23, 61-64, 82; Kitchen ¶¶451-455. The retention posts physically *interact* with the confinement structures because the posts apply pressure to and encounter resistance from the confinement structures, including via “spring-loaded plungers 320.” Ex. 1007, ¶¶62-64; Kitchen ¶453. The retention posts also electrically

interact with retention structures 260, for example, by sending and receiving “communication signals.” Ex. 1007, ¶¶59-60; Kitchen ¶454.

k. 1[d][3]

Under Gamevice’s improper interpretation, *see* Ex. 1018, 147 (“connectors on Joy-Cons [] send signals containing electronic information ... through the [FCBs]”), Hirschman disclosed this limitation as described above (at 72, 75, 76-77) regarding limitations 1[b][2][b], 1[c][2][b], and 1[d][2]. For example, retention posts 160 send “electrical signals” to retention structures 260.

l. 1[d][4]

Hirschman disclosed that game control accessories 140 and 520 (*electronic game control modules*) are detachable from the portable computer system, sidewalls 282, and retention structures 260. *E.g.*, Ex. 1007, Fig. 6, ¶¶ 61-64, 67. Game control accessories 140 and 520 are thus *separate and distinct structures, forming no structural portion of the pair of confinement structures*. Kitchen ¶¶459-460.

m. 1[d][5]

Gamevice contends that the Nintendo Switch’s side rails are “separate and distinct” from the “upper frame” because “they can be easily separated from the upper frame by unscrewing the screws securing them together.” Ex. 1018, 153.

Under Gamevice’s improper interpretation, Hirschman disclosed sidewalls 282 and retention structures 260 (*confinement structures*) that are

separate and distinct parts, forming no structural portion of chassis 280. Sidewalls 282 and retention structures 260 are attached to the chassis 280 at brackets 286 via insertion. Ex. 1007, Fig. 3, ¶ 57. A POSITA would have understood that retention structures 260 could be separated from brackets 286, and thus that retention structures 260 and sidewalls 282 could be disengaged from chassis 280. Kitchen ¶¶462-464.

2. Claim 2

Under Gamevice's improper interpretation, Hirschman anticipates or rendered obvious this claim. Hirschman's chassis 280 (*rigid structural bridge*) supports circuit board 240 and touch-screen 230 (*electronics associated with the computing device*) via receptacles 288. Ex. 1007, Fig. 3, ¶57; Kitchen ¶¶466-468.

3. Claim 3

Under Gamevice's improper interpretation, Hirschman anticipates or rendered obvious this claim. Hirschman disclosed circuit board 240 and touch-screen 230 (*computing device*) having a *back* (circuit board 240) with an *internal surface* and an *external surface*, where the back *cooperates with at least two opposing sides* of the computing device to at least allow mating of touch-screen 230 with circuit board 240, and insertion of dorsal fin structures 262 through both circuit board 240 and touch-screen via slots 244. Ex. 1007, Fig. 3, Kitchen ¶¶470-471.

4. Claim 4

Under Gamevice's improper interpretation, Hirschman anticipates or rendered obvious this claim. Hirschman disclosed chassis 280 (*rigid structure bridge*) works with (*cooperates with*) circuit board 240 (*back of the computing device*) at least by supporting the *back* via receptacles 288. Ex. 1007, Fig. 3, ¶¶56, 58; Kitchen ¶¶473-474.

5. Claim 6

Hirschman's portable computer system, or under Gamevice's improper interpretation, circuit board 240 and touch-screen 230 (*computing device*), comprise an electronic display screen (touch-screen 230). Hirschman disclosed the recited *communication links* and *signals* as described above (at 72, 74-75) regarding limitations 1[b][2][a], [b] and 1[c][2][b]. Hirschman disclosed that game accessories 140 and 520 have "common physical controls 522, including buttons, a joystick, and a d-pad, along with connector group 160." Ex. 1007, Fig. 6, ¶67; Kitchen ¶477. A POSITA would have understood that the *signals* from Hirschman's game accessories (*electronic game control modules*) can *control images displayed on the electronic display screen*, as shown in annotated figure 14A (below). Ex. 1007, Figs. 14A, 14B, ¶¶60, 75, 76, 82; Kitchen ¶¶476-478.

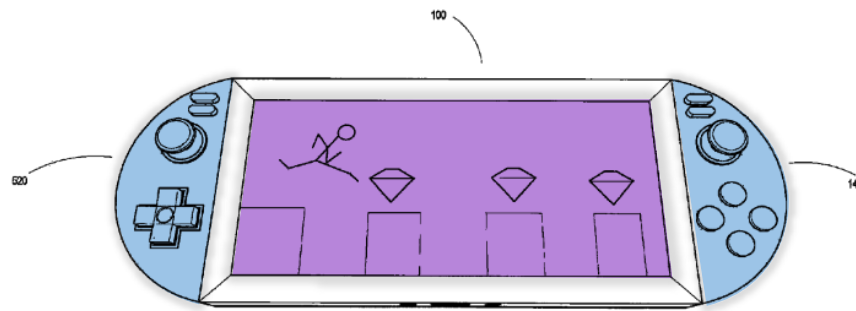


FIG. 14A

6. Claim 7

Hirschman disclosed *electronics supported by the rigid structural bridge* as described above (at 73, 78) regarding limitation 1[c][1] and claim 2, under Gamevice’s improper interpretation. Hirschman also disclosed that circuit board 240 may contain various components for communication including “communications busses,” which a POSITA would have understood are *communication modules associated with the computing device*. Ex. 1007, Fig. 3, ¶ 56; Kitchen ¶¶480-481.

VII. THE BOARD SHOULD REACH THIS PETITION’S MERITS

A. Gamevice hid the significance of the prior art, preventing the Examiner from considering it

Gamevice may contend that 35 U.S.C. §325(d) gives the Board discretion to deny institution because the art cited herein was disclosed to the Examiner. That is incorrect.

The Board in *Advanced Bionics, LLC v. Med-El Elektromedizinische Geräte GMBH* explained that application of §325(d) does not hinge on whether art was submitted during examination. IPR2019-01469, Paper 6, at 8 (PTAB Feb. 13, 2020). Instead, the Board considers whether the Office erred during examination, such as by “overlooking specific teachings” when “previous consideration” of submitted art was “not well developed or *silent*.” *Id.*, 8 n.9, 10 (emphasis added). The Board further examines the extent to which the asserted art was evaluated during examination, including whether it was a basis for rejection. *Id.*, 10. And the Board routinely declines to apply §325(d) when an examiner fails to evaluate previously submitted prior art during examination. *E.g., Apple Inc. v. Telefonaktibolaget LM Ericsson*, IPR2022-00457, Paper 7, at 8-9 (PTAB Sept. 21, 2022); *Roku, Inc. v. Universal Elecs., Inc.*, IPR2019-01615, Paper 12, at 12-13 (PTAB April 17, 2020); *Collective Minds Gaming Co. Ltd. v. Ironburg Inventions Ltd.*, IPR2018-00356, Paper 11, at 8 (PTAB June 7, 2018).

These principles compel a finding that §325(d) is inapplicable here. The Examiner did not consider the art cited in this petition. While Gamevice identified the art from Nintendo’s IPRs to the Examiner, Gamevice failed to disclose the IPRs themselves. But the IPRs provided critical information about the art’s importance, including detailed explanations for why the art disclosed or rendered obvious many of the same limitations recited in the claims of the ’393 patent,

along with expert testimony as to why the art would be combined. Had the Examiner known that the Board instituted review of the '119 patent over the same art silently submitted by Gamevice, he might have evaluated that art.

But because Gamevice never explained the significance of the art, the Examiner never evaluated it. As the file history shows, the Examiner only made two substantive comments about *any* art: (1) he determined the pending claims were patentably indistinct from the '498 patent (Ex. 1009, 77-78); and (2) he found that the Wu and Willis references—neither raised here—did not render the claims obvious (*id.*, 25-29). The Examiner's silence on the art raised here, by itself, tilts the scales in favor of institution. *E.g., Solaredge Techs. Ltd. v. SMA Solar Tech. AG*, IPR2020-00021, Paper 8, 12 (PTAB April 10, 2020).

B. The Board's § 314(a) institution denial in IPR2020-01197 supports institution now

When Nintendo presented its first IPR petition on the '393 patent, Gamevice told the Board that the ITC, not the Board, was the proper forum to “resolve” raised invalidity issues. IPR2020-01197, Paper 7 at 11-12, 16; *id.*, Paper 12 at 7. Now that the ITC has found the challenged claims invalid, Gamevice may well say that the District Court, not the Board, is the proper forum to resolve raised invalidity issues. That argument is misplaced.

General Plastic Indus. Co. v. Canon Kabushiki Kaisha, IPR2016-01357, Paper 19, at 9-10 (PTAB Sept. 6, 2017) sets forth seven non-exclusive factors that

the Board considers in weighing a request for discretionary denial of institution of a second or subsequent petition under §314(a). These factors compel a finding that the Board should institute.

The first factor—claim identity—weighs in favor of institution. Director Vidal recently made clear in *Code200, UAB v. Bright Data Ltd.* that denial of institution of a subsequent petition under § 314, pursuant to the *General Plastic* factors, is improper if the Board did not substantively address the merits of a first petition. *See* Ex. 1027, IPR2022-00861, Paper 18 at 6 (PTAB Aug. 23, 2022) (Director Decision). Gamevice successfully short-circuited the Board’s substantive consideration of Nintendo’s petition in IPR2020-01197 in view of then-pending ITC action. But as Director Vidal has provided, “‘allowing [a petitioner] the opportunity to pursue a decision on the merits’ in a second-filed petition, when the first-filed petition was not evaluated on the merits, ‘best balances the desires to improve patent quality and patent-system efficiency against the potential for abuse of the review process by repeated attacks on patents.’” Ex. 1027, 4-5 (citation omitted).

Factors 2 and 3—timing of the art’s discovery with respect to a first petition and access to a prior preliminary response or institution decision—are to be read in conjunction with factor 1, and cannot weigh against institution unless Gamevice can demonstrate “road-mapping” or other issues concerning potential

abuse from staggered petitions. *Id.* at 10. Gamevice cannot do so, given that neither Gamevice nor the Board substantively responded to the grounds in Nintendo's first petition on the '393 patent. IPR2020-01197, Paper No. 17 at 11-16, Paper 13.

Factor 4—timing of the petition vis-à-vis the art's discovery—is irrelevant because Nintendo is relying on the same art now that it used previously. Factor 5—the petitioner's explanation for the time elapsed between the petitions—also has limited application here. Nintendo filed this petition within the one-year period under §315(b). *See Amneal Pharms., LLC v. Endo Pharms. Inc.*, No. IPR2014-00360, Paper 15, at 4-10 (PTAB June 27, 2014) (designated informative Jan. 10, 2018) (§315(b)'s one-year period started upon filing of amended complaint after court granted unopposed motion to amend complaint to assert challenged patent). Nintendo filed the petition when it did to allow for the possibility that the District Court might resolve pending motions for summary judgment in Nintendo's favor, and further, to allow the court to rule on Nintendo's challenge that claim 12 is indefinite. *See* Ex. 1022; Ex. 1024. Nintendo's approach—allowing the District Court to rule—avoided a challenge to now-invalid claims 12-15, conserving the time and resources of the Board and the parties.

Factor 6—the finite resources of the Board—favors institution as Nintendo’s prior petition was not evaluated on its merits. Any alleged concern regarding factor 6 is “outweighed by the Board’s mission to improve patent quality.” Ex. 1027, 6. That is especially so here, where the Board remarked Nintendo’s challenges had “strength” and where the ITC previously determined, by clear and convincing evidence, that the challenged claims were invalid over the cited art.

Finally, factor 7—the Board’s ability to issue a final determination within one-year after institution, per 35 U.S.C. §316(a)(11), is inapplicable here. *See Code200*, Paper 18, at 15-16 (PTAB July 25, 2020).

C. Gamevice’s assertion of the ’393 patent in District Court after losing at the ITC does not preclude this IPR

Gamevice may contend that the Board should—again—deny institution under §314(a) in view of a parallel proceeding, this time the District Court case that concerns the ’393 patent among others. The Board should reject any such contention.

Importantly, if this IPR is instituted, Nintendo will not pursue the same invalidity grounds against the challenged claims of the ’393 patent in the parallel litigation on any grounds that could have been reasonably raised in this petition. That ends the inquiry, and institution cannot be discretionarily denied. Ex. 1025, 7.

But even if the other *Finitv* factors are holistically weighed, institution would be strongly favored. Nintendo intends to request a stay of proceedings on the '393 patent. The District Court has not yet set a trial date, and the median time to trial in the Northern District of California suggests that trial may occur after the Board's final written decision.¹⁰ The parties and the District Court have had minimal investment of resources in the District Court litigation. And to the extent Gamevice contends that minimal work remains in the District Court due to the reliance by the parties on previous expert reports to provide initial infringement and invalidity contentions, Gamevice recently suggested it intends to amend its infringement contentions in view of the District Court's claim constructions. Ex. 1029, 15 n.4. Thus, any contention that the District Court case is ready for trial is mistaken. Additionally, the claims and grounds for invalidity before the District Court are not the same—Nintendo challenges claim 5 here, which Gamevice has not asserted in the District Court, and Nintendo relies on significant product art in the District Court, Ex. 1015, 6-8, Ex. 1023, 2. Moreover, this petition's grounds present compelling evidence on unpatentability. Such circumstances warrant institution. *See, e.g., Unified Patents, LLC v.*

¹⁰ The median trial time in the Northern District of California is 34.7 months. Ex. 1026 at 69.

Justservice.net LLC, IPR2020-01258, Paper 18 at 44-48 (PTAB Feb. 18, 2021)

(instituting petition despite parallel litigation); Ex. 1025, 2.

VIII. CONCLUSION

Claims 1-7 of the '393 patent are unpatentable.

Dated: March 6, 2023

Respectfully submitted,

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CERTIFICATION OF WORD COUNT UNDER 37 CFR § 42.24(d)

Under the provisions of 37 C.F.R. §42.24(d), the undersigned hereby certifies that the word count for the foregoing petition for *Inter Partes Review* totals 13,974 words, excluding the parts exempted by 37 C.F.R. §42.24(a).

This word count was made by using the built-in word count function tool in the Microsoft Word software used to prepare the document.

Dated: March 6, 2023

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CERTIFICATE OF SERVICE

The undersigned hereby certifies that true copies of the foregoing petition for *Inter Partes* Review of U.S. Patent No. 10,391,393 and supporting materials (Exhibits 1001-1030 and Powers of Attorney) have been served this 6th day of March, 2023, by FedEx® delivery service on Patent Owner at the correspondence address for the attorney of record for the '393 patent shown in USPTO PAIR:

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