

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. IPR2018-01521

Patent No. 9,126,119

**PETITION FOR *INTER PARTES* REVIEW
OF U.S. PATENT NO. 9,126,119**

(claims 1-10, 13-21)

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EXHIBIT LIST

- Ex. 1001 U.S. Patent No. 9,126,119 (“119 Patent”)
- Ex. 1002 Declaration of Garry Kitchen (“Kitchen”)
- Ex. 1003 U.S. Patent No. 9,539,507 B2 (“Schoenith”)
- Ex. 1004 Translation of Korean Patent No. 10-2011-0116892 (“Park”) with Korean Version and Translation Certification
- Ex. 1005 International Patent Application No. WO 2014/079264 A1 (“Kessler”)
- Ex. 1006 U.S. Patent Application Publication No. US 2015/0134859 A1 (“Hirschman”)
- Ex. 1007 U.S. Patent No. 8,529,357 (“357 patent”)
- Ex. 1008 File History for U.S. Patent No. 9,126,119
- Ex. 1009 Complaint filed in *Gamevice, Inc. v. Nintendo Co., Ltd. et al.*, Case No. 17-cv-05923 (C.D. Cal. Aug. 9, 2017)
- Ex. 1010 U.S. Patent No. 8,944,912 (“912 patent”)
- Ex. 1011 Excerpt of American Heritage Dictionary (Second College Edition)
- Ex. 1012 Merriam-Webster's Online Dictionary (“conduit”) (<https://www.merriam-webster.com/dictionary/conduit>)
- Ex. 1013 U.S. Provisional Patent Application No. 61/477,387
- Ex. 1014 U.S. Patent Application Publication No. 2001/0045938 A1 (“Willner”)
- Ex. 1015 U.S. Patent Application Publication No. 2010/0195279 A1 (“Michael”)

I. INTRODUCTION

Smart phones, tablets, and PDAs became popular long before 2015. Along with the rise of these portable computing devices came the rise of *gaming* on those devices. But gaming on these devices had downsides, including the inability to use more-traditional (and enjoyable) control inputs like buttons, joysticks, and a D-pad, the need for one to block the screen (and thus the game) to touch the screen and control the game, and the discomfort of holding a small device and using one's fingers to control the game for extended periods. To solve these problems, companies in the 2000s began designing controllers that provided physical control modules that resembled well-known gaming controllers, but were designed to hold and communicate with portable computing devices.

Patent Owner designed one such game controller—but it was not the first to do so. The '119 patent nonetheless recites and claims the combination of a computing device and game controller that includes standard game-controller components known in the art and used as expected and intended. Petitioners accordingly request that the Board cancel claims 1-10 and 13-21 of the '119 patent.

II. MANDATORY NOTICES

A. Real Party-in-Interest

Petitioners Nintendo of America Inc. and Nintendo Co., Ltd. are the only real parties in interest.

B. Related Matters

Patent Owner Gamevice asserted the '119 patent against Petitioners in an action captioned *Gamevice, Inc. v. Nintendo Co., Ltd. et al.*, No. 2:17-cv-05293-GW-FFM, which was filed in the Central District of California on August 9, 2017. Gamevice never served the Complaint on Petitioners and dismissed that action without prejudice on October 23, 2017. Gamevice's Complaint in the Central District of California alleged infringement by the Nintendo Switch. Ex. 1009.

Gamevice filed a second action against Petitioners on March 29, 2018, in the Northern District of California, titled *Gamevice, Inc. v. Nintendo Co., Ltd. et al.*, No. 3:18-cv-01942-RS. The '119 patent is not asserted in that action, but Gamevice asserts related patents and alleges infringement by the Nintendo Switch. Gamevice has also filed and is pursuing an investigation before the United States International Trade Commission, titled *Certain Portable Gaming Console Systems with Attachable Handheld Controllers and Components Thereof*, Inv. No. 337-TA-1111. The '119 patent is not asserted in that matter, but Gamevice asserts that the Nintendo Switch infringes related patents there. Gamevice has, however, recently intimated that it might allege counterclaims for infringement of the '119 patent in the Northern District of California action (based on the Switch), but it has not done so yet. Case No. 3:18-cv-01942, Dkt. 40 at 5.

Concurrent with this petition, Petitioners are filing a separate petition for IPR that relies upon different prior art combinations to challenge claims of the '119 patent. See IPR2018-01522.

C. Notice of Counsel and Service Information

Petitioners' counsel are identified below:

Lead Counsel	Back-Up Counsel
Jonathan L. McFarland (Reg. No. 61,109) PERKINS COIE LLP 1201 3rd Ave., #4900 Seattle, WA 98101 Telephone: (206) 359-8000 Facsimile: (206) 359-9000	Kevin J. Patariu (Reg. No. 63,210) PERKINS COIE LLP 11988 El Camino Real, Ste. 350 San Diego, CA 92130 Telephone: (858) 720-5726 Facsimile: (858) 720-5799 Grant E. Kinsel <i>Pro hac vice</i> to be submitted Lane M. Polozola <i>Pro hac vice</i> to be submitted Kevin A. Zeck <i>Pro hac vice</i> to be submitted PERKINS COIE LLP 1201 3rd Ave., #4900 Seattle, WA 98101 Telephone: (206) 359-8000 Facsimile: (206) 359-9000

Petitioners consent to electronic service in this matter. The following email address may be used for service and all communications:

Nintendo-Gamevice-IPR@perkinscoie.com

Petitioners have executed and are concurrently filing Powers of Attorney appointing the above-designated counsel.

III. GROUNDS FOR STANDING

Pursuant to 37 C.F.R. § 42.104(a), Petitioners certify that the '119 patent is available for IPR. Petitioners are not barred or estopped from requesting an IPR challenging claims of the '119 patent on the grounds identified herein.

IV. IDENTIFICATION OF CHALLENGE AND RELIEF REQUESTED

Petitioners request that the Board cancel claims 1-10 and 13-21 as obvious under 35 U.S.C. § 103. The following prior art references are relied upon:

Ground	References	Challenged Claims
1	Schoenith & Kessler	1-10, 13-21
2	Schoenith & Park	1, 3-10, 13-21
3	Michael & Park	1-10, 13-21

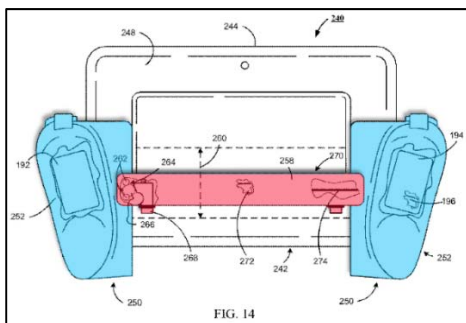
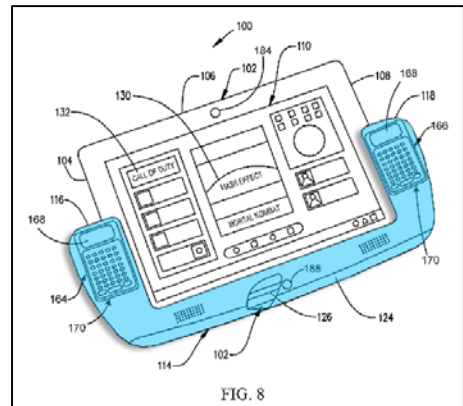
Petitioners further rely on the Declaration of Garry Kitchen (Ex. 1002, hereinafter “Kitchen”), and other evidence listed in Petitioners’ Exhibit List. An explanation of how claims 1-10 and 13-21 are invalid is provided in Section VI.

V. BACKGROUND

A. The '119 Patent

The '119 patent describes and claims a game controller that attaches to a portable computing device. Ex. 1001. The claimed controller consists of structural and communications components, including a *communication port* that provides a *communication link* and two *confinement structures* secured by a *structural bridge*. An *input device* consists of two *control modules*, or game controllers, which are attached to those *confinement structures* and contain *apertures* and *instructional input devices* in the form of buttons, joysticks, a keyboard module, or other known input means.

Figure 1 (right) shows an embodiment from the original parent application. As shown, there is an electronic computing device (e.g., tablet) that is seated in an external controller with two sides and bottom section (blue). Each side contains input



controls such as buttons, a d-pad, or joysticks, and could also include keyboard modules. Figure 14 (left) shows a modified embodiment that contains the two game control modules (blue) with a different external structure (red) connecting them behind the back side of the

computing device. These disclosures were also included in the application leading to the '357 patent, an application that Gamevice recently added to the priority chain via a certificate of correction. But these disclosures do not show every limitation claimed by the '119 patent, such as *confinement structures*.

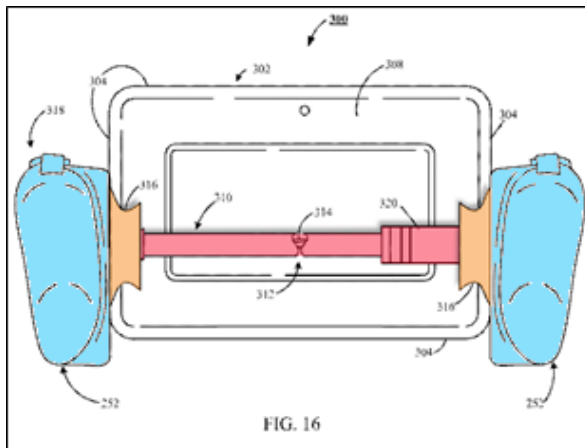


Figure 16, left, was a new disclosure in the continuation-in-part application leading to the '119 patent. It shows the back of an alternative combination containing components recited in claim 1. This embodiment and

certain components—for example, separate *confinement structures* (orange)—were first disclosed in the '119 continuation-in-part application. Two game control modules (blue) are connected to two *confinement structures*; those, in turn, confine a computing device on two sides and are secured together via a *structural bridge* (red). The *communication port* is identified as the structural bridge and, as claimed, provides the two *confinement structures* and the *communication link*.

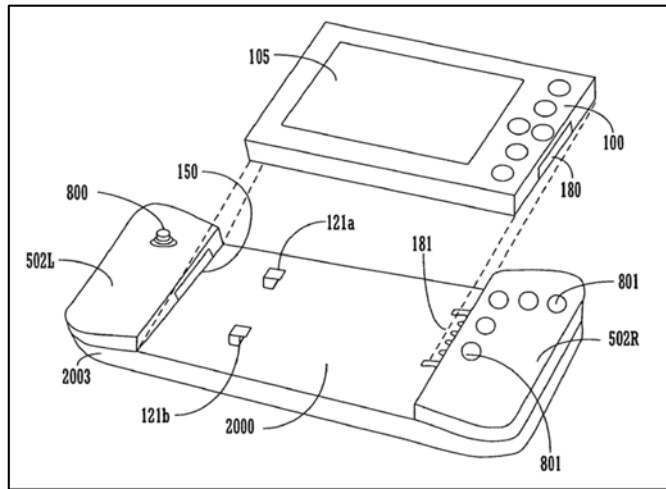
B. Prosecution History

The '119 patent issued only after the applicant amended claim 1. In the original claim 1, the applicant recited a combination that did not claim certain elements now recited. Following an examiner interview, the applicant submitted

an amendment to claim 1 that added limitations reciting a “structural bridge” securing the confinement structures together and comprising a conduit and fastening mechanism; and an “attachment structure” on the control modules securing them (the input device) to the communication port. Ex. 1008 at 136.

The examiner allowed the amended claim 1. He explained that U.S. Patent No. 7,733,637 (“Lam”) taught many limitations of claim 1, but that Lam was silent

on (1) the input device being a “separate and distinct structure from the communication port...”; and (2) a structural bridge securing the confinement structures together, an attachment structure on the game



control modules, and a fastening mechanism. *Id.* at 114-15. The prior art presented herein remedies these perceived deficiencies.

C. Level of Skill in the Art

A person having ordinary skill in the art at the time of the filing of the '119 Patent's application (“POSITA”) would have had the equivalent of a bachelor’s 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 possess at least one year of experience in developing and/or evaluating interactive products.

D. The '119 Patent Is Only Entitled to its Actual Filing Date

The application for the '119 patent was filed February 2, 2015, and the patent issued September 8, 2015. Ex. 1001. It was a continuation-in-part of U.S. Patent application Serial No. 13/681,153, filed Nov. 19, 2012, and is related to other continuation-in-part applications. Ex. 1008 (File History) at 151. The '357 patent was not claimed in the '119 patent's priority chain, but the PTO granted a certificate of correction on August 1, 2018 allowing Patent Owner to add it to that chain.

The combination recited in claim 1 of the '119 patent lacks written description support in any prior-related application. Material added to the '119 patent and absent from the related-applications include Figures 16-25 and the accompanying description. *Compare* Ex. 1001; Ex. 1010 ('912 patent disclosing Figures 1-10 and accompanying description); Ex. 1007 ('357 patent adding figures 11-15 and accompanying description). Specifically, the new material added to the '119 patent is the only potential support for the “pair of confinement structures,” “communication port,” “conduit,” “attachment structures,” or “fastening mechanism” as claimed in claim 1—all of which were added only in the '119 patent. As a result, Gamevice cannot show written description support for claim 1

or any other dependent claim. The '119 patent is thus entitled only to its actual filing date of February 2, 2015.

E. Proposed Constructions

The Board currently gives a claim in an unexpired patent “its broadest reasonable construction in light of the specification of the patent.” 37 C.F.R. § 42.100(b); *In re Cuozzo Speed Techs., LLC*, 793 F.3d 1268, 1276 (Fed. Cir. 2015), *aff'd* 136 S. Ct. 2131 (2016). Petitioners recognize the PTO has proposed requiring the *Phillips* standard in a proposed notice of rulemaking. *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc). Here, the '119 patent's claims are invalid whether under BRI or the *Phillips* standard. All claim terms not particularly proposed have been accorded their plain and ordinary meaning as understood by POSITA and consistent with the specification.

Regardless of standard, Gamevice cannot rely upon broad constructions in litigation or the ITC for infringement purposes while utilizing narrower positions to protect its patent's validity before the Board. As the Federal Circuit has explained, “claims must be interpreted and given the same meaning for purposes of both validity and infringement analyses.” *Amazon.com, Inc. v. Barnesandnoble.com, Inc.*, 239 F.3d 1343, 1351 (Fed. Cir. 2001). To “ensure that claims are not argued one way in order to maintain their patentability and in a different way against accused infringers,” the Federal Circuit recently confirmed

that a prosecution disclaimer can arise from statements in IPRs. *Aylus Networks, Inc. v. Apple Inc.*, 856 F.3d 1353, 1360 (Fed. Cir. 2017) (rejecting patent owner’s attempt to apply a broader interpretation for infringement after applying narrower interpretation in IPR). Thus, Gamevice cannot take broad positions—as it has in the complaint it filed asserting the ’119 patent and now in the ITC for related patents—while taking narrower positions to defend the ’119 patent here.

1. “Confinement Structures” (claim 1)

Independent claim 1 requires the *communication port to provide a pair of confinement structures adjacent to and confining the computing device on at least two opposing sides of the plurality of sides of the computing device*. The *pair of confinement structures* is recited in purely functional terms—only by what they do, *confining the computing device on at least two opposing sides*—not by what they are or how they operate. Thus, while the phrase does not use the term “means,” it is a means-plus-function limitation because it “fails to recite sufficiently definite structure” and recites function “without reciting sufficient structure for performing that function[.]” *Adv. Ground Info. Sys., Inc. v. Life360, Inc.*, 830 F.3d 1341, 1347 (Fed. Cir. 2016); *Diebold Nixdorf, Inc. v. ITC*, ___ F.3d ___, Appeal No. 2017-2553, Slip Op. at 9-10, 18-19 (Fed. Cir. Aug. 15, 2018) (reversing ITC by holding that “cheque standby unit” was a means-plus-function limitation); *see also Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1349 (Fed. Cir. 2015). This is so whether the

BRI standard or the *Phillips* standard is nominally being applied. *In re Donaldson*, 16 F.3d 1189, 1193 (Fed. Cir. 1994) (holding “no distinction is made in paragraph six between prosecution in the PTO and enforcement in the courts”).

The first step in construing means-plus-function limitations is to identify the functions performed. *Lockheed Martin Corp. v. Space Sys./Loral, Inc.*, 324 F.3d 1308, 1318 (Fed. Cir. 2003). The function for the *pair of confinement structures* is: “confining the computing device on at least two opposing sides of the plurality of sides of the computing device.” Next, the corresponding structure must be identified. *Lockheed*, 324 F.3d at 1320. Here, there is essentially no structure provided beyond, at most, the embodiment shown in Figures 16-22 and the corresponding limited written description. Thus, only one construction exists that is, even arguably, definite.

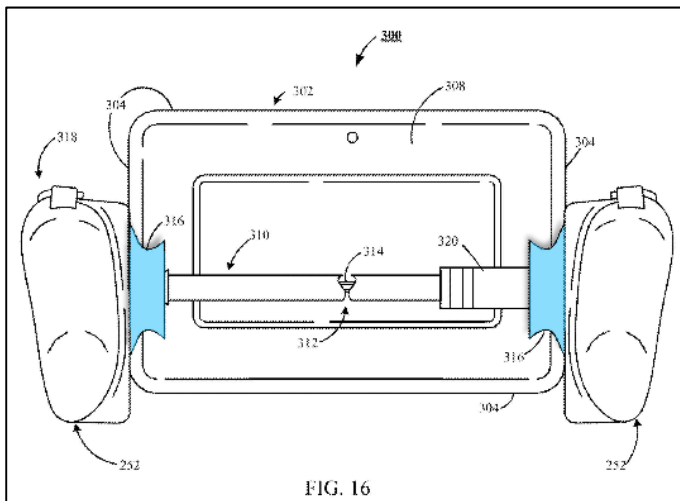


Figure 16 (annotated left) shows what the written description identifies as two confinement structures 316. They are shown adjacent to and confining the two sides of the computing device, as

claimed, but with no other structural detail. The specification further describes the confinement structures in functional language, noting that the communication port

310 “provides a pair of confinement structures 316, ... which are preferably adjacent to and confining, the computing device 302 on at least two opposing sides...” Ex. 1001 at 8:1-5. Limited description of the confinement structures is further provided with regard to Figures 17 and 19-22. The specification describes the confinement structures as shown in those figures as including a device cradle 336 and other features, such as docking pins 334, an interface feature, and signal input lands. *Id.* at 8:54-67.

Accordingly, the term *pair of confinement structures* should be construed as a means-plus-function phrase limited to the disclosures of Figures 16-22 (and accompanying description) or their equivalents.

In any case, the specification’s disclosures concerning the confinement structures, which are claimed to be adjacent to and confining the computing device on at least two opposing sides of the computing device, are limited to the structure 316 identified in Figure 16 and related figures and corresponding descriptions, as discussed above. So even if *confinement structure* is not considered a means-plus-function term, its construction should be limited to the disclosures of Figures 16-22 and accompanying descriptions because any broader interpretation would be improper. *In re Smith International, Inc.*, 871 F.3d 1375, 1383 (Fed. Cir. 2017).

2. “Structural Bridge” (claims 1, 9-10)

Structural bridge is a “coined term” with no common, ordinary meaning. Kitchen ¶78. The broadest reasonable interpretation of *structural bridge* is “a member separate from, and external to, the computing device that connects the confinement structures one to the other whether or not a computing device is present.” *Id.* ¶¶78-80. Every figure that teaches a *structural bridge* shows a structure separate from and external to the computing device that connects either the control modules or the confinement structures. Ex. 1001 at Figs. 14-18, 25. Likewise, the specification’s discussion of a *structural bridge* is limited to descriptions of Figures 14 and 17—which include only an external structure that connects either the control modules or the confinement structures together, depending on the embodiment. *Id.* at 7:1-5, 8:28-35. Further, the specification provides that the computing device can be “remove[d]” from the controller and it is the controller that provides the communication port, the input device, and *the confinement structures*. *Id.* at 8:44-53, Abstract. In the claims, the *structural bridge* is limited to securing the confinement structures one to the other, as shown in Figure 17, and is recited as a structure separate from the computing device. *Id.* at 10:19 (claim 1).

Accordingly, the BRI of *structural bridge* requires “a member separate from, and external to, the computing device that connects the confinement structures one

to the other whether or not a computing device is present.” No support exists in the claims, specification, or prosecution history for interpreting structural bridge to encompass a structure internal to, or part of, the claimed computing device.

3. “Conduit” (claim 1)

The BRI of *conduit* is “closed tube or duct for confining and protecting wires or cables.” The specification describes a *conduit* in only a single instance where it explains that, as shown in Figure 17, the “fastening mechanism 320, is preferably securely fastened to to [sic] a conduit 328, of the structural bridge 322....” Ex.

1001 at 8:35-40. Figure 17 (shown below) shows the conduit 328 as a portion of

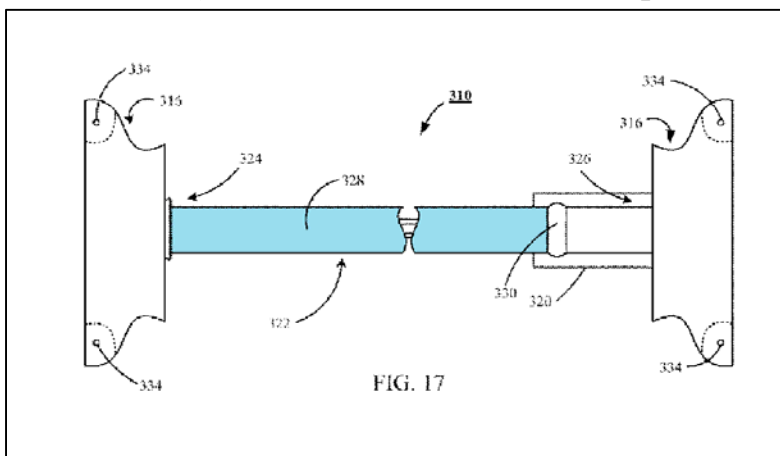
the structural bridge 322

with wired components

running through it. *Id.* at

Fig. 17. Consistent with

this usage, common



dictionaries show that *conduit* has a well-understood meaning in ordinary parlance

when used as to electrical devices. The American Heritage Dictionary defines

conduit as “a tube or duct for enclosing electric wires or cable.” Ex. 1011 at 307.

A POSITA reading the '119 patent's specification and claims would

understand *conduit* to have its ordinary and reasonable interpretation in this

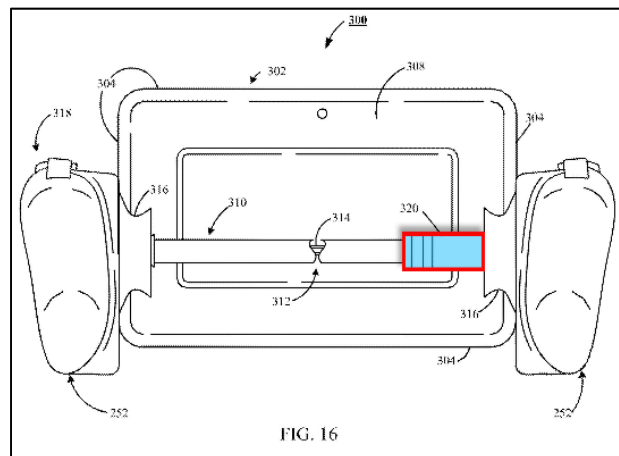
context: a “closed tube or duct for confining and protecting wires or cables.”

Kitchen ¶¶81-83. Any broader construction would be unreasonable because it has no support in the specification, prosecution history, or ordinary parlance.

4. “Fastening Mechanism” (claim 1)

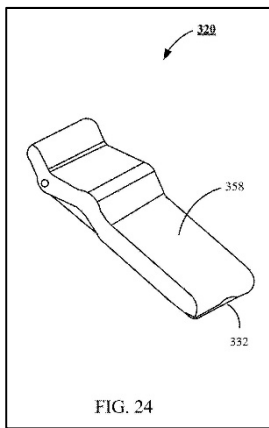
Independent claim 1 requires that the *structural bridge* comprise a *fastening mechanism cooperating with the pair of confinement structures, the fastening mechanism secures the pair of confinement structures one to the other*. Ex. 1001 at 10:25-28. The *fastening mechanism* is recited in purely functional terms by what it does: *cooperating with the confinement structures and secur[ing] them one to the other*. Thus, while the phrase does not use the term “means,” it is a means-plus-function limitation because it merely recites function with no structure. *Adv. Ground Info. Sys.*, 830 F.3d at 1347.

As claimed, the function of the *fastening mechanism* is “cooperating with and securing the pair of confinement structures one to the other.” The only structure disclosed for *fastening mechanism* is the fastening mechanism 320, taught in Figures 16-18, 21, and 24-25. That component is shown in



annotated Figure 16 (right). The specification explains that the communication port includes a “fastening mechanism 320” that in one embodiment is “a soft draw

latch, such as that provided by Southco” of Concordville, PA. Ex. 1001 at 8:23-27. That latch is shown in detail in Fig. 24 (left). According to the specification, the fastening mechanism is fastened to the conduit via anchor member 330, which is in turn positioned adjacent to the slip fit 326, and attached to the other confinement structure via an attachment member 332. *Id.* at 8:35-43. “Operation



of the fastening mechanism 320, facilitates an expand and contract of the distance between the pair of confinement structures” though the use of the slip fit. *Id.* at 8:43-45, 9:42-44.

Accordingly, the only arguably definite structure for *fastening mechanism* is limited the fastening mechanism 320 of Figures 16 and 24—the soft draw latch and slip-fit discussed in the specification. Kitchen ¶¶84-88.

Even if means-plus-function treatment were not given to fastening mechanism, the BRI would still be a soft draw latch or equivalent structures. The specification discloses that the fastening mechanism “facilitates an expand or contract of the distance between the pair of confinement structures,” and only provides one disclosure that arguably satisfies this requirement: a soft-draw latch.

5. “Communication Link” (claims 1, 13, 16)

The BRI of communication link is a “wired or wireless connection for passing signals between the control modules.” This is what the specification

describes when discussing the communication link and is consistent with the term's plain and ordinary meaning. The specification explains that Figure 14, which does not teach confinement structures, shows that the structural bridge 258 "provides a communication link 270, which passing [sic] signals between the pair of control modules 252." Ex. 1001 at 7:15-17. It further explains that the communication link can provide a communication module 272 or a signal pathway 274 for "use in passing signals between the pair of control modules 252." *Id.* at 7:18-49. With regard to Figure 16, which added confinement structures, the communication link 312 is identified as part of the communication port and either a wired or wireless connection allowing communication between the confinement structures and thus the control modules. *Id.* at 7:65-8:1, Fig. 16.

VI. THE CHALLENGED CLAIMS ARE UNPATENTABLE

Claims 1-10 and 13-21 are unpatentable under 35 U.S.C. § 103.

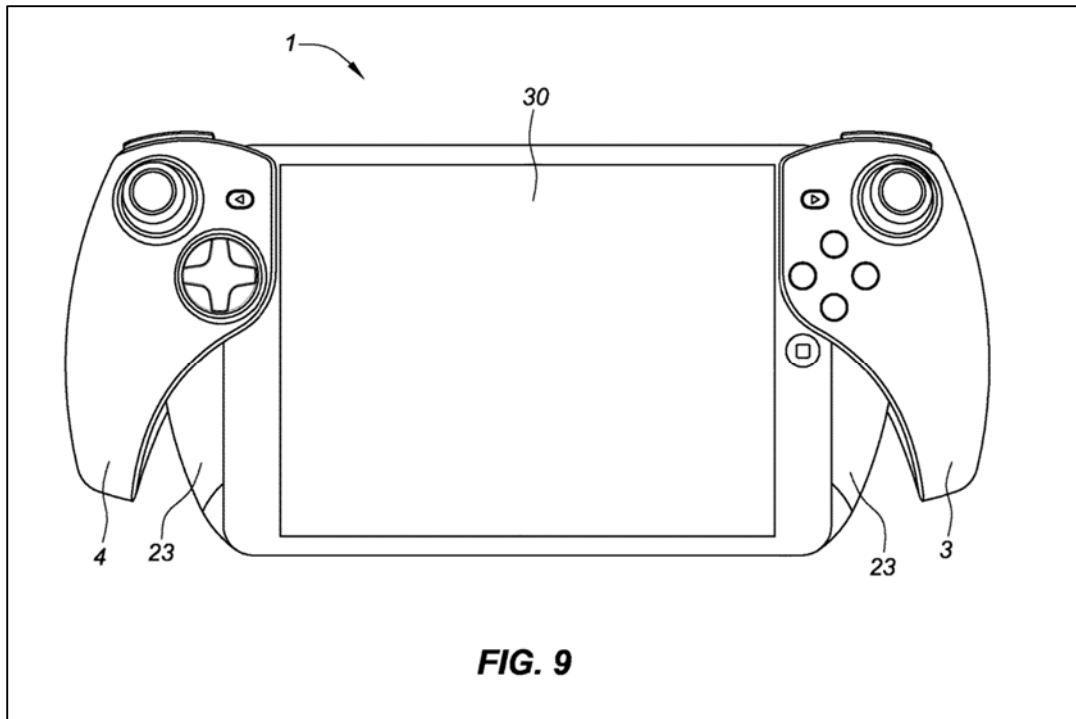
A. Prior Art

1. Schoenith

Schoenith issued from an application filed July 11, 2014 and published January 15, 2015. It claims priority to provisional applications filed July 11, 2013 and September 18, 2013. It is prior art under 35 U.S.C. § 102(a)(1)-(2).¹ Schoenith was not of record in the '119 patent's prosecution.

Schoenith disclosed a game controller apparatus designed to work with smart devices such as iPhones and iPads. As shown in Figure 9, the controller accessory included a right side panel, a left side panel, and a “cradle” that could be detachable. Ex. 1003 at 2:14-19. The right and left side panels were controllers that could include input controls, such as a joystick, directional pad (“d-pad”), buttons, or others, used to control a game on a smart device. Those input controls could be “removable or non-removable, and interchangeable.” *Id.* at 4:40,-67, 5:45-56.

¹ The '119 patent is subject to AIA §§ 102-103 because at least one claim is entitled to the actual filing date of February 2, 2015. MPEP § 2159.02 (9th ed., rev. Jan. 2018).



Schoenith's cradle could be attached to the right and left side panels and secure a smart device. *Id.* at 5:15-26, 6:15-20, 7:14-30, 8:21-35. It could have any size, shape, or configuration, and enabled the smart device to fit snugly in the cradle and be "securely placed, inserted, slid, attached, and the like[.]" *Id.* at 6:25-29. The cradle could have structures to secure accommodation of the smart device such as a depression portion, slots, and/or raised walls on any of the cradle's sides. *Id.* at 6:30-50, 6:55-61. It could also have "connection parts" such as snap-fits, mechanical keys, or support wings, to connect to the control panels, which had their own attachment openings or connections. *Id.* at 7:14-33.

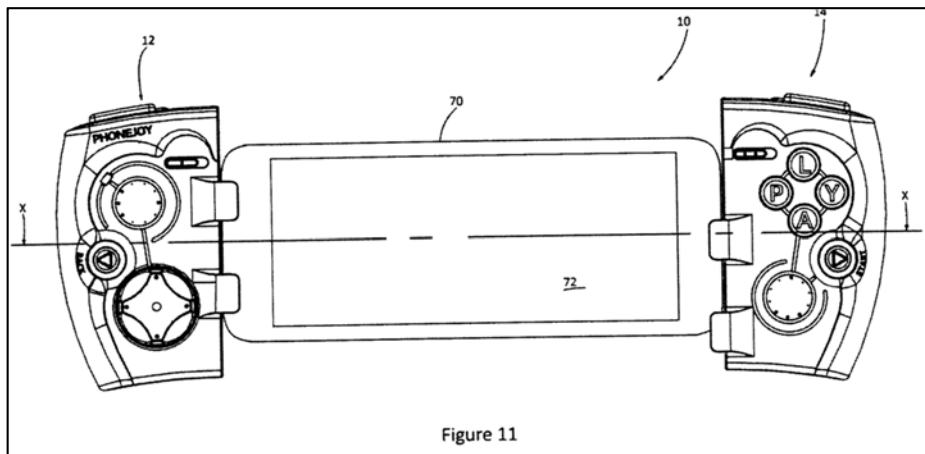
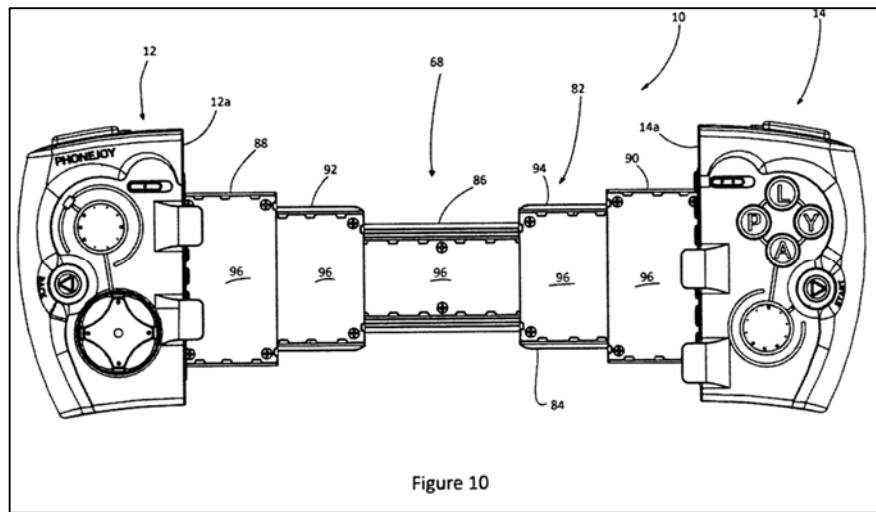
Schoenith taught that its controller could include a wireless connection such as Bluetooth or infrared LEDs for exchanging data between the smart device and

the controller “in the right side panel, left side panel, the chassis, the cradle, or a combination thereof.” *Id.* at 7:34-41. It could also have wired connections such as a power connector (e.g., Apple Lightning connector) and a docking port to which the device could attach via the panels or the cradle. *Id.* at 7:42-66.

2. Kessler

Kessler published on May 30, 2014 after being filed on September 13, 2013 with a U.S. designation. It claims priority to a foreign application filed in November 23, 2012. Kessler is prior art under 35 U.S.C. § 102(a)(1)-(2). Kessler was not of record in the '119 patent's prosecution.

Kessler disclosed a handheld game pad controller designed to hold and communicate with a computing device. Like Schoenith, it taught separate left and right handle housings that each contain user input controls such as buttons, d-pads, or joysticks. The handle controllers were interconnected via an adjustable bridge that wrapped around the back of a smart device. When opened, the controller could receive the handheld computing device by confining it on two sides. Figure 10 (below) showed the game controller in an open position without the computing device. Figure 11 (below) showed the controller holding a smart phone.

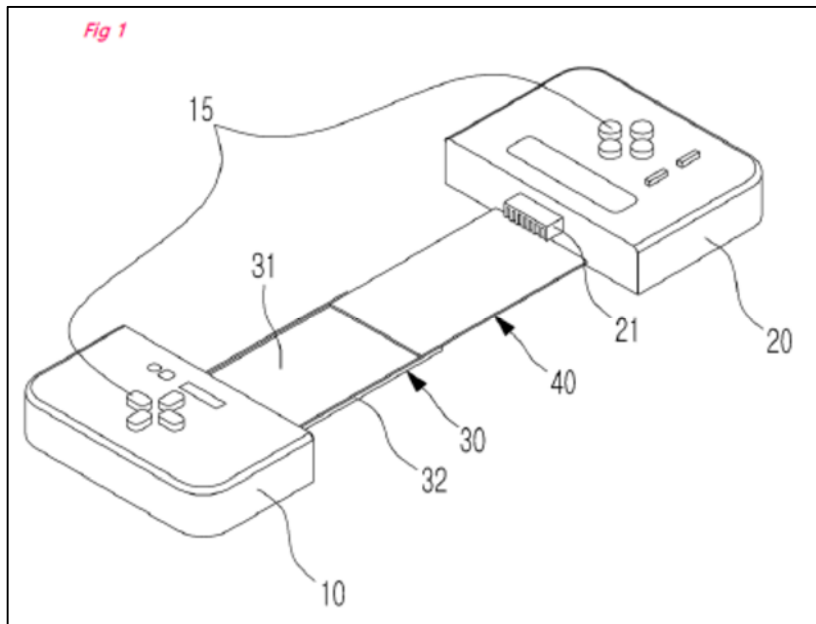


The controller in each of the handles had memory, a processor, and a communication module (which could be wireless or wired) capable of communicating with the smart device. Ex. 1005 ¶¶11-12, 19. Each handle also had control circuitry connected via an electrical connection means that passed through the extension mechanism (bridge), which is identified as a “conduit.” *Id.* ¶¶26-27.

3. Park

Park was filed April 20, 2010 and published October 26, 2011. It is prior art under 35 U.S.C. § 102(a)(1)-(2). Park was not of record in the '119 patent's prosecution.

Park disclosed a gamepad apparatus that consisted of two controllers—one on the left and one on the right—connected via an adjustable bridge. Ex. 1004 at Abstract. The device confines a mobile phone lengthwise on two sides between the raised walls of the controllers with the adjustable bridge supporting the back of the phone. *Id.* ¶13. Figure 1 below shows Park's device without the mobile phone inserted:



The left and right controller bodies are electrically connected via a cable that runs through the bridge. A connecting terminal 21, or docking port, is also

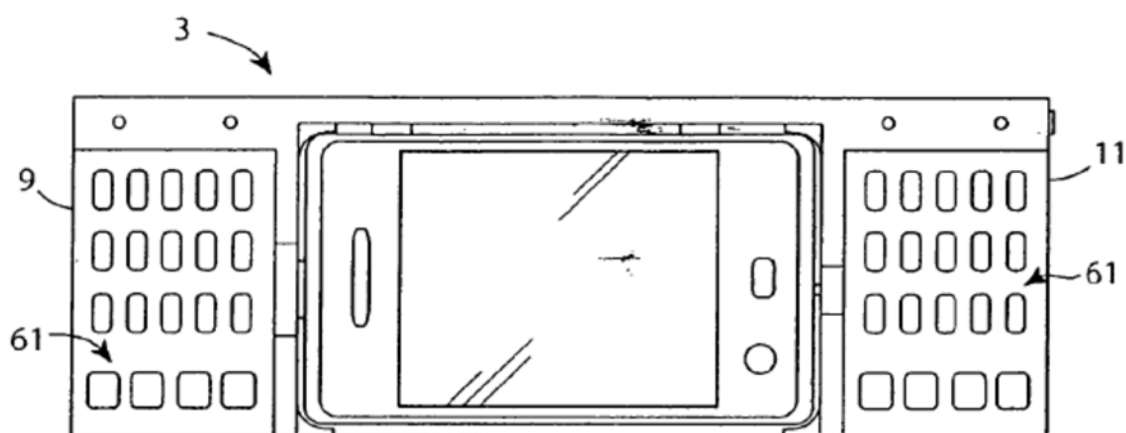
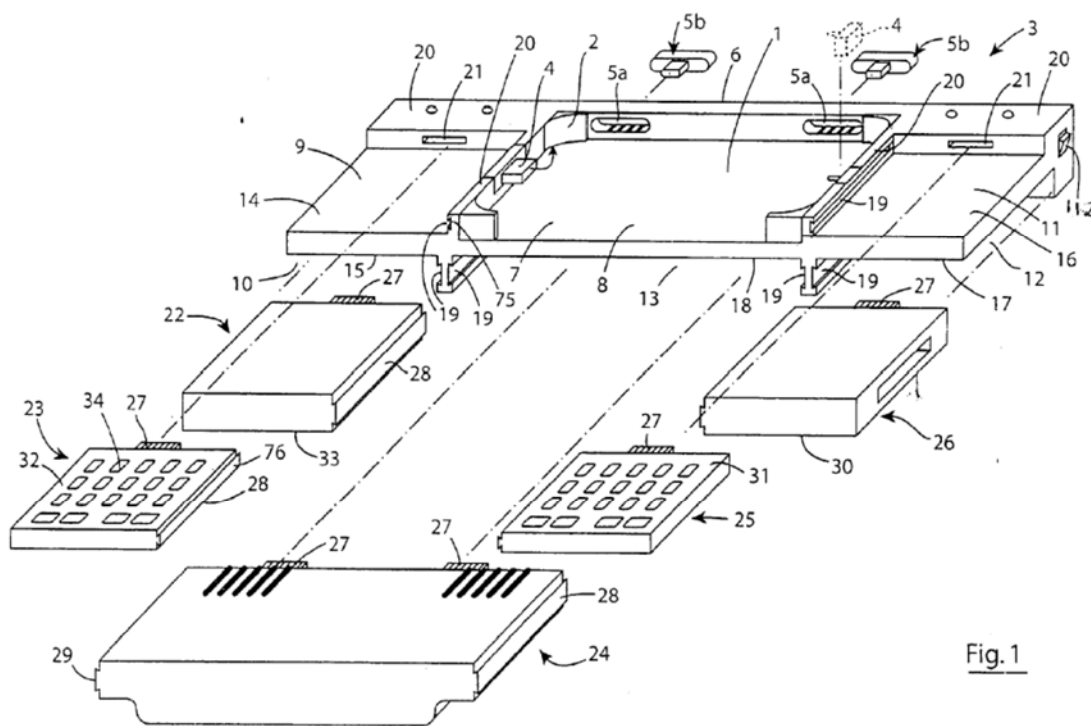
provided to link the mobile phone to the bodies. The two sides of the device are fastened together by the sliding panels of the bridge, which contained recessed guide grooves and catching holes that locks them, and thus, the inner side walls of the controllers, together. *Id.* ¶9.

4. Michael

Michael was filed July 18, 2008 (PCT) and published on August 5, 2010. It is prior art under 35 U.S.C. § 102(a)(1)-(2). Michael was not of record in the '119 patent's prosecution.

Michael disclosed a handheld docking station for personal electronic devices, including mobile phones. Ex. 1015 ¶¶1, 10-17. The docking station provides a cradle/frame with a defined compartment for holding a smartphone, as well as two compartments for docking interchangeable modular controls. *Id.* ¶¶10-17, 49-51, 82-83, 100. The interchangeable controls included gaming controls so as to provide the user the feel of a traditional game controller when gaming on the

smartphone. *Id.* ¶¶17-18, 20, 35-36. Figures 1 and 5 show the device and how it interacts with the phone and interchangeable input controls.



As shown, the phone is physically and electrically connected when docked. *Id.* ¶¶125-26, 135. Likewise, each interchangeable controller module attaches to the sidewalls of the docking station and is electrically connected to the device, which then communicates with the phone via the docking connector. *Id.* ¶¶17, 20, 82-83, 100, 128-29.

B. Ground 1: Claims 1-10 and 13-21 are unpatentable as obvious over Schoenith in view of Kessler

1. Motivation to Combine

The Supreme Court has explained that where a claimed invention involves “mere substitution of one element for another known in the field, the combination must do more than yield a predictable result.” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 416-17 (2007). Patentability thus requires more than rearranging “old elements with each performing the same function it had been known to perform and yield[ing] no more than one would expect from such an arrangement.” *Id.*

The claims of the ’119 patent involve mechanical technology that is not complex, where the claimed elements would be easily interchangeable with teachings from known prior art and where a POSITA would have had a high expectation of success in modifying or combining those teachings to create the claimed combinations. See *Kitchen* ¶¶66,107; see also *Allied Erecting &*

Dismantling Co. v. Genesis Attachments, LLC, 825 F.3d 1373, 1381 (Fed. Cir. 2016) (physical combinability not required for obviousness).

A POSITA would have had several reasons to combine the teachings of Schoenith and Kessler. Each teach game controller devices with similar features that solve a similar problem. *KSR*, 550 U.S. at 420 (“[A]ny need or problem known in the field of endeavor at the time of invention and addressed by the patent can provide a reason for combining the elements in the manner claimed.”); *Nike, Inc. v. Adidas AG*, 812 F.3d 1326, 1337 (finding motivation where references “serve[d] the same purpose”). Each was designed to hold a smart phone or tablet in place and provide two external control modules for use in gaming. Those control modules provide buttons, joysticks, or other input devices. The essential point of each device is to provide physical controls for use with gaming on a touchscreen device to improve the overall gaming experience and avoid the problems associated with controlling a game solely via a touchscreen. *Kitchen* ¶¶61-62, 68-71, 107.

Schoenith explained that due to the “growing number of hand-held electronic devices available to consumers, there is an increasing need for secondary accessories that modify and enhance these devices.” *Ex. 1003* at 1:11-15. It then identified problems associated with gaming on a smart device without a controller—discomfort, blocking the screen, and the ability to use only a single index finger for game control—and identified how an accessory providing

“additional controls” was needed. *Id.* at 1:35-62. Kessler likewise explained that its controller was designed to provide physical controls for use while gaming on a smart phone, but to do so in a way that stably mounts the phone, provides a balanced and easily manipulatable set of controls, provides a natural viewing position, and is adjustable to secure different sized phones. Ex. 1005 ¶¶2-11, 14-18. In light of these similarities and the compatible nature of their overall structures, a POSITA would have been familiar with, and understood, the interchangeable nature of their teachings in any endeavor to design a game controller for smartphones (*i.e.*, portable computing devices). Kitchen ¶¶66, 68-71, 107.

Given the number and variety of smartphones and tablets widely available before the priority date of the ’119 patent, a POSITA would have been motivated to improve Schoenith’s game controller by making the cradle/bridge adjustable to accommodate devices of different sizes. Kitchen ¶67. Making the bridge adjustable to work with a wider variety of phones or tablets would make the device more useful to consumers and was a known feature for similar devices. *Id.* Kessler likewise provided an example of how to design an adjustable bridge that complements Schoenith’s teachings. As Kessler explained, the adjustable nature of its bridge “provides the advantage that the controller or handheld apparatus ... can be used with a range of different sized handheld information processing devices such as smart phones.” Ex. 1005 ¶¶17-18. Using Kessler’s teachings of an

adjustable bridge structure would have been the use of known components as they were designed to be used to reach predictable results. Kitchen ¶¶67-71.

Finally, a POSITA would have recognized the benefit of combining Schoenith's and Kessler's teachings because the use of Schoenith's detachable controllers would have improved Kessler's design, thus allowing users to attach a larger variety of controls and modes of using the controllers, including away from the computing device, to suit the user's preference (*e.g.*, various button layouts, additional joysticks, etc.). Kitchen ¶¶64,66. A POSITA would have been recognized this as the use of known components, as they were designed, to reach predictable results. *Id.*

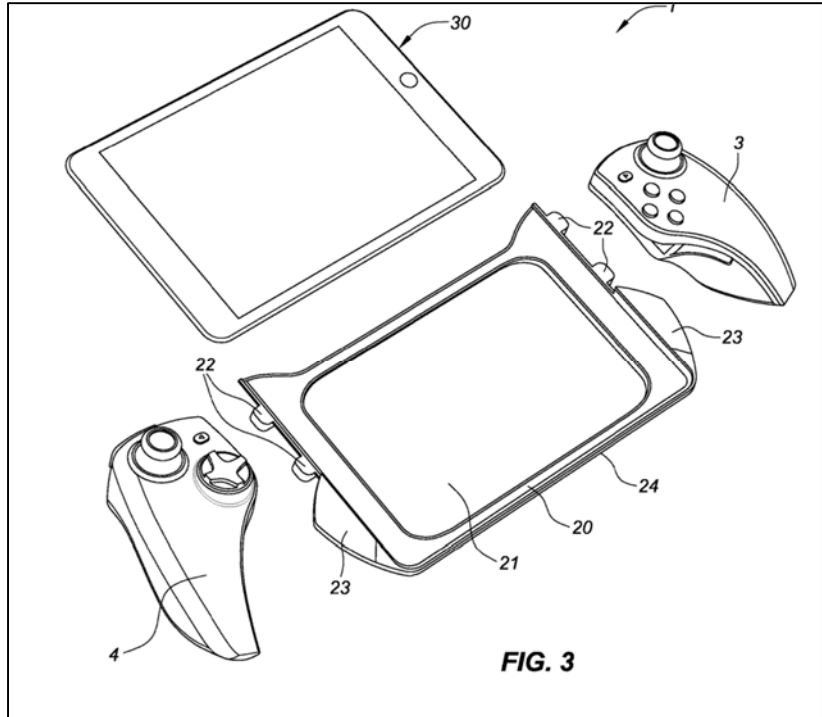
2. Claim 1

- a. Limitation 1(a)-(b): *A combination comprising: a computing device, the computing device providing a plurality of sides, each of the plurality of sides are disposed between an electronic display screen of the computing device and a back of the computing device;*

Schoenith disclosed a *computing device providing a plurality of sides*, which were *disposed between an electronic display screen and the back of the computing device*. As shown in Figure 3 (below), it taught “hand-held smart devices” such as

iPhones, tablets, and other “smart devices,” which were combined with a game controller accessory. Ex. 1003 at 1:23-24, 4:32-39, Fig. 3. Such devices were well-

known and contained electronic display screens, a plurality of sides, and a back. *Id.* at 1:24-2:10, 4:65 (devices contain screens), 6:55 (back), Fig. 3, 8-13, 16-20 (showing smart device with screen, plurality of



sides, and back); Kitchen ¶109. Kessler likewise taught a smart device to be used with its game controller accessory. Ex. 1005 ¶11-12; Figure 11; Kitchen ¶110.

- b. Limitation 1(c): *a communication port interacting with the computing device, the communication port providing a communication link and a pair of confinement structures, the pair of confinement structures adjacent to and confining the computing device on at least two opposing sides of the plurality of sides of the computing device;*

Schoenith taught a cradle that supports the smart device on at least two sides. That cradle could have any size, shape, or configuration, and could have structures such as a depression portion and/or “raised walls” on any side to secure the smart

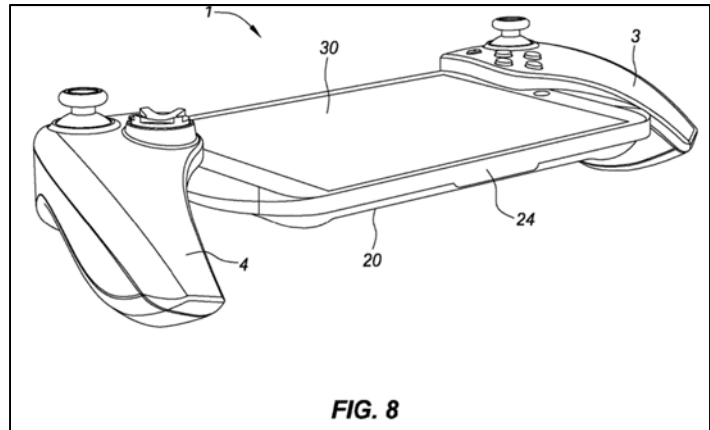
device on those sides. Ex. 1003 at 6:15-50; 6:58-63 (support may be provided on one, two, or three sides, leaving the remaining sides free of support), 9:65-67 (identifying raised wall 24). Thus, Schoenith taught a *pair of confinement structures adjacent to and confining the computing device on at least two opposing sides* of the computing device. *Id.* at Figs. 3, 8-12, 17-20 (showing confinement structures in form of cradle sides). The cradle's sides and raised walls, on two sides, satisfy the requirement of being "adjacent to and confining the computing device on at least two opposing sides of the plurality of sides of the computing device." Kitchen ¶¶113-115.

Schoenith disclosed a *communication link* because it taught that the controller could include components such as a wireless connection "for exchanging data between the smart device and the controller in the right side panel, left side panel, the chassis, the cradle, or a combination thereof." Ex. 1003 at 7:35-41 (emphasis added). It likewise taught use of wired connections between the smart device and the controller in the panels, the cradle, or a combination thereof. *Id.* at 7:42-47 (describing a wired electrical connection between smart device, cradle, and controller). Thus, Schoenith disclosed a *communication port* (cradle structure) that provides a *communication link* and a *pair of confinement structures*, as claimed. Kitchen ¶113.

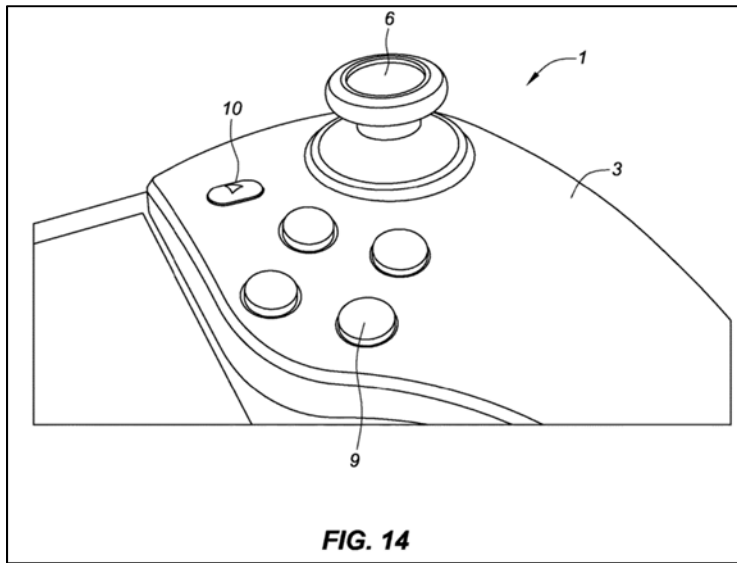
To the extent it is argued that Schoenith's disclosures are insufficient as to *communication link*, Kessler disclosed two controller modules (similar to Schoenith's controllers) that were explicitly connected via an electrical cable running through a bridge. Thus, a POSITA seeking a more detailed disclosure of what Schoenith already provided—a *communication port* providing a *communication link* between controller modules—would have looked to Kessler, which showed that one would connect the modules via the *communication port*, thereby providing a *communication link*, as claimed. Kitchen ¶116.

- c. Limitation 1(d): *an input device attached to and in electronic communication with the communication port, the input device providing a pair of control modules, the pair of control modules providing input module apertures, each input module aperture secures an instructional input device, wherein said input module apertures are adjacent each of the at least two opposing sides of the plurality of sides of the computing device, and wherein the input device is a separate and distinct structure from the communication port, forming no structural portion of the communication port; and*

Schoenith disclosed an *input device attached to and in electronic communication with the communication port as claimed*. First, the *pair of control modules* are the right and left side panels, which could be attached to the sides of the cradle. Ex. 1003 at 7:14-15; Figs. 2, 3, 8-13, 17-20. Figure 8, as one example (right), showed the panels attached to the cradle.



Those control panels, as noted above, could communicate with the smart device or the cradle (the *communication port*) via wired or wireless connection. *Id.* at 7:35-47. Second, the *control modules*, or side controller panels, provided *input module apertures* that *secure[] instructional input device[s]* and are *adjacent each of the at least two opposing*



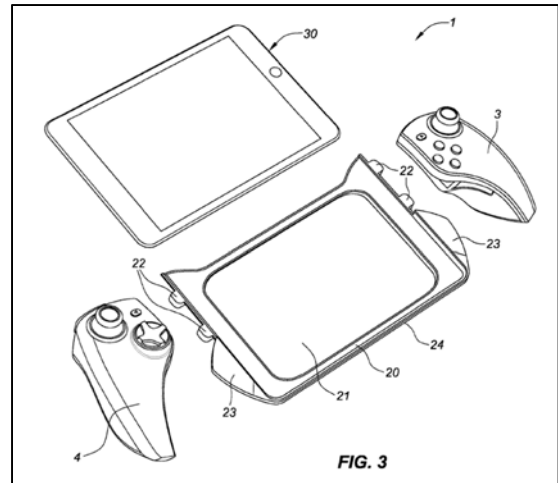
sides of the computing device, as shown above. The instructional input devices were buttons, d-pads, joysticks, or other controls. *Id.* at 5:45-67. Figure 14 (left) provided a close-up of the instructional

input devices secured by the input module apertures. Finally, the input device is separate and distinct from the communication port (i.e., confinement structures and bridge of the cradle) because the controllers are physically separate and detachable components. *Id.* at Fig. 3; Kitchen ¶¶118-22, 127.

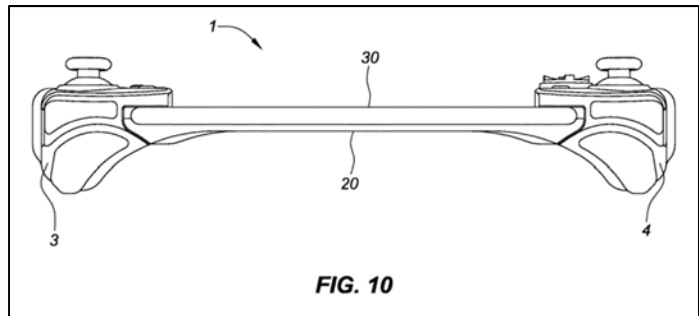
- d. Limitation 1(e): a structural bridge securing the pair of confinement structures one to the other, in which each of the pair of control modules provide an attachment structure cooperating with the communication port, each attachment structure secures the input device to the communication port, and in which the structural bridge comprising:

Schoenith disclosed a structural bridge securing the pair of confinement structures one to the other because it taught a third side of the external cradle that physically connected and secured the two lengthwise sides of the cradle, which then provided raised walls, or confinement structures, to confine the electronic device. *Id.* at 6:15-50, 6:58-63 (cradle can offer support along two or three sides

while leaving others unsupported); Figs. 3, 8-12, 17-20; Kitchen ¶¶129-132. The structural bridge was external to the computing device. Further, the right and left panels, or control modules, each provide attachment structures that cooperat[e] with

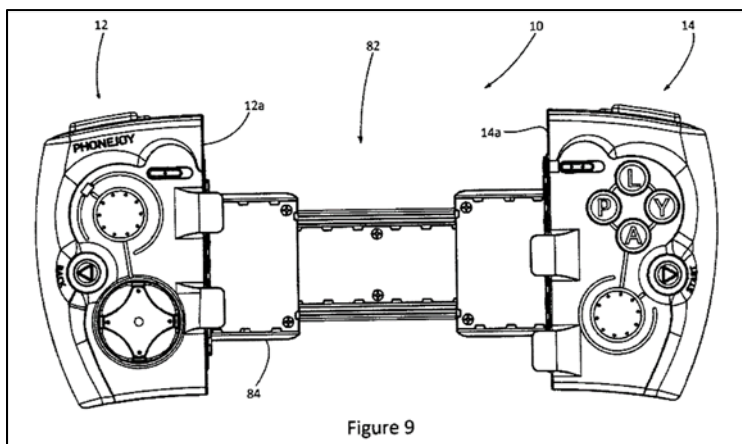


and secure[] them to the communication port because they provide structural openings that connect to the cradle. *Id.* at 7:14-34; 9:31-32 (connection, opening, or both of side panels used to connect to cradle); Kitchen ¶136. Figure 10 (above) shows side panels attached via attachment structures to the cradle.



cradle); Kitchen ¶136. Figure 10 (above) shows side panels attached via attachment structures to the cradle.

A POSITA would also have been motivated to improve Schoenith's cradle



structure on the third side, or structural bridge, and use a more robust, and adjustable, structural bridge instead, as taught in Kessler. Kessler taught a structural bridge that

could adjust to accommodate different sized smart devices (like the '119 patent), and would work with Schoenith's design because both are designed to provide two side controllers and confinement structures via a bridge to hold a smartphone or tablet. As shown above, Kessler's connection mechanism is a *structural bridge*, which would be easily adapted to utilize Schoenith's two "raised walls," separate from the controllers, that hold the device. Kitchen ¶¶133-34.

- e. Limitation 1(f): *a conduit between the pair of control modules; and a fastening mechanism cooperating with the pair of confinement structures, the fastening mechanism secures the pair of confinement structures one to the other.*

The Schoenith/Kessler combination satisfies this limitation. First, Schoenith's *structural bridge* combined with Kessler would comprise a *conduit*. Kessler taught that its bridge was a form of "conduit" for the electrical connections that run through it because it provided a protected area for the electrical wires/circuit. Ex. 1005 ¶¶27, 93. In light of that disclosure and a POSITA's knowledge, the use of a *conduit* as properly construed was obvious. Kitchen ¶¶138-46. That *conduit* would have run between the two *control modules*, which both Schoenith and Kessler taught on the left and right sides.

Second, although Schoenith and Kessler do not explicitly teach a fastening mechanism under Nintendo's proposed construction, a POSITA would have found it obvious to include a *fastening mechanism* that *cooperat[es] with and secures the*

pair of confinement structures one to the other. Kessler taught that its extension mechanism, or bridge, contained slats that slide together via overlapping tongue/groove connections. Ex. 1005 ¶¶90-91. While Kessler did not expressly describe how its extension mechanism was fastened together, a POSITA would have understood that such a mechanism *would* be fastened together, including by using a latch-type structure or another equivalent, as known in the art. Kitchen ¶139. In light of these disclosures and the knowledge of a POSITA—including what was known in the state of the art, such as Park’s catching hole fastening mechanism—it was obvious to add a latch-like structure or equivalent to an adjustable structural bridge, to create an extendable bridge that secures together raised sides wall, as taught by Schoenith and Kessler. Kitchen ¶¶149,154-57.

Moreover, under Gamevice’s improper, apparent constructions, Kessler’s tongue and groove mechanism would satisfy this limitation. In the Central District of California suit, Gamevice pointed to screws as fastening mechanisms, apparently contending that anything that keeps confinement structures together, even if indirectly, satisfies the fastening mechanism limitation. Ex. 1009 at 11. Under that improper construction, Kessler’s tongue and groove assembly would disclose a fastening mechanism (either expressly or inherently) securing side walls, as taught by Schoenith and Kessler, together. Kitchen ¶¶150-53.

3. **Claim 2:** *The combination of claim 1, further comprising a data storage device confined within the input device and communicating with the computing device.*

The Schoenith/Kessler combination renders this claim obvious. *See supra* §VI.B.1. Kessler taught that at least one handle controller comprised a memory storing machine readable instructions, a processor, and a communications module. Ex. 1005 ¶12. Including memory and other computing components in a game controller was standard in the art and obvious to a POSITA. Kitchen ¶¶158-62. This was using known components as intended to achieve predictable results. *Id.*

4. **Claim 3:** *The combination of claim 1, further comprising an auxiliary power source confined within the input device and communicating with the computing device.*

The Schoenith/Kessler combination renders this claim obvious. *See supra* §VI.B.1. Schoenith taught that the controller could include power storage/batteries for operation, and that the docking port enabled charging of the smart device while the smart device is inserted. Ex. 1003 at 7:49-67. Kessler likewise taught that the handle housings could contain a power supply that could pass power to each other. Ex. 1005 ¶93. A POSITA would have been motivated to use these known components (power sources, *e.g.*, batteries) as intended to achieve predictable results (powering a device). Kitchen ¶¶163-66. A POSITA would have been motivated to do so because rechargeable batteries were well known, because Schoenith and Kessler taught that batteries could be used to power the operations

of the handle housings, and because a computing device may have a greater power supply capacity than the game controller, allowing it to be used to supply power to an auxiliary power source within an input device. *See id.*

5. **Claim 4:** *The combination of claim 1, in which the instructional input device is a removable input device, and in which the removable input device passes signals through the communication port to the computing device, the signals controlling images displayed on the display screen of the computing device.*

The Schoenith/Kessler combination renders this claim obvious. *See supra* §VI.B.1. Schoenith taught that the instructional input devices, or buttons, joysticks, etc., “may be backlit, removable or non-removable, and interchangeable.” Ex. 1003 at 5:55-56. Further, as discussed above, Schoenith taught that its controls were used to control a game on a smart device (*e.g.*, iPhone or iPad), *id.* at 1:21-62, and that it had connections “for exchanging data between the smart device and the controller in the right side panel, left side panel, the chassis, the cradle, or a combination thereof.” *Id.* at 7:35-41; 7:42-47 (wired connections, such as docking connector, disclosed). Thus, the controls could pass signals from the removable input devices through the communication port (or cradle) and then to the smart device. Kitchen ¶168. Kessler likewise provided similar input controls that controlled games running on smart devices. Ex. 1005 ¶¶11-12, 93. A POSITA would have understood that game controllers were used to control images displayed

on the screen of a smart device during gameplay. Kitchen ¶171. Thus, in light of the teachings of Schoenith and Kessler, a POSITA would have found it obvious and would have been motivated to use *removable input devices* as claimed. *Id.* ¶¶167-72.

6. **Claim 5:** *The combination of claim 1, in which the instructional input device is a game control module, and in which the game control module passes signals through the communication port to the computing device, the signals controlling images displayed on the display screen of the computing device.*

The Schoenith/Kessler combination renders this claim obvious. *See supra* §VI.B.1. The input controls in Schoenith and Kessler are *game control modules* because they are input buttons, d-pads, and joysticks (among others), or *modules*, that are specifically provided for controlling gaming applications. Ex. 1003 at 5:45-67; Ex. 1005 ¶¶11-12. The remaining aspects of this claim were taught for the same reasons as claim 4. *See supra* §VI.B.5.

7. **Claim 6:** *The combination of claim 1, in which the instructional input device is a keyboard module, and in which the keyboard module passes signals through the communication port to the computing device, the signals controlling images displayed on the display screen of the computing device.*

The Schoenith/Kessler combination renders this claim obvious. *See supra* §VI.B.1. In addition to the gaming-specific input controls taught in each, Schoenith and Kessler disclosed that a variety of controls could be used. Ex. 1003 at 5:45-67

(controller could provide “one or more controls”); Ex. 1005 ¶¶11 (input means used to generate control signals communicated to phone in order to “exert some control on a game or other application...”), 73 (user input means could comprise any of d-pad, joy-stick, or “one or more push buttons”). A POSITA would have understood that the variety of input controls available would include a keyboard module, which is a combination of buttons or controls. Kitchen ¶180. Thus, a POSITA would have found it obvious to use a keyboard module as an input device. *Id.* The remaining aspects of this claim were taught for the same reasons as claims 4 and 5. *See supra* §§VI.B.5-6.

8. Claim 7: *The combination of claim 4, in which the removable instructional input device is a removable game control module.*

The Schoenith/Kessler combination renders this claim obvious for the same reasons as claims 4 and 5. Specifically, Schoenith taught that its buttons, joysticks, or input controls, which are *instructional input devices*, or *game control modules*, “may be backlit, removable or non-removable, and interchangeable.” Ex. 1003 at 5:55-56. Kessler likewise provided similar input controls that enabled control of a game on a smart device. Ex. 1005 ¶¶11-12. A POSITA would have understood that Schoenith’s and Kessler’s input controls—buttons, d-pads, joysticks—are *game control modules* that, as taught in Schoenith, could be removable and interchangeable to increase controller flexibility. Kitchen ¶182. Thus, at a

minimum, a POSITA would have found it obvious to use removable game input controls as claimed. *Id.*

9. Claim 8: *The combination of claim 4, in which the removable instructional input device is a removable keyboard module.*

Claim 8 was obvious for the same reasons explained for claims 4 and 6. See *supra* §§VI.B.5, 7. Specifically, Schoenith taught removable and/or interchangeable *instructional input devices*. Ex. 1003 at 5:55-56. Use of a *keyboard module*—i.e., a different type of known input means for its intended purpose, to provide user input—was obvious to a POSITA in light of Schoenith's and Kessler's teachings that a variety of input controls could be used. Kitchen ¶183.

10. Claim 9: *The combination of claim 1, in which the structural bridge is a ridged structure.*²

The Schoenith/Kessler combination renders this claim obvious. See *supra* §VI.B.1. Schoenith taught making its cradle, which provided a bridge, with materials offering sufficient rigidity to provide a secure accommodation of the smart device. Ex. 1003 at 8:43-60. Further, Kessler taught that its bridge comprised sections of molded plastics and a sheet metal cover plate, which

² Petitioners assume the phrase “ridged” is a misspelling of the term “rigid.” Ex. 1001 at 7:42-50. Dependent claim 10 also uses the term *rigid*.

provided a rigid *structure* as the *structural bridge*. Ex. 1005 ¶89. A POSITA would have understood that Schoenith and Kessler each taught *rigid structures* as the *structural bridge*. Kitchen ¶¶184-85.

11. Claim 10: *The combination of claim 9, in which the rigid structural bridge is a removable rigid structure.*

The Schoenith/Kessler combination renders this claim obvious. *See supra* §VI.B.1. Schoenith taught that its cradle was detachable. Thus, with Kessler's *structural bridge* linking the *confinement structures* of the combined Schoenith/Kessler device, the *rigid structural bridge* would be a *removable rigid structure*. Kitchen ¶¶186-87.

12. Claim 13: *The combination of claim 1, in which the communication link is a signal pathway.*

The Schoenith/Kessler combination renders this claim obvious. *See supra* §VI.B.1. Schoenith taught use of a wired connection between the smart device and the controller via the right/left side panels, cradle, or a combination thereof—thus, there necessarily existed a wired *communication link*, which is a *signal pathway*, that could pass signals between the control modules via the cradle. Ex. 1003 at 7:42-66; Kitchen ¶190. Further, Kessler's *structural bridge* provided a *communication link* in the form of a flexible circuit that enabled communications between the two controller modules and passed power between them. Ex. 1005 ¶93. That flexible circuit could be a “flexible circuit board, a flat multi-wire

electrical connector or any suitable electrical power and signal connection means.”

Id. The Schoenith/Kessler combination thus would have contained a *communication link that is a signal pathway*. Kitchen ¶¶191-93. In short, a POSITA would have understood that the adjustable bridge in the Schoenith/Kessler combination would have a wired connection or flexible circuit running through it. *Id.*

13. Claim 14: *The combination of claim 13, in which the signal pathway is a metallic pathway.*

The Schoenith/Kessler combination renders this claim obvious. *See supra* §VI.B.1. A POSITA would have understood that the wired communication links taught by Schoenith (*e.g.*, 30-pin docking connectors or Apple Lighting connector) or Kessler (*e.g.*, multi-wire electrical connectors) utilized a metallic pathway—*i.e.*, metallic wires and pins. Kitchen ¶195. A POSITA would further have had reason to use a *metallic pathway* as a *signal pathway* because it was a known design option (wires) that would be used as expected to produce predictable results. Kitchen ¶¶195-96.

14. Claim 15: *The combination of claim 13, in which the signal pathway is a fiber optic pathway.*

The Schoenith/Kessler combination renders this claim obvious. *See supra* §VI.B.1. As noted above for claim 14, Schoenith and Kessler each taught wired *signal pathways*. Further, Kessler taught that the electrical connection means could

be a multi-wire electrical connector or “any suitable electrical power and signal connection means.” Ex. 1005 ¶93. A POSITA would have understood that a *fiber optic pathway* is a suitable electrical signal connection means taught by Kessler, and thus that it would have been obvious to use a fiber optic cable in a Schoenith/Kessler combination. This is merely the use of known components, as they were intended to be used, to reach predictable results. See Kitchen ¶¶198-200. This would take the form, for example, of a fiber optic cable running through an adjustable bridge. *Id.*

15. Claim 16: *The combination of claim 1, in which the communication link provides a communication platform.*

The Schoenith/Kessler combination renders this claim obvious. See *supra* §VI.B.1. Schoenith taught that the controller (which includes the side panels and the cradle) included additional components such as a wireless connection for “exchanging data...”, in addition to wired connections, *e.g.*, docking connectors or an Apple Lightning connector. Ex. 1003 at 7:34-48. The wireless component could enable Bluetooth connectivity. *Id.* Further, Kessler similarly taught that, in addition to a wired connection or flex circuit, its controllers could contain a “communications module” for communicating control signals via “short range wireless protocol to the smart phone 70....” Ex. 1005 ¶102. In light of these disclosures, a POSITA would have found it obvious for the *communication link* to

provide a *communication platform*. Kitchen ¶¶201-03. As noted below, the communication platform may be a wired communications module, and so this would take the form of, for example, a wired connection running through the adjustable bridge, as taught by Kessler.

16. Claim 17: *The combination of claim 16, in which the communication platform is a wired communication module.*

The Schoenith/Kessler combination renders this claim obvious. *See supra* §VI.B.1. As explained for claim 16, Schoenith taught a wired connection between the smart device and the controller’s right or left side panel, cradle, or combination thereof. *Id.* at 7:42-48. A POSITA would thus have found it obvious for the *communication platform* to be a *wired communication module*, including in the form of, for example, a wired connection running through an adjustable bridge, as taught by Kessler. Kitchen ¶205.

17. Claim 18: *The combination of claim 16, in which the communication platform is a wireless communication platform.*

The Schoenith/Kessler combination renders this claim obvious. *See supra* §VI.B.1. Schoenith taught that the controller (which includes the side panels and the cradle) included additional components such as a wireless connection for “exchanging data...” Ex. 1003 at: 7:34-41. That wireless component could enable Bluetooth connectivity. *Id.* Furthermore, Kessler similarly taught that its

controllers could contain a “communications module.” Ex. 1005 ¶102. In light of these disclosures, a POSITA would have found it obvious for the *communication platform* to be a *wireless communication platform* in the combined Schoenith/Kessler device. Kitchen ¶¶208-09. This would take the form of, for example, the wireless component, as taught in Schoenith, implemented in an adjustable bridge, as taught by Kessler, so that the detachable controllers of Schoenith would be in wireless communication with components comprising the adjustable bridge, which in turn would interact with the computing device and communicate with the detachable controllers. *Id.*

18. Claim 19: *The combination of claim 18, in which the wireless communication platform operates in a frequency range of 2.4 GHz.*

The Schoenith/Kessler combination renders this claim obvious. *See supra* §VI.B.1. Schoenith and Kessler each taught the use of Bluetooth for the controller to communicate wirelessly. Ex. 1003 at 7:34-41; Ex. 1005 ¶¶19, 80. Kessler likewise taught the use, generally, of a “short range wireless communication protocol,” citing Bluetooth and WiFi as examples. Ex. 1005 ¶¶19, 80. Bluetooth operates (and operated in 2012 and 2015) *in a frequency range of 2.4 GHz*. Kitchen ¶¶211-12 (Bluetooth operation from 2.4-2.485 GHz). WiFi, likewise, was well-understood to operate in the 2.4GHz band. Kitchen ¶213.

19. Claim 20: *The combination of claim 18, in which the wireless communication platform is a personal area network.*

The Schoenith/Kessler combination renders this claim obvious. *See supra* §VI.B.1. Schoenith and Kessler each taught communication via wireless connectivity, including Bluetooth. *See supra* §VI.B.18. Utilizing those connections necessarily allowed the controller to join a personal area network, which was well understood by POSITAs by 2012 and 2015. Kitchen ¶216 (personal area networks created between devices connected wirelessly via Bluetooth). As described above, this would take the form of, for example, a wireless Bluetooth component, as taught in Schoenith, implemented in an adjustable bridge, as taught by Kessler, so that the detachable controllers of Schoenith would be in wireless communication with components comprising the adjustable bridge. *Id.*

20. Claim 21: *The combination of claim 18, in which the wireless communication platform utilizes infrared technology for data transactions.*

The Schoenith/Kessler combination renders this claim obvious. *See supra* §VI.B.1. Schoenith taught that infrared light-emitting diodes (LEDs) could be utilized for its wireless connection. Ex. 1003 at 7:37-41. Infrared LEDs are *infrared technology for data transactions* and were utilized by the *wireless communication platform*. Kitchen ¶¶219-20.

C. Ground 2: Claims 1, 3-10, and 13-21 are unpatentable as obvious over Schoenith in view of Park

1. Motivation to Combine

A POSITA would have had several reasons to combine the teachings of Schoenith with Park. *See supra* §VI.B.1. Schoenith and Park each taught game controllers with similar features that solved a similar problem. Park, like Schoenith, disclosed a game controller designed to hold a smart phone in place and provided two external control modules with input controls. Like Schoenith, Park's essential point was to provide physical controls for use with gaming on a separate touchscreen device to improve gaming experience. Kitchen ¶¶222; *see* Ex. 1004 at Abstract, ¶¶1-3, 18-22, 39; Ex. 1003 at 1:1-62.

As noted above, a POSITA would also have been motivated to improve Schoenith's game controller by making the bridge structure (or cradle) adjustable to accommodate portable computing devices of various sizes. Kitchen ¶¶67, 222. Making an adjustable bridge for an external controller accessory would make an external controller more useful to consumers and was a known feature for similar devices. *Id.* ¶67. Park explained, for example, that a user could adjust the bridge to accommodate his or her mobile phone. Ex. 1004 ¶¶39-46. Ultimately, combining Park's adjustable bridge structure with Schoenith would have

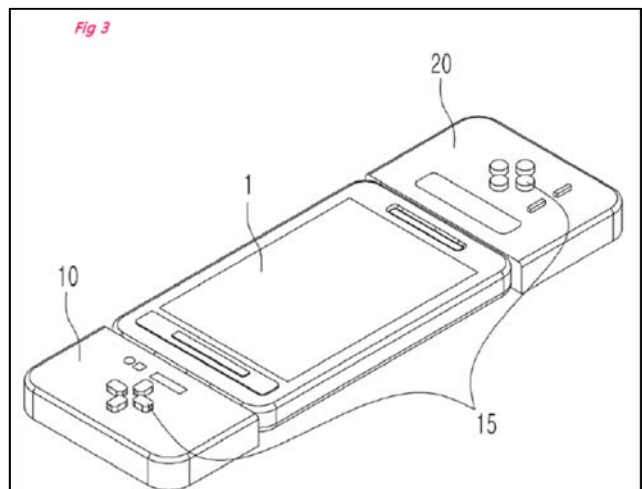
constituted the use of known components, as they were designed to be used, to reach predictable results. Kitchen ¶¶67, 222.

Finally, a POSITA would have recognized the benefit of combining Schoenith and Park because the use of Schoenith's detachable controllers would have provided a benefit to Park's design. And a POSITA would have recognized this as the use of known components, as they were designed to be used, to reach entirely predictable results. *Id.*

2. Claim 1

a. Limitation 1(a)-(b)

As explained above for Ground 1, Schoenith disclosed a combination comprising a *computing device providing a plurality of sides*, which were *disposed between an electronic display screen and the back of the computing device*. See *supra* §VI.B.2.a; Kitchen ¶224. Park similarly disclosed a smart device with an *electronic display screen*, a *plurality of sides* that were *disposed between the display and the back of the device*. Ex. 1004 at Abstract, ¶¶1-2; Kitchen ¶225. Figure 3, right, shows a smart device, as claimed.



b. Limitation 1(c)

As explained above, Schoenith taught a *pair of confinement structures adjacent to and confining the computing device on at least two opposing sides of the computing device*. See *supra* §VI.B.2.b. Specifically, Schoenith taught a cradle that supports the smart device on at least two sides via a depression portion and/or “raised walls.” Ex. 1003 at 6:15-50; 6:58-63, 9:65-67; Figs. 3, 8-12, 17-20. Schoenith further disclosed a *communication link* because it taught that the controller could include wireless and wired connection components. See *supra* §VI.B.2.b; Ex. 1003 at 7:35-41, 7:42-47 (describing a wired electrical connection between smart device, cradle, and controller). Thus, Schoenith disclosed a *communication port* providing a *communication link* and a *pair of confinement structures*, as claimed.

To the extent it is argued that Schoenith’s disclosures are insufficient as to *communication link*, Park disclosed a similar game controller, but one in which the two controller modules were explicitly connected via an electrical cable running through the bridge, as in the ’119 patent. Ex. 1004 ¶36 (describing “[a] connecting cable for electrically connecting the first body and second body” that runs “inside of the bridge”). It also disclosed a connection directly to the smart device. A POSITA seeking a more detailed disclosure of what Schoenith already provided would have looked to Park, which showed how one would connect the modules via

the *communication port* providing a *communication link* in the form of a wired connection. Kitchen ¶¶226-28.

c. Limitation 1(d)

As explained above, Schoenith taught this limitation. *See supra* §VI.B.2.c. Further, Park disclosed an *input device* in the form of a *pair of control modules* with *input module apertures* securing *instructional input devices*, as claimed. Ex. 1004 ¶¶19, 26-27, 29, Figs 1. Signals from those input devices were communicated via the electrical connection in the bridge and the docking port in the sidewalls—thus, via the *communication port*. Kitchen ¶¶229-38.

d. Limitation 1(e)

Schoenith disclosed a *structural bridge* securing the *pair of confinement structures one to the other* because it taught a third side of the cradle that structurally bridges, and secures to one another, the two other sides, which then provided raised walls, or *confinement structures*, to confine the electronic device. Ex. 1003 at 6:15-50, 6:58-63 (cradle can offer support along two or three sides while leaving others unsupported); Figs. 3, 8-12, 17-20. Further, the right and left panels, or *control modules*, each provide *attachment structures* that *cooperat[e]* with and *secure[]* them to the *communication port* because the structures provide openings that mate with, or connect to, the cradle. *See id.* at 7:14-34; 9:31-32. Schoenith also taught that the cradle and control modules could be connected via

“any connection commonly utilized in controllers, ... such as a magnetic connection, a snap-fit connection, mechanical keys, a combination thereof, or the like.” *Id.* at 7:18-26.

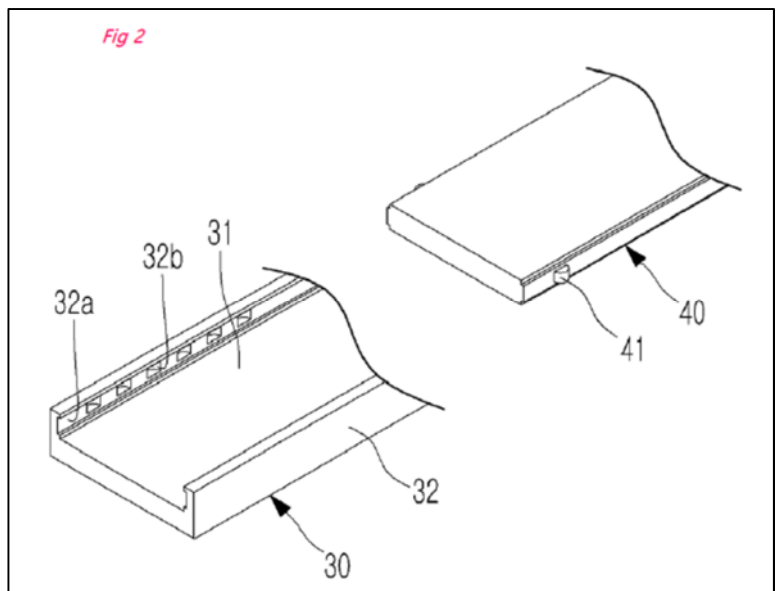
A POSITA would have been motivated to improve Schoenith’s cradle structure on the third side, or structural bridge, and use a more robust, and adjustable, structural bridge instead, as taught in Park. Park taught an adjustable bridge that accommodated different sized smart devices, as in the ’119 patent, and was compatible with Schoenith’s design because both were designed to provide two side controllers via a bridge that connects two structures (raised walls) which, in turn, hold a smart device. As shown above, Park’s connection mechanism is a *structural bridge* as claimed, which would be easily adapted to utilize two separate “raised walls,” separate from the controllers, that hold the smart device, as taught in Schoenith. Kitchen ¶¶239-47.

e. Limitation 1(f)

The Schoenith/Park combination satisfies this limitation. First, looking to Schoenith’s bridge as improved by Park, the combination would have a *conduit* as properly construed. Park taught that its bridge contained a confined space inside, through which the electrical connection means ran. In light of that disclosure and a POSITA’s knowledge, the use of a *conduit between the pair of control modules* was obvious. Ex. 1004 ¶¶8, 13, 26, 36. That *conduit* would have run *between the*

pair of control modules, which both Schoenith and Park taught on the left and right sides. Kitchen ¶¶248-60.

Second, the combination would contain a *fastening mechanism* that *secures the pair of confinement structures one to the other* as properly construed. Park taught that its bridge had two panels that were connected via the use of recessed guide grooves 32a and a plurality of recessed catching holes 32b, which accommodated protrusions 41 from the additional panel and thereby fastened them together. Ex. 1004 ¶¶9, 14, 32. Figure 2 (right) showed this *fastening*



mechanism. This structure is equivalent to the structure disclosed in the '119 patent. Park's fastening mechanism, which facilitated the expansion and contraction of the distance between the controllers' inner side walls, *cooperat[ed] with the controller's sidewalls and secure[d] them one to the other*, and thus, would be obvious to use to secure the two separate raised walls of Schoenith combined with Park's adjustable bridge. Kitchen ¶¶261-70. In sum, a POSITA would have found it obvious take the raised walls of Schoenith and modify or combine them with the teachings of Park, including by using Park's fastening mechanism to

secure the raised side walls together and to facilitate the contraction or expansion of the sides to accommodate different sized devices.

3. Claim 3

The Schoenith/Park combination renders this claim obvious. *See supra* §VI.C.1. Schoenith taught use of power storage/batteries for its controllers, and that the docking port enabled charging of the smart device while it was in the controller. Ex. 1003 at 7:49-67. Park likewise taught a docking port for connecting to the mobile phone. Ex. 1004 ¶¶26, 28 (connecting terminal 21), Fig. 1. A POSITA would have understood that utilizing a power source in the controller for communicating with the computing device was the application of known elements (batteries) as intended with predictable results. Kitchen ¶¶271-73.

4. Claim 4

The Schoenith/Park combination renders this claim obvious. *See supra* §VI.C.1. As noted, Schoenith taught that the instructional input devices, or buttons, joysticks, etc., “may be backlit, removable or non-removable, and interchangeable.” Ex. 1003 at 5:55-56. It also taught that its controls were used to control a game application on the hand-held device, *id.* at 1:21-62, and that it had wireless and wired connections for connecting the smart device and the controller in the panels, cradle, or a combination thereof. Ex. 1003 at 7:35-41, 7:42-47. Thus, the controls passed signals from the removable input devices through the

communication port (or cradle) and then to the smart device. Kitchen ¶275. Park likewise provided similar input controls that enabled control of a game running on a smart device. Ex. 1004 at Abstract, ¶¶1, 19-22, 30. A POSITA would have understood that game controllers are used to control images displayed on the screen of a smart device during gameplay. Kitchen ¶¶278-79.

5. Claim 5

The Schoenith/Park combination renders this claim obvious. *See supra* §VI.C.1; Kitchen ¶281. The input controls in Schoenith and Park were *game control modules* because they were input buttons, d-pads, and joysticks (among others) specifically provided for controlling gaming applications. *See* Ex. 1003 at 5:45-67; Ex. 1004 at Abstract, ¶¶8, 13, 19, 29, 65, Fig. 1. The remaining aspects of this claim are taught for the same reasons as claim 4. *See supra* §VI.C.4.

6. Claim 6

The Schoenith/Park combination renders this claim obvious. *See supra* §VI.C.1. In addition to the gaming-specific input controls taught in each, Schoenith and Park disclosed that a variety of controls could be used. *See* Ex. 1003 at 5:45-67; Ex. 1004 ¶¶19, 29 (“[I]t goes without saying that they key buttons (15) are not limited to a particular shape or function.”). A POSITA would have understood that the variety of input controls available could include a keyboard module, which is a combination of buttons or controls. Kitchen ¶286. Thus, a POSITA would have

found it obvious to use a keyboard module as an input device. The remaining aspects of this claim are taught for the same reasons as claims 4 and 5. *See supra* §§VI.C.4-5.

7. Claim 7

The Schoenith/Park combination renders this claim obvious for the same reasons as claims 4 and 5. Schoenith taught that its buttons, joysticks, or input controls, which are *instructional input devices*, or *game control modules*, “may be backlit, removable or non-removable, and interchangeable.” Ex. 1003 at 5:55-56. Park further provided similar input controls that enabled control of a game running on a smart device. Ex. 1004 ¶¶27, 29. A POSITA would have understood that Schoenith’s and Park’s input controls—buttons, d-pads, joysticks—are *game control modules* that, as taught in Schoenith, can be removable and interchangeable. Kitchen ¶287.

8. Claim 8

Claim 8 was obvious for the same reasons explained for claims 4 and 6. *See supra* §§VI.C.4, 6. Specifically, Schoenith taught removable and/or interchangeable *instructional input devices*. Ex. 1003 at 5:55-56. Use of a *keyboard module*—i.e., a different type of known input means—was obvious to a POSITA to increase flexibility in light of Schoenith’s and Park’s teachings that a variety of input controls could be used. Kitchen ¶288.

9. Claim 9

The Schoenith/Park combination renders this claim obvious. *See supra* §VI.C.1. Schoenith taught that its cradle, which provided a bridge, could require materials offering sufficient rigidity to provide a secure accommodation of the smart device. Ex. 1003 at 8:43-60. Further, Park taught that its bridge comprised two sliding portions connected via a series of recessed catching holes and protrusions. Ex. 1004 ¶¶9, 14, 33. A POSITA would have understood that teaching to form the bridge with a *rigid structure* in order to function. Kitchen ¶¶290-91. A POSITA would thus have understood that Schoenith and Park each taught *rigid structures* as the *structural bridge*.

10. Claim 10

The Schoenith/Park combination renders this claim obvious. *See supra* §VI.C.1. Schoenith taught that its cradle was detachable. Thus, with Park's *structural bridge* linking the *confinement structures* of the combined Schoenith/Park device, the *rigid structural bridge* would be a *removable rigid structure*. Kitchen ¶¶292-94.

11. Claim 13

The Schoenith/Park combination renders this claim obvious. *See supra* §VI.C.1. Schoenith taught use of a wired connection between the smart device and the controller via the right/left side panels, cradle, or a combination thereof—thus,

there existed a wired *communication link*, which is a *signal pathway*. Ex. 1003 at 7:42-66. Further, Park's structural bridge provided a *communication link* in the connection cable running inside the bridge that connected the two side controllers. Ex. 1004 ¶36. The Schoenith/Park combination thus would have contained a *communication link that is a signal pathway*. Kitchen ¶¶295-99.

12. Claim 14

The Schoenith/Park combination renders this claim obvious. *See supra* §VI.C.1. A POSITA would have known that the wired communication links taught by Schoenith (*e.g.*, 30-pin docking connectors or Apple Lighting connector) or Park (connecting cable electrically joining two components) would have utilized a metallic pathway—*i.e.*, metallic wires and pins. Kitchen ¶301. A POSITA would have further been aware of using a *metallic pathway* as a *signal pathway* because it is a known design option (wires) that would be used as expected to produce entirely predictable results. *Id.*

13. Claim 15

The Schoenith/Park combination renders this claim obvious. *See supra* §VI.C.1. As noted above for claim 14, Schoenith and Park each taught wired communication links that are signal pathways. *See supra* §VI.C.13. A POSITA would have understood that a *fiber optic pathway* was a connection means that would have been used in the Schoenith/Kessler combination for high speed

communications. Kitchen ¶305. This would take the form, for example, of a fiber optic cable running through an adjustable bridge. *Id.*

14. Claim 16

The Schoenith/Park combination renders this claim obvious. *See supra* §VI.C.1. As explained above, Schoenith taught that the controller (which includes the side panels and the cradle) included additional components such as a wireless connection for “exchanging data...,” such as Bluetooth. Ex. 1003 at 7:34-41. Schoenith likewise disclosed a wired connection between the smart device and the controller, which included docking connectors or an Apple Lightning connector (as examples). *Id.* at 7:42-48. Furthermore, Park taught a connection cable running inside the bridge that connected the two side controllers. Ex. 1004 ¶36. In light of these disclosures, a POSITA would have found it obvious for the *communication link* to provide a *communication platform*. Kitchen ¶¶308-09.

15. Claim 17

The Schoenith/Park combination renders this claim obvious. *See supra* §VI.C.1. As explained above, Schoenith taught a wired connection between the smart device and the controller, which included docking connectors or an Apple Lightning connector (as examples). *Id.* at 7:42-48. Furthermore, Park taught a connection cable running inside the bridge that connected the two side controllers. Ex. 1004 ¶36. In light of these disclosures, a POSITA would have found it obvious

for the *communication platform* to be a *wired communication module*, including in the form of, for example, a wired connection running through an adjustable bridge, as taught by Park. Kitchen ¶¶311-12.

16. Claim 18

The Schoenith/Park combination renders this claim obvious. *See supra* §VI.C.1. As explained above, Schoenith taught that the controller (which includes the side panels and the cradle) included additional components such as a wireless connection for “exchanging data...,” such as Bluetooth. Ex. 1003 at 7:34-41. A POSITA would thus have found it obvious for the *communication platform* to be a *wireless communication platform* in the combined Schoenith/Park device. Kitchen ¶¶314-15. This would take the form of, for example, the wireless component, as taught in Schoenith, implemented in an adjustable bridge, as taught by Park. *Id.*

17. Claim 19

The Schoenith/Park combination renders this claim obvious. *See supra* §VI.C.1. Schoenith taught the use of Bluetooth for the controller to communicate wirelessly. Ex. 1003 at 7:34-41. Bluetooth operates (and operated in both 2012 and 2015) *in a frequency range of 2.4 GHz*. Kitchen ¶¶316-19 (Bluetooth operates from 2.4 to 2.485 GHz).

18. Claim 20

The Schoenith/Park combination renders this claim obvious. *See supra* §VI.C.1. Schoenith taught communication via wireless connectivity, including Bluetooth. *See supra* §§VI.V.16-17. Utilizing those connections necessarily allowed the controller to join a personal area network, which was well understood by 2012 and 2015. Kitchen ¶¶322-23.

19. Claim 21

The Schoenith/Park combination renders this claim obvious. *See supra* §VI.C.1. Schoenith taught that infrared light-emitting diodes (LEDs) could be utilized for its wireless connection. Ex. 1003 at 7:37-41. Infrared LEDs are *infrared technology for data transactions* and were utilized by the *wireless communication platform*. Kitchen ¶¶325-26.

D. Ground 3: Claims 1-10 and 13-21 are unpatentable as obvious over Michael in view of Park

1. Motivation to Combine

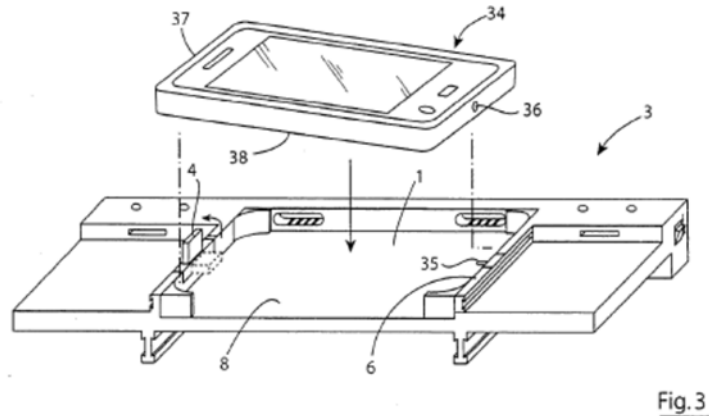
A POSITA would have had several reasons to combine the teachings of Michael with Park. *See supra* §VI.B.1. Michael taught a portable docking station that operated as a handheld game controller apparatus, like Park, to provide more traditional gaming controls for use on phone/mobile gaming applications. Ex. 1015 ¶¶2, 7, 36, 74, 131. The devices taught in Michael and Park are structurally compatible, serve similar purposes, and solve similar problems. Kitchen ¶328.

A POSITA would also have been motivated to improve Michael's game controller by making its bridge structure—the structure that holds the phone—adjustable to accommodate portable computing devices of various sizes. Kitchen ¶67. Making the bridge of an external controller accessory adjustable would make it more useful to consumers and was a known feature for similar devices. *Id.* Park explained, for example, that a user could adjust the bridge to accommodate his or her mobile phone. Ex. 1004 ¶¶39-46. This benefit was known to POSITAs. Kitchen ¶67. Ultimately, combining Park's adjustable bridge structure with Michael would have constituted the use of known components, as they were designed to be used, to reach predictable results. *Id.*

Finally, a POSITA would have recognized the benefit of combining Michael and Park because the use of Michael's detachable/interchangeable controller modules would have provided a benefit to Park's design. The use of detachable controllers would allow users the ability to attach a larger variety of controls that would suit the user's preference (*e.g.*, various button layouts, additional joysticks, etc.). See Ex. 1015 ¶¶17, 41, 126, 131, Fig. 5. A POSITA would have recognized this as the use of known components, as they were designed to be used, to reach entirely predictable results. Kitchen ¶64.

2. Claim 1

a. Limitations 1(a)-(b)



Michael disclosed a *computing device providing a plurality of sides*, which were *disposed between an electronic display screen and the back of the computing device*. See Ex. 1015 ¶¶1, 125, Figs. 3-6, 14-15, 18; Kitchen ¶312. Figure 3 shows an example of a smartphone used with Michael's device, which meets this limitation. Park similarly disclosed a smart device, as explained above. See *supra* §VI.C.2.

b. Limitation 1(c)

Michael's docking device is a *communication port interacting with the computing device* as recited in this limitation. Specifically, Michael taught that its docking device provided a frame and compartment for holding a phone, where the back of the phone interacted with the platform of the docking device. Ex. 1015 ¶¶125, 175-77, Figs. 1, 14. Additionally, Michael taught a *pair of confinement*

structures adjacent to and confining the computing device on at least two opposing sides of the computing device because it disclosed that its docking device had a first compartment that contained sidewalls 20 and rubber grips in its corners to secure, and confine, the portable computing device. Ex. 1015 ¶¶125, 136; *id.* ¶82 (use of “at least two upstanding walls”); Kitchen ¶335

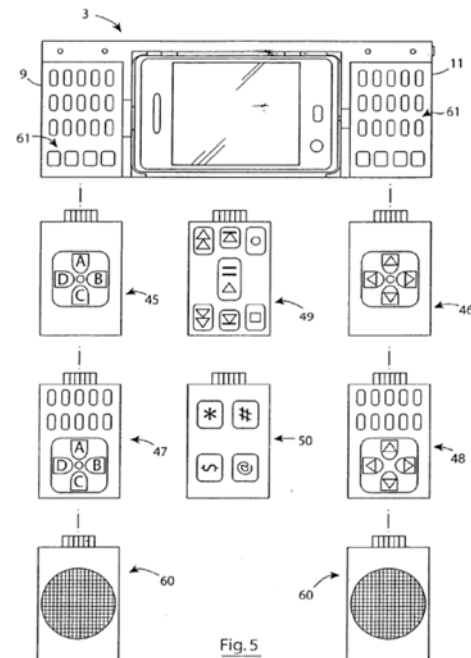
Michael further disclosed a *communication link* because it taught that each of the second and third compartments allow for physical and electrical connection to the interchangeable control modules in multiple ways. *Id.* ¶336. One was a “connective arrangement 21,” which was a “port for receiving a plug on the modular device.” Ex. 1015 ¶¶128-130, 134, Fig. 1. The other was shown in Fig. 14 and contained “connective arrangements” that were “ports 1404” for receiving plugs 1405 on the modular controllers, though the connective arrangement could be also be a “terminal, jack, or wiring.” *Id.* ¶¶175-78, Fig. 14. The connective arrangements were located within the frame. *Id.* ¶175. Thus, Michael disclosed a *communication port* that provides a *communication link* and a *pair of confinement structures*, as claimed.

Park disclosed a similar game controller in which the two controller modules were explicitly connected via an electrical cable running through the bridge, and so also disclosed a *communication port* that provides a *communication link* and a *pair of confinement structures*, as claimed. Ex. 1004 ¶36; Kitchen ¶¶337

c. Limitation 1(d)

Michael taught this limitation. Specifically, Michael taught gaming control modules (*input device*) that physically and electronically attach to the docking device, or *communication port*, on opposing sides of the portable phone. Ex. 1015 ¶131 (identifying “gaming control pads 45 and 46”); *see id.* ¶¶7, 36, 74, 132.

Figure 5 below shows examples of the many side controllers that could be used—including standard game control layouts with d-pads and other gaming buttons, which are *instructional input devices* provided through *apertures*. *Id.* ¶¶7, 36, 74, Fig. 5. The input devices are a *separate and distinct structure from the communication port* because they are physically and electronically detachable modular components. *Id.* ¶¶18-31, 41, 45, 82; Kitchen ¶¶348-50.

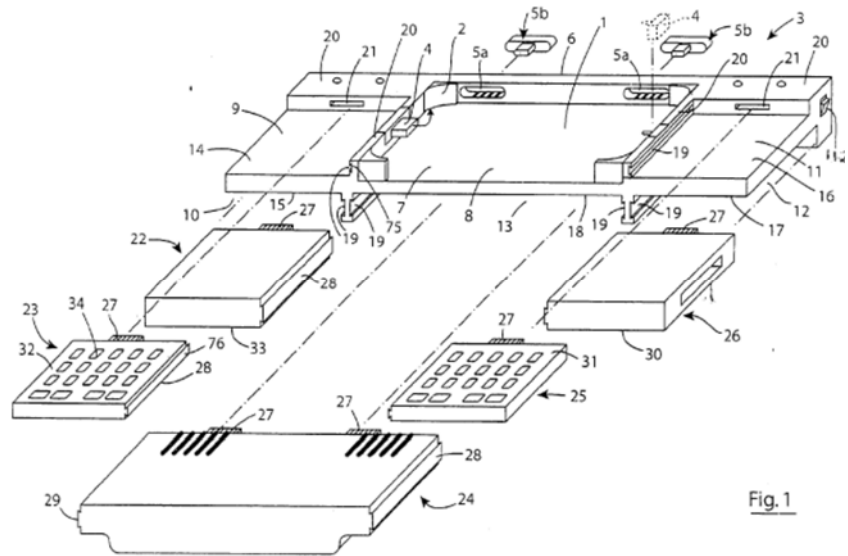


As noted above, Park disclosed an *input device* in the form of a *pair of control modules with input module apertures securing instructional input devices*, as claimed. Ex. 1004 ¶¶19, 26-27, 29, Figs. 1. As in Michael, signals from those input devices were communicated via the electrical connection in the bridge and

the docking port in the sidewalls—thus, via a *communication port*. Kitchen ¶¶351-61.

d. Limitation 1(e)

Michael disclosed a *structural bridge securing the pair of confinement structures one to the other* because it taught frame or rim with a “floor pan or platform” that support the phone and connects the raised sidewalls, or *confinement structures*,



that confine the phone. Ex. 1015 ¶125, Figs, 1, 14. Further, the right and left control modules each provided *attachment structures that cooperat[e] with and secure[] them to the communication port*. In one embodiment, Michael taught that its control modules attach to the device compartment via a guiding means, or track 19 that utilizes a rail to engage the modular control and attach to the docking device; each modular control had a rail that engaged the track 19 to hold it in place. Ex. 1015 ¶¶129-30, 134.

A POSITA would have been motivated to improve Michael's structural bridge by making it adjustable to accommodate different sized smart devices, as taught in Park. As shown above, Park's connection mechanism is a *structural bridge* as claimed, which would be easily adapted to utilize two separate "raised walls," separate from the controllers, that hold the smart device, as taught in Michael. Kitchen ¶¶336-47, 368-79.

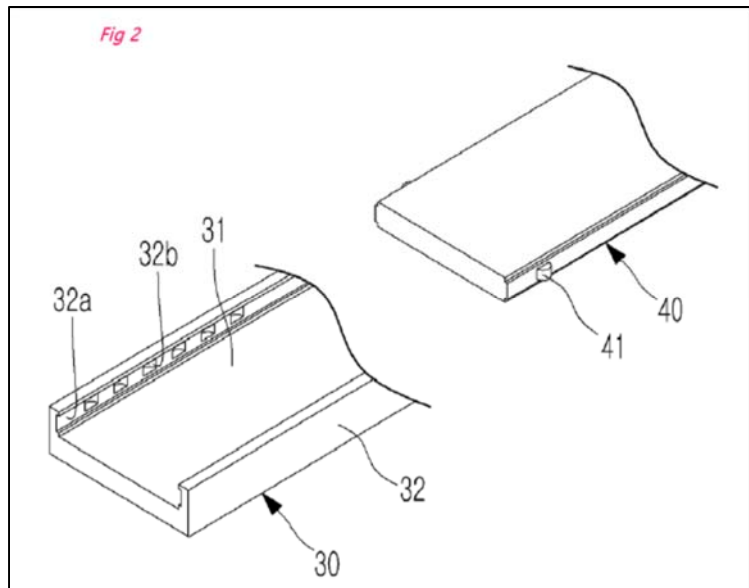
e. Limitation 1(f)

The Michael/Park combination satisfies this limitation. First, Park's bridge had a defined space inside, through which the electrical connection means ran. In light of that disclosure and a POSITA's knowledge, the use of a *conduit between the pair of control modules* was obvious. Ex. 1004 ¶¶8, 13, 26, 36. That *conduit* would have run *between the pair of control modules*, which both Michael and Park taught on the left and right sides.

Second, the combination would contain a *fastening mechanism* that *secures the pair of confinement structures one to the other* as properly construed. As noted above, Park taught that its bridge had two panels that were connected via the use of recessed guide grooves 32a and a plurality of recessed catching holes 32b, which

accommodated protrusions 41 from the additional panel and thereby fastened them together. Ex. 1004 ¶¶9, 14, 32. Figure 2 (right) showed this *fastening mechanism*.

This structure is equivalent to the structure disclosed in the '119 patent under either construction. Park's fastening mechanism *cooperate[d] with the two confinement structures* and *secure[d] them one to the*



other because it secured the panels, and thus, would secure the two separate raised walls of Michael, together. Kitchen ¶¶380-98.

3. Claim 2

The Michael/Park combination renders this claim obvious. First, including memory and other computing components in a game controller was standard in the art and obvious to a POSITA. Kitchen ¶400. A POSITA would have been motivated to use these known components (computer components) as intended (to store and process data) to achieve predictable results (the storage of data for processing and communicating). *Id.* ¶¶399-402. Indeed, Michael specifically taught inclusion of memory devices and processing units in its modular devices. Michael ¶¶18-23. It also taught use of touch screens, *id.* ¶¶20-21; a POSITA would

understand that that would require a data storage device (memory) to operate.

Kitchen ¶400.

4. Claim 3

The Michael/Park combination renders this claim obvious. Including a battery, or *auxiliary power source*, in a controller that communicates with the computing device was standard and would have been known to a POSITA. Kitchen ¶404. Michael, relatedly, taught including power inputs such as batteries in its modular devices and using a docking port that connected the phone to the controller. Ex. 1015 ¶¶18-26, 161. Park likewise taught a docking port for connecting to the mobile phone. Ex. 1004 ¶¶26, 28, Fig. 1. A POSITA would have known that utilizing a power source in the controller for communicating with the computing device was utilizing known elements (batteries) as intended with predictable results. Kitchen ¶¶403-06.

5. Claim 4

The Michael/Park combination renders this claim obvious. Kitchen ¶¶407-19. As noted, Michael taught that it contained interchangeable modular accessories for controlling games on the portable phone connected via the cradle. Ex. 1015 ¶¶10, 17, 52. The interchangeable controls passed signals from the removable input devices through the communication port (or cradle) and then to the phone to control gameplay. Kitchen ¶410-11. Park provided similar input controls that enabled

control of gameplay on a smart device. Ex. 1004 at Abstract, ¶¶1, 19-22, 30. A POSITA would have understood that controllers are used to control images displayed on the screen of a smart device during gameplay. Kitchen ¶415.

6. Claim 5

The Michael/Park combination renders this claim obvious. Kitchen ¶¶420-26. The input controls in Michael and Park were *game control modules* because they were input buttons, d-pads, and joysticks (among others) provided for controlling gaming applications. Ex. 1015 ¶¶10, 20, 74; Ex. 1004 at Abstract, ¶¶8, 13, 19, 29, 65, Fig. 1. The remaining aspects of this claim are taught for the same reasons as claim 4. *See supra* §VI.D.4.

7. Claim 6

The Michael/Park combination renders this claim obvious. Kitchen ¶¶427-31. In addition to the gaming-specific input controls, Michael and Park disclosed use of a variety of controls. Ex. 1015 ¶20; Ex. 1004 ¶¶19, 29. Michael taught that the interchangeable controllers included keypads or keyboards. Ex. 1015 ¶20. A POSITA would have understood that the variety of input controls available included a keyboard module, which is a combination of buttons or controls. Kitchen ¶428. The remaining aspects of this claim are taught for the same reasons as claims 4 and 5. *See supra* §§VI.D.4-5.

8. Claim 7

The Michael/Park combination renders this claim obvious for the same reasons as claims 4 and 5. Michael taught interchangeable modular accessories with a variety of controls, including game controllers. Ex. 1015 ¶20. Park further provided similar input controls that enabled control of gameplay on a smart device. Ex. 1004 ¶¶27, 29. A POSITA would have understood that Michael's and Park's input controls—buttons, d-pads, joysticks—are *game control modules* that, as taught in Michael and other state of the art references like Schoenith, would be removable and interchangeable. Kitchen ¶¶432-36.

9. Claim 8

Claim 8 was obvious for the same reasons explained for claims 4 and 6. See *supra* §§VI.DC.5, 7. Use of a *keyboard module*—i.e., a different type of known input means, which was taught in Michael—was obvious to a POSITA in light of Michael's and Park's teachings to use a variety of input controls. Kitchen ¶¶437-40.

10. Claim 9

The Michael/Park combination renders this claim obvious. Michael taught that its cradle platform provided “rigid support” for accessories, which a POSITA would understand is a *rigid structure*. Ex. 1015 ¶74, 181. Similarly, Park taught that its bridge comprised two sliding portions connected via a series of recessed

catching holes and protrusions. Ex. 1004 ¶¶9, 14, 33. A POSITA would have understood such teachings to form the bridge of a *rigid structure* in order to function. A POSITA would thus have understood that Michael and Park each taught *rigid structures* as the *structural bridge*. Kitchen ¶¶441-42.

11. Claim 10

The Michael/Park combination renders this claim obvious. Michael taught that its docking device was detachable from the phone and accessory controllers. Thus, with Park's *structural bridge* linking the *confinement structures* of the combined Michael/Park device, the *rigid structural bridge* would be a *removable rigid structure*. Kitchen ¶443.

12. Claim 13

The Michael/Park combination renders this claim obvious. Michael taught that its control modules are operably and electronically connected via its cradle/docking device. Ex. 1015 ¶10, 17. Further, Park's *structural bridge* provided a *communication link* in the connection cable running inside the bridge that connected the two side controllers. Ex. 1004 ¶36. The Michael/Park combination thus would have contained a *communication link that is a signal pathway*. Kitchen ¶¶444-48.

13. Claim 14

The Michael/Park combination renders this claim obvious. A POSITA would have understood that the wired communication links taught by Michael (hard-wired connections/ports) and Park (connecting cable electrically joining two components) would have utilized a metallic pathway—*i.e.*, metallic wires and pins. Kitchen ¶¶449-52. A POSITA would have further used a *metallic pathway* as a *signal pathway* because it is a known design option (wires) that would be used as expected to produce entirely predictable results. *Id.* ¶452.

14. Claim 15

The Michael/Park combination renders this claim obvious. As noted above for claim 14, Schoenith and Park each taught wired communication links that are signal pathways. *See supra* §VI.D.13. A POSITA would have understood that a *fiber optic pathway* was a connection means that would have been used in the Michael/Park combination. Kitchen ¶454.

15. Claim 16

The Michael/Park combination renders this claim obvious. Michael disclosed both wired and wireless communication links. Ex. 1015 ¶¶140, 196; Kitchen ¶456. Park taught a connection cable running inside the bridge that connected the two side controllers. Ex. 1004 ¶36. In light of these disclosures, a

POSITA would have found it obvious for the *communication link* to provide a *communication platform*. Kitchen ¶¶455-57.

16. Claim 17

The Michael/Park combination renders this claim obvious. As explained above, Michael taught a wired communication link between the controllers and the docking device. Ex. 1015 ¶¶43, 140, 148. Park taught a connection cable running inside the bridge that connected the two side controllers. Ex. 1004 ¶36. In light of these disclosures, a POSITA would have found it obvious for the *communication platform* to be a *wired communication module*. Kitchen ¶¶459-60.

17. Claim 18

The Michael/Park combination renders this claim obvious. Michael taught that its device could have WiFi capabilities and other modular devices for allowing wireless connections. Ex. 1015 ¶¶18-29, 196. In light of these disclosures, a POSITA would have found it obvious for the *communication platform* to be a *wireless communication platform* in the combined Michael/Park device. Kitchen ¶¶461-63.

18. Claim 19

The Michael/Park combination renders this claim obvious. Michael taught the use of WiFi and other wireless connections. Ex. 1015 ¶¶196. WiFi utilizes a *frequency range of 2.4 GHz*, and a POSITA would also have known that other

wireless transmission methods, such as Bluetooth, likewise operate in the 2.4GHz range. Kitchen ¶¶464-67.

19. Claim 20

The Michael/Park combination renders this claim obvious. Michael taught communication via wireless peer-to-peer connectivity. Ex. 1015 ¶196. Utilizing those connections allowed the controller to join a personal area network, which was well understood by 2012 and 2015. Kitchen ¶¶468-71.

20. Claim 21

The Michael/Park combination renders this claim obvious. Michael taught that “additional wireless connections” could be utilized to interface with units such as TVs. Ex. 1015 ¶197; Kitchen ¶475. A POSITA would have understood that infrared communications are used for communications with televisions. Use of a communication platform that utilizes infrared technology for data transactions would accordingly be obvious as a known signal transmission method. *Id.* ¶476-77.

VII. CONCLUSION

Petitioners respectfully ask the Board to cancel claims 1-10 and 13-21 of the '119 patent.

Dated: August 30, 2018

Respectfully submitted,

PERKINS COIE LLP
1201 Third Avenue, Suite 4900
Seattle, WA 98101-3099
Telephone: 206.359.8000
Facsimile: 206.359.9000

/Jonathan L. McFarland/
Lead Counsel
Jonathan L. McFarland, Reg. No. 61,109

Back-up Counsel
Kevin J. Patariu, Reg. No. 63,210
Grant E. Kinsel, *Pro hac vice*
Lane M. Polozola, *Pro hac vice*
Kevin A. Zeck, *Pro hac vice*

*Attorneys for Petitioners Nintendo Co., Ltd.
and Nintendo of America Inc.*

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 13,959 words, excluding the parts exempted by 37 C.F.R. § 42.24(a).

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Dated: August 30, 2018

Respectfully submitted,

PERKINS COIE LLP
1201 Third Avenue, Suite 4900
Seattle, WA 98101-3099
Telephone: 206.359.8000
Facsimile: 206.359.9000

/Jonathan L. McFarland/
Lead Counsel
Jonathan L. McFarland, Reg. No. 61,109

Back-up Counsel
Kevin J. Patariu, Reg. No. 63,210
Grant E. Kinsel, *Pro hac vice*
Lane M. Polozola, *Pro hac vice*
Kevin A. Zeck, *Pro hac vice*

*Attorneys for Petitioners Nintendo Co., Ltd.
and Nintendo of America Inc.*

CERTIFICATE OF SERVICE

The undersigned hereby certifies that true copies of the foregoing Petition for *Inter Partes* Review of U.S. Patent No. 9,126,119 and supporting materials (Exhibits 1001-1015 and Powers of Attorney) have been served this 30th of August, 2018, by FedEx® mail delivery service on Patent Owner at the correspondence address for the attorney of record for the '119 Patent shown in USPTO PAIR:

Hall Estill Attorneys at Law
(MDMMY)
100 NORTH BROADWAY
SUITE 2900
OKLAHOMA CITY OK 73102-8820

and via electronic mail to the attorneys of record for Plaintiff in the related litigation matter:

Christopher Anthony Mathews - chrismathews@quinnemanuel.com
Ali Moghaddas - alimoghaddas@quinnemanuel.com
Bruce R Zisser - brucezisser@quinnemanuel.com
John B Quinn - johnquinn@quinnemanuel.com
Scott Alan Florance - scottflorance@quinnemanuel.com

Dated: August 30, 2018

Respectfully submitted,

PERKINS COIE LLP
1201 Third Avenue, Suite 4900
Seattle, WA 98101-3099
Telephone: 206.359.8000
Facsimile: 206.359.9000

/Jonathan L. McFarland/
Lead Counsel
Jonathan L. McFarland, Reg. No. 61,109

Back-up Counsel
Kevin J. Patariu, Reg. No. 63,210
Grant E. Kinsel, *Pro hac vice*
Lane M. Polozola, *Pro hac vice*
Kevin A. Zeck, *Pro hac vice*

*Attorneys for Petitioners Nintendo Co., Ltd.
and Nintendo of America Inc.*