

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SONY COMPUTER ENTERTAINMENT AMERICA LLC,
Petitioner,

v.

APLIX IP HOLDINGS CORPORATION,
Patent Owner.

Case IPR2015-00730
Patent 7,932,892 B2

Before SALLY C. MEDLEY, BRYAN F. MOORE, and
JASON J. CHUNG, *Administrative Patent Judges*.

CHUNG, *Administrative Patent Judge*.

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

I. INTRODUCTION

We have jurisdiction to hear this *inter partes* review under 35 U.S.C. § 6(c). This Final Written Decision is issued pursuant to 35 U.S.C. § 318(a) and 37 C.F.R. § 42.73. For the reasons discussed herein, Petitioner has shown by a preponderance of the evidence that claims 1–11 of U.S. Patent No. 7,932,892 B2 are unpatentable.

A. Procedural History

Petitioner, Sony Computer Entertainment America LLC, filed a Petition requesting an *inter partes* review of claims 1–11 of U.S. Patent No. 7,932,892 B2 (Ex. 1001, “the ’892 patent”). Paper 1 (“Pet.”). Patent Owner, Aplix IP Holdings Corporation, filed a Preliminary Response. Paper 10 (“Prelim. Resp.”). Upon consideration of the Petition and Preliminary Response, on June 30, 2015, we instituted an *inter partes* review of claims 1–11, pursuant to 35 U.S.C. § 314. Paper 11 (“Dec.”).

Subsequent to institution, Patent Owner filed a Patent Owner Response (Paper 19 (“PO Resp.”)) and Petitioner filed a Reply (Paper 24 (“Reply”)). Patent Owner filed a Motion for Observations (Paper 26) and Petitioner filed a Response to the Observations (Paper 30). An oral hearing was held on March 30, 2016, and a transcript of the hearing is included in the record (Paper 32 (“Tr.”)).

B. Related Proceedings

The ’892 patent is involved in the following lawsuit: *Aplix IP Holdings Corp. v. Sony Computer Entertainment, Inc.*, No. 1:14-cv-12745 (MLW) (D. Mass.). Pet. 54.

C. The ’892 Patent

The ’892 patent relates to hand-held input acceleration devices that interface with electronic devices, such as cell phones, personal digital assistants (“PDAs”), pocket personal computers, smart phones, hand-held game devices, bar-code readers, MP3 players and other similar input devices having a keypad or one or more input elements. Ex. 1001, 1:19–26. The hand-held input acceleration device transfers data bi-directionally with a hand-held host device. *Id.* at Abstract.

D. Illustrative Claim

Of the challenged claims, claim 1 is the only independent claim. Claims 2–11 depend from claim 1.

Claim 1, reproduced below, is illustrative.

1. An input accelerator device for controlling a hand-held host device, the input accelerator device comprising:
 - a communication channel to interface with the hand-held host device;
 - an input assembly comprising multiple input elements, at least one of the input elements selectively map to one or more functions of a software application running on the hand-held host device to control the mapped one or more functions of the software application without having to actuate at least one input element of the hand-held host device; and
 - an input controller communicatively coupled to the input assembly and the communication channel, the input controller configured to generate an input signal upon actuation of the at least one of the input elements and further configured to relay the input signal to the communication channel for transmission to the hand-held host device to control execution of the one or more functions of the software application mapped to the actuated at least one input element.

Ex. 1001, 33:24–43.

E. Grounds of Unpatentability

We instituted an *inter partes* review of claims 1–11 on the following grounds:

Claim(s)	Basis	References
1–4, 6, and 7	§ 103(a)	Mollinari ¹ and Nishiumi ²

¹ WO 2004/007041 A2; Jan. 22, 2004 (Ex. 1003, “Mollinari”)

² U.S. Patent No. 5,903,257; May 11, 1999, (Ex. 1004, “Nishiumi”)

Claim(s)	Basis	References
11	§ 103(a)	Mollinari and Jacobi ³
5	§ 103(a)	Mollinari, Nishiumi, and Tu ⁴
8–10	§ 103(a)	Kerr ⁵ and Lum ⁶

II. ANALYSIS

A. Level of Skill of Person in the Art

We find that the level of ordinary skill in the art is reflected by the prior art of record. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001); *In re GPAC Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995); *In re Oelrich*, 579 F.2d 86, 91 (CCPA 1978).

B. Claim Interpretation

In an *inter partes* review, we construe claim terms in an unexpired patent according to their broadest reasonable construction in light of the specification of the patent in which they appear. 37 C.F.R. § 42.100(b); *see also Cuozzo Speed Techs., LLC v. Lee*, No. 15–446, 2016 WL 3369425 (U.S. June 20, 2016). Consistent with the broadest reasonable construction, claim terms are presumed to have their ordinary and customary meaning as

³ U.S. Patent Application Publication No. 2003/0103413 A1; June 5, 2003 (Ex. 1005, “Jacobi”)

⁴ U.S. Patent Application Publication No. 2004/0139254 A1; July 15, 2004 (Ex. 1006, “Tu”)

⁵ U.S. Patent Application Publication No. 2004/0137983 A1; July 15, 2004 (Ex. 1008, “Kerr”)

⁶ U.S. Patent Application Publication No. 2005/0221894 A1; Oct. 6, 2005 (Ex. 1009, “Lum”)

understood by a person of ordinary skill in the art in the context of the entire patent disclosure. *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007). Also, we must be careful not to read a particular embodiment appearing in the written description into a claim if the claim language is broader than the embodiment. *See In re Van Geuns*, 988 F.2d 1181, 1184 (Fed. Cir. 1993) (“[L]imitations are not to be read into the claims from the specification.”). However, an inventor may provide a meaning for a term that is different from its ordinary meaning by defining the term in the specification with reasonable clarity, deliberateness, and precision. *In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994).

In our Decision to Institute, we determined that it was not necessary to construe any terms. Dec. 4–5. Patent Owner subsequently proposed a construction for the claim 1 term an “input controller configured to generate an input signal . . . to control execution of the one or more functions of the software application” to be defined as an “input controller that can interpret input data and convert it to an input signal ready to be mapped to control functions of a software application.” PO Resp. 24–27.

Patent Owner argues that the aforementioned term must be more than raw, unstructured input data. *Id.* (citing Ex. 1001, 14:47–54, 13:3–5, 15:42–48). Moreover, Patent Owner argues raw, unstructured input data must undergo at least some additional interpretation before it can be mapped to an application function and used to control execution of it. *Id.* at 27 (citing Ex. 2009 ¶ 64–65). We are not persuaded to import this narrowing limitation from the specification based on the examples argued because the Specification of the ’892 patent does not include a special definition, nor a disavowal. Rather, we agree with Petitioner’s argument that the plain

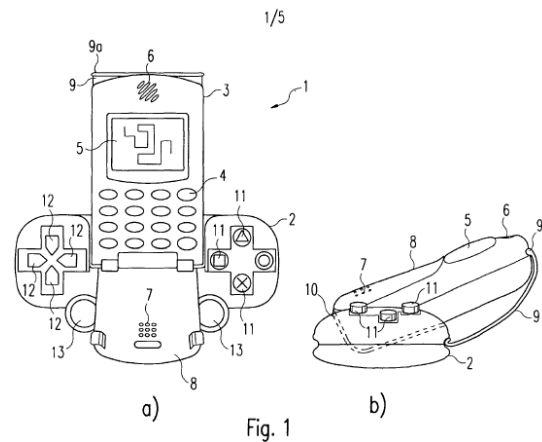
language of claim 1 and Specification of the '892 patent permit a scope of the aforementioned claim 1 limitation to include also an electrical signal that is generated in response to a user pressing a button that controls one or more functions of a software application. Reply 19–20 (citing Ex. 1001, 14:53–15:6). We, therefore, decline to adopt Patent Owner's narrow construction. We, instead, decline to construe the aforementioned claim 1 term.

C. Obviousness over Mollinari and Nishiumi

Petitioner contends that claims 1–4, 6, and 7 are unpatentable under 35 U.S.C. § 103 based on Mollinari and Nishiumi. Pet. 6–19. To support its contentions, Petitioner provides a detailed showing, mapping limitations of claims 1–4, 6, and 7 to structures taught by Mollinari and Nishiumi. *Id.* Petitioner also relies upon the Declaration of Dr. Gregory F. Welch (Ex. 1010) to support its position.⁷

Mollinari teaches a game controller holding a releasable mobile telecommunication terminal. Ex. 1003, Abstract. Figure 1 of Mollinari is reproduced below.

⁷ Patent Owner argues that the Board should give Dr. Welch's testimony little weight. PO Resp. 7–8, 30–32. We are not persuaded by the arguments. The evidence to which we are directed does not support the conclusion that Dr. Welch is not a credible witness. *See id*; Ex. 1039 ¶¶ 2–13.



As shown in Figure 1 of Mollinari, the game controller includes inputs 11, 12, 13 on a front surface for user commands. Mollinari teaches a first set of keys 11 that are used to activate certain game functions, while a second set of keys 12 are used for navigational purposes. *Id.* at 6:30–33. Mollinari teaches transmitting the user commands using data transmission means to and from mobile telecommunications terminal 3, 3a, 3b, 3c held by the game controller. *Id.* at Abstract. Mollinari teaches user commands as a user pressing buttons or moving a joy-stick to react to events of a game installed on their mobile phone and re-mapping the user commands into a scan code required by a game application. *Id.* at 7:4–12, 11:9–12:21. Mollinari's data transmission means may include an electromechanical connector, wireless infrared, wired infrared, other optical interfaces, or wireless short range radio data transmission such as Bluetooth. *Id.* at 7:15–25, 6:25–26, Fig. 9.

Nishiumi teaches a game controller having inputs on a front surface and a bottom surface. Ex. 1004, 7:1–5. Figures 7 and 8 of Nishiumi are reproduced below.

FIG. 7

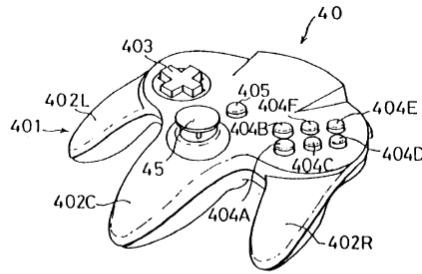
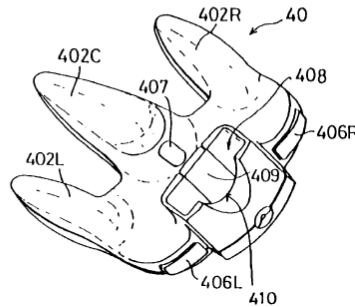


FIG. 8



As shown in Figure 7 of Nishiumi, there are numerous front surface inputs including designation switch 403, input keys 404A–F, and analog joystick 45. *See also* Ex. 1004, 6:45–67. In addition, as shown in Figure 8 of Nishiumi, bottom surface switch 407 is formed approximately at the center of the game controller, and side surface switches 406L, 406R are located on the side of the game controller. *See also id.* at 6:45–7:1–5.

Nishiumi Is Analogous Art

Patent Owner argues that Nishiumi is not analogous art because it is neither in the same field of endeavor as the '892 patent nor reasonably pertinent to the particular problem addressed by the '892 inventors. PO Resp. 8–19, 28. We have considered Patent Owner's arguments, but do not find them persuasive.

The test for determining whether a prior art reference constitutes analogous art to the claimed invention is: (1) whether the prior art is from

the same field of endeavor, regardless of the problem addressed, or (2) if the reference is not within the field of the inventor's endeavor, whether the reference still is reasonably pertinent to the particular problem with which the inventor is involved. *See In re Bigio*, 381 F.3d 1320, 1325 (Fed. Cir. 2004).

Patent Owner conflates the two prong analogous art test. In an attempt to define the field of invention of the '892 patent, Patent Owner looks to the problems solved by the inventors and argues that the '892 patent is concerned with streamlining interactions with hand-held host devices like PDAs and smart phones. PO Resp. 13–14. Such a showing is insufficient to establish the field of endeavor.

In determining the field of endeavor, we look to the '892 patent's written description and claims, including the structure and function of the invention. *Bigio*, 381 F.3d at 1326. And, we agree with Petitioner that in defining the field of invention, and in determining the relevance of Nishiumi to the obviousness inquiry, here a broad approach should be taken. Reply 4–7. Indeed, the Supreme Court provided guidance in determining the applicability of a reference's teachings in an obviousness inquiry. In *KSR Int'l Co. v. Teleflex Inc.*, the Court explained that if a feature has been used to improve one device, and a person of ordinary skill in the art would have recognized that it would improve a similar device in that field or another, implementing that feature on the similar device is likely obvious. *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 417 (2007).

Here, the appropriate scope of the field of endeavor is at least hand-held input devices for interfacing with electronic devices. Ex. 1001, 1:19–26, 18:1–8, 33:24–44. Patent Owner characterizes Nishiumi as being in the

field of recalibrating joystick origin points to address joystick-manufacturing defects. PO Resp. 10–14. However, in arriving at that description, Patent Owner too narrowly characterizes the Nishiumi invention. Nishiumi is within the field of endeavor because it teaches hand-held input devices for interfacing with electronic devices. Ex. 1004, Abstract, 1:5–12, Figs. 7–8.

Because we find that Nishiumi is within the same field of endeavor as the claimed invention, we need not consider Patent Owner’s arguments regarding whether Nishiumi is reasonably pertinent to the particular problem with which the inventors are involved. PO Resp. 15–19.

*Claim 1*⁸

Petitioner argues that Mollinari teaches an input accelerator with a communication channel to interface with a hand-held host device. Pet. 6–15. Petitioner argues that Mollinari teaches mapping selectively one or more input elements to one or more functions of a software application running on the hand-held host device to control the mapped one or more functions of the

⁸ Patent Owner argues that we should not rely on Petitioner’s anticipation arguments to evaluate obviousness, but that we should observe that no evidence has been presented about how any proposed combination of prior art references renders obvious claim 1. PO Resp. 5–7. We decline to do so. Although Petitioner alleges claim 1 is unpatentable as obvious, yet appears to present a case of anticipation, we determine that such a presentation is not a basis for dismissing the petition. It is axiomatic patent law that a disclosure that anticipates under 35 U.S.C. § 102 also may render the claim unpatentable under 35 U.S.C. § 103, because anticipation is the epitome of obviousness. *See In re McDaniel*, 293 F.3d 1379, 1385 (Fed. Cir. 2002) (“It is well settled that ‘anticipation is the epitome of obviousness.’”) (quoting *Connell v. Sears, Roebuck & Co.*, 722 F.2d 1542, 1548 (Fed. Cir. 1983)).

application without having to actuate at least one input element of the hand-held host device. *Id.*

Petitioner argues that Nishiumi's bottom surface switch 407, side surface switches 406L/406R, input keys 404A–F, designation switch 403, and analog joystick 45 meet the limitations of “one of the multiple input elements located on a rear surface,” “one of the multiple input elements located on a side surface,” “a key,” “a D-pad,” and “a miniature analog joystick,” respectively. Pet. 15–19. Petitioner concludes that one of ordinary skill in the art would have recognized that Mollinari's game controller could be modified to include elements on the side and rear surfaces, like Nishiumi's analogous game controller with input elements, to enhance the user's ability to control a game application running on the mobile telecommunications terminal. *Id.* at 15–16.

Patent Owner argues that Mollinari and Nishiumi cannot be combined because Petitioner relies on hindsight and failed to identify a sufficient basis to combine Mollinari and Nishiumi. PO Resp. 29–30. We disagree with Patent Owner's argument that Petitioner relies on hindsight and failed to identify a sufficient basis to combine Mollinari and Nishiumi because as explained *supra* in the preceding paragraph, Petitioner identified a teaching to combine or modify components. In addition, Dr. Welch explained that “the ability to concurrently control additional aspects of a game running on the game controller of Mollinari without re-positioning one's hand would offer a significant advantage.” Reply 16 (citing Ex. 1010 ¶ 44). Thus, Petitioner provided articulated reasoning with rational underpinnings to support the motivation to combine the teachings of Mollinari and Nishiumi (see *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)).

Patent Owner next argues that the combination of Mollinari and Nishiumi fails to teach the claim 1 limitation an “input controller [being] configured to generate an input signal . . . to control execution of the one or more functions of the software application.” PO Resp. 32–35. Patent Owner explains Mollinari teaches merely “raw,” “unstructured” user input data rather than the “raw,” “unstructured” data additionally undergoing processing before it is ready to be used to control execution of the functions of a software application. *Id.* at 27, 32–35.

We disagree with Patent Owner that claim 1 requires “raw,” “unstructured” data undergoing additional data processing before it is ready to be used to control execution of the functions of a software application for the reasons discussed *supra* in Part II.B. Moreover, as discussed *supra* in Part II.B., although we declined to construe the aforementioned claim 1 term, claim 1 and the Specification of the ’892 patent permit a scope of the aforementioned claim 1 limitation to include also an electrical signal that is generated in response to a user pressing a button that controls one or more functions of a software application. Similarly, Mollinari teaches electrical signals generated by an actuation of a control element that is processed by a micro-controller. Pet. 12–15.

We, therefore, agree with Petitioner’s showing, and adopt it as our own, that Mollinari in combination with Nishiumi teaches the limitations claimed in claim 1.

Claims 2–4, 6, and 7

Claims 2–4, 6, and 7 directly or indirectly depend from claim 1. Petitioner accounts for dependent claims 2–4, 6, and 7. Pet. 15–19. We agree with Petitioner’s showing, which we adopt as our own, that Mollinari

and Nishiumi teach the additional limitations of claims 2–4, 6, and 7. Patent Owner does not argue claims 2–4, 6, and 7 separately. PO Resp. 28–35.

D. Obviousness over Mollinari, Nishiumi, and Tu

Petitioner contends that claim 5 is unpatentable under 35 U.S.C. § 103 based on Mollinari, Nishiumi, and Tu. Pet. 45. To support its contentions, Petitioner provides a detailed showing, mapping limitations of claim 5 to structures taught by Mollinari, Nishiumi, and Tu. *Id.* at 43–45. Petitioner also relies upon the Declaration of Dr. Welch (Ex. 1010) to support its position.

Tu teaches using efficiently an input device, such as a game controller, for alphanumeric character entry. Ex. 1006 ¶ 2. Figure 4 of Tu is reproduced below.

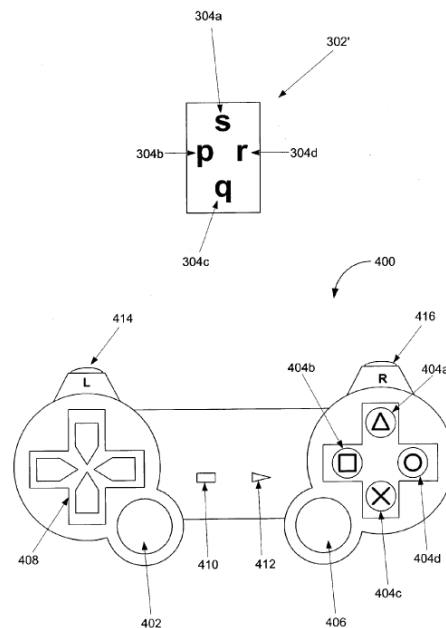


FIG. 4

As shown in Figure 4 of Tu, a user using a game controller enters data quickly and easily without needing to examine visually an entire list of characters. *See also* Ex. 1006 ¶¶ 14–17, 32–33.

Tu Is Analogous Art

Patent Owner argues that Tu is not analogous art because it is neither in the same field of endeavor as the '892 patent nor reasonably pertinent to the particular problem addressed by the '892 inventors. PO Resp. 19–24. We have considered Patent Owner's arguments, but do not find them persuasive.

As discussed *supra*, the two part test for analogous art is: (1) whether the prior art is from the same field of endeavor, regardless of the problem addressed, or (2) if the reference is not within the field of the inventor's endeavor, whether the reference still is reasonably pertinent to the particular problem with which the inventor is involved.

Patent Owner conflates the two prong analogous art test. In an attempt to define the field of invention of the '892 patent, Patent Owner looks to the improvements to the problems solved by the inventors and argues that the '892 patent is concerned with serving as a multi-purpose do-all that would improve how users interacted with a wide variety of hand-held devices. PO Resp. 20–22. Such a showing is insufficient to undermine that the reference is in the same field of endeavor.

In determining the field of endeavor, we look to the '892 patent's written description and claims, including the structure and function of the invention. *Bigio*, 381 F.3d at 1326. And, we agree with Petitioner that in defining the field of invention, and in determining the relevance of Tu to the obviousness inquiry, here a broad approach should be taken. Reply 4–7, 9–10. Indeed, the Supreme Court provided guidance in determining the applicability of a reference's teachings in an obviousness inquiry. In *KSR*, the Court explained that if a feature has been used to improve one device,

and a person of ordinary skill in the art would have recognized that it would improve a similar device in that field or another, implementing that feature on the similar device is likely obvious. *KSR*, 550 U.S. at 417.

Here, the appropriate scope of the field of endeavor is at least hand-held input devices for interfacing with electronic devices. Ex. 1001, 1:19–26, 18:1–8, 33:24–44. Patent Owner characterizes Tu as being in the field of improving a stationary home videogame console having a software-user interface controlled by a game controller. PO Resp. 20–22. However, in arriving at that description, Patent Owner too narrowly characterizes the Tu invention. Tu is within the field of endeavor because it teaches a hand-held input devices for interfacing with electronic devices. Ex. 1006 ¶¶ 2, 33, 37, 38, Figs. 3, 4, 8A–8B.

Because we find that Tu is within the same field of endeavor as the claimed invention, we need not consider Patent Owner’s arguments regarding whether Tu is reasonably pertinent to the particular problem with which the inventors are involved. PO Resp. 22–24.

Claim 5

Claim 5 indirectly depends from claim 1. Claim 5 recites “accelerat[ing] text input.” Petitioner relies on Tu’s description of a user using a game controller entering data quickly and easily without needing to examine visually an entire list of characters to meet the limitation of “accelerat[ing] text input.” Pet. 23–25. Petitioner concludes that one of ordinary skill in the art would have recognized that the hand-held device of Mollinari and Nishiumi’s game controller device could be modified with alphanumeric data inputting, like Tu’s game controller, to input rapidly alphanumeric data. *Id.*

Patent Owner argues that applying Tu's text selection system to Mollinari would decelerate text entry because Mollinari already has a grid of keys available to the user in the native host interface device. PO Resp. 39 (citing Ex. 2009 ¶¶ 106–109). We disagree with Patent Owner's argument because Tu teaches accelerating input on a phone with a keypad. Reply 23 (citing Ex. 1006 ¶¶ 11–14). In addition, Tu teaches that embodiments of the invention could be used with cell phones. *Id.* (citing Ex. 1006 ¶ 33). Thus, Tu's text selection system would provide a benefit of accelerated input over using Mollinari's grid of keys.

Patent Owner also argues that Mollinari's host device provides a screen that is too small to be used comfortably with Tu's character-selection grid showing characters in a large font that works on displays such as a generous sized television screen. PO Resp. 39–40. We disagree with Patent Owner's argument because Tu teaches that embodiments of the invention could be used with cell phones, personal digital assistants, car navigation systems, audio/video players, CD players, MD players, and DVD players. Reply 23–24 (citing Ex. 1006 ¶ 33). In addition, nothing in Tu limits the teachings to television screens and nothing in the claims of the '892 patent require accelerated input on a host device with a large screen. *Id.* at 24 (citing Ex. 1010 ¶ 30).

We, therefore, agree with Petitioner's showing, and adopt it as our own, that Mollinari in combination with Nishiumi and Tu teaches the limitations claimed in claim 5.

E. Obviousness over Kerr and Lum

Petitioner contends that claims 8–10 are unpatentable under 35 U.S.C. § 103 based on Kerr and Lum. Pet. 53–54. To support its contentions,

Petitioner provides a detailed showing mapping limitations of claims 8–10 to structures taught by Kerr and Lum. *Id.* at 52–54. Petitioner also relies upon the Declaration of Dr. Welch (Ex. 1010) to support its position.

Kerr teaches a gaming shell structure for receiving a handheld wireless device, such as wireless phone 100. Ex. 1008 ¶ 66. Figure 7 of Kerr is reproduced below.

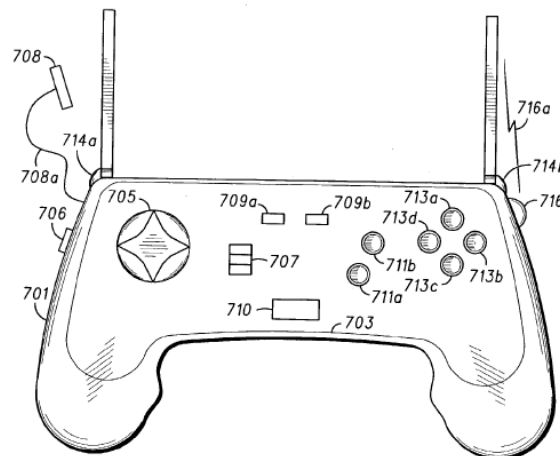


FIG. 7

As shown in Figure 7 of Kerr, the gaming shell includes interface connector 708a that connects to accessory port 115 of wireless device 100. *Id.* ¶ 72. Alternatively, Kerr also teaches the interface device may include a Universal Serial Bus, RS-232 Transceiver, Universal Asynchronous Receiver/Transmitter, microchip, or other circuitry to receive and transmit information such as infrared data. *Id.* ¶ 86. In addition, Kerr teaches mapping input elements 713a–d on the gaming shell structure to various gaming functions, such as launching a missile in a shooting game, jumping, kicking, punching, flipping in an action game. *Id.* ¶ 79. Further, Kerr teaches the user's data inputs are in the form of instructions and hardware memory processor 805 receives the instructions and acts on these instructions. *Id.* ¶¶ 86–88. Kerr teaches transferring the user's data inputs

from the gaming shell to the wireless phone, and then the wireless phone performs an action on the gaming operation in response to the data. *Id.* ¶ 89.

Lum teaches a game controller having central processing unit 402, memory 404, 406, 408, and input elements 420/422. Ex. 1009 ¶¶ 46–47. Figure 4 of Lum is reproduced below.

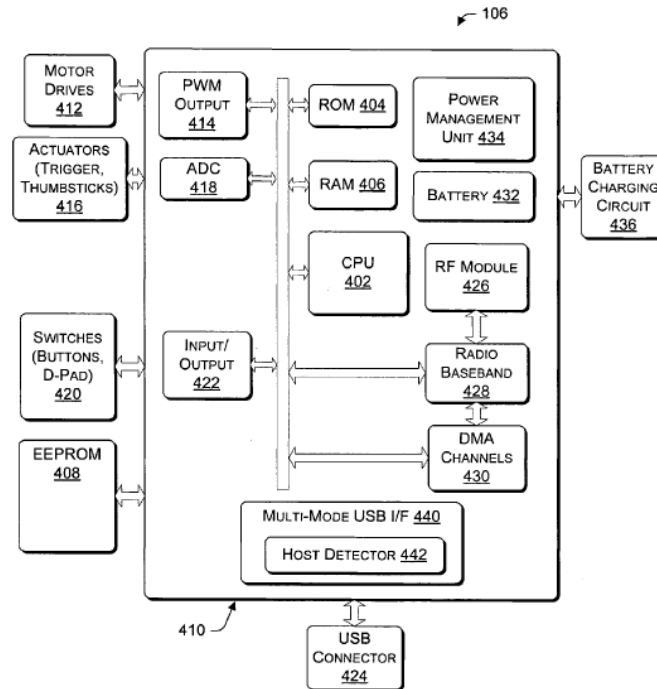


Fig. 4

As shown in Figure 4 of Lum, one or more bussing structures connect central processing unit 402, memory 404, 406, 408, and input elements 420/422 together. *See also* Ex. 1009 ¶¶ 46–47.

*Claims 8–10*⁹

Each of claims 8–10 ultimately depends from claim 1. Claim 8 recites a storage device storing one or more instructions. Claim 9 recites the one or

⁹ Patent Owner argues that we should not rely on Petitioner’s anticipation arguments to evaluate obviousness, but that we should observe that no evidence has been presented about how any proposed combination of prior

more instructions comprising at least one of a text application, a mapping software, a firmware, a gaming application, or a scrolling application. Claim 10 recites a processor interpreting the input signal and executing the one or more instructions and a bus configured to direct communications to and from the processor.

Petitioner argues that Kerr teaches a gaming shell structure having input elements used to control game applications on handheld wireless devices such as cellular phones as required by claim 1. Pet. 37–42.

Petitioner argues that Kerr’s operating circuit 807 detects the operating state containing data of the input elements and transfers the data to wireless phone 100 as required by claim 1. *Id.* at 42–43. Petitioner argues that Kerr teaches a hardware processor that is also a storage device that stores and executes one or more instructions relating to firmware or a gaming application to meet the limitations of claims 8 and 9. *Id.* at 52.

Petitioner argues that Lum’s one or more bussing structures connect central processing unit 402, memory 404, 406, 408, and input elements 420/422 together meets the limitations “a bus configured to direct communications to and from the processor” as recited in claim 10. Pet. 53–

art references renders obvious claims 8 and 9. PO Resp. 5–7. We decline to do so. Although Petitioner alleges these claims are unpatentable as obvious, yet appears to present a case of anticipation, we determine that such a presentation is not a basis for dismissing the petition. It is axiomatic patent law that a disclosure that anticipates under 35 U.S.C. § 102 also may render the claim unpatentable under 35 U.S.C. § 103, because anticipation is the epitome of obviousness. *See McDaniel*, 293 F.3d at 1385 (“It is well settled that ‘anticipation is the epitome of obviousness.’”) (quoting *Connell*, 722 F.2d at 1548).

54. Petitioner concludes that one of ordinary skill in the art would have recognized that Kerr's game controller could be modified as a simple design choice to include well known bus components, like Lum's similar game controller with input elements, to enable the processor to communicate with other electronic components using a bus. Pet. 53 (citing Ex. 1010 ¶ 73).

Patent Owner argues that Kerr fails to teach what kind of processing it might perform. PO Resp. 40–41. We are not persuaded by Patent Owner's argument because claims 8 and 9 of the '892 patent do not recite or require any particular kind of processing. Reply 24. Claim 10 recites "a processor configured to interpret the input signal and execute the one or more instructions," which is what Kerr teaches. Specifically, Kerr teaches that "[p]rocessor 805 receives the instructions from interface device 803 and acts on the instructions." *Id.* (citing Ex. 1008 ¶ 87).

Patent Owner argues that "nothing in Kerr discloses or suggests that Processor 805 'stores and executes one or more instructions relating to firmware or a gaming application'" as required by claim 9. PO Resp. 42. We disagree with Patent Owner's argument because Kerr teaches that the processor "may be implemented as hardware," which includes EEPROM, flash memory, and/or RAM. Reply 24–25 (citing Ex. 1008 ¶ 88). A person having ordinary skill in the art would have understood that in order to receive and act on instructions, a processor would need to store the instructions, which is why processors, like Kerr's processor, included some type of memory. *Id.* at 25 (citing Ex. 1039 ¶¶ 33–34). Kerr teaches that "[t]he software program in processor 805 may include an algorithm for initiating a vibration mechanism," which teaches the claim 9 limitations "instructions comprise at least one of . . . firmware" (software in the

processor) and “instructions comprise at least one of . . . gaming application” (vibration of a game controller). *Id.* (citing Ex. 1008 ¶ 87).

Patent Owner argues that Kerr fails to teach the claimed “input controller” that generates an “input signal.” PO Resp. 42–43 n.13. As discussed *supra* in Part II.B., although we declined to construe the aforementioned claim 1 term, claim 1 and the Specification of the ’892 patent permit a scope of the aforementioned claim 1 limitation to include also an electrical signal that is generated in response to a user pressing a button that controls one or more functions of a software application. Similarly, Kerr teaches monitoring operating states of gaming buttons and transferring that electrical data to a wireless phone. Reply 25 (citing Ex. 1008 ¶¶ 89, 121; Ex. 1039 ¶ 22).

We, therefore, agree with Petitioner’s showing, and adopt it as our own, that the combination of Kerr and Lum teaches the limitations claimed in claims 8–10.

F. Obviousness over Mollinari and Jacobi

Petitioner argues that claim 11 is unpatentable under 35 U.S.C. § 103 based on Mollinari and Jacobi. Pet. 22–23. To support its contentions, Petitioner provides a detailed showing mapping limitations of claim 11 to structures taught by Mollinari and Jacobi. Pet. 20–23. Petitioner also relies upon the Declaration of Dr. Welch (Ex. 1010) to support its position.

Jacobi teaches a portable universal interface device that allows the device to operate as one or more of cell phones, MP3 players, e-mail transmittal and retrieval devices, stored-value cards, remote control devices for locking cars, and remote control devices for operating automatic garage door openers. Ex. 1005, Abstract. Figure 1 of Jacobi is reproduced below.

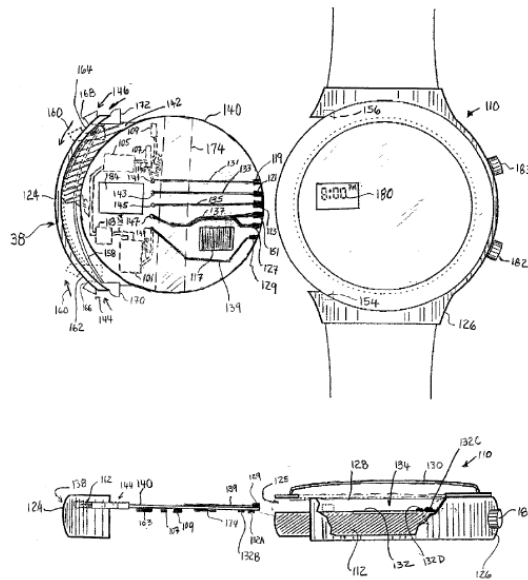


FIG. 1

As shown in Figure 1 of Jacobi, a portable universal interface device is implemented as a digital wristwatch. Jacobi teaches the portable universal interface device is not limited to be configured as a digital wristwatch; it can also be integrated into a cellular phone, a PDA, a digital camera, a pager, a laptop PC, a notebook PC, an electronic ID card, or an MP3 player, etc. Ex. 1005 ¶ 17. Jacobi teaches the portable universal interface device can operate as a remote control device for an automatic garage door opener, television receiver, cable box, or stereo. *Id.* ¶ 30.

Claim 11

Claim 11 directly depends from claim 1. Claim 11 recites “a secondary control unit configured to perform functions of one or more secondary devices including at least one of . . . a garage door opener, . . . a digital wristwatch, or a MP3 player.”

Petitioner argues that Jacobi's portable universal interface device, such as a digital wristwatch, that allows the device to operate as one or more of cell phones, MP3 players, e-mail transmittal and retrieval devices, stored-

value cards, remote control devices for locking cars, or remote control devices for operating automatic garage door openers teaches the claim 11 limitation “one or more secondary devices including at least one of . . . a garage door opener, . . . a digital wristwatch, or a MP3 player.” Pet. 22–23. Petitioner concludes that one of ordinary skill in the art would have recognized that the radio-frequency and/or infrared game controller of Mollinari that wirelessly controls systems could be modified, like Jacobi’s, to control wirelessly other systems such as automatic garage doors, television receivers, cable boxes, stereos, etc. Pet. 20–21.

Patent Owner argues that it would not have been obvious to modify Mollinari’s controller with Jacobi because Mollinari has a simple external controller, whereas Jacobi’s interchangeable interface components are powerful devices that can perform a wide variety of functions. PO Resp. 35–38. We disagree with Patent Owner’s argument because Jacobi teaches the device can be configured in various embodiments “of several different types of remote control devices.” Reply 20 (citing Ex. 1005 ¶ 17). Moreover, a person having ordinary skill in the art would have appreciated that Mollinari’s game controller would be one type of remote control device that Jacobi’s invention could be incorporated into. *Id.* (citing Ex. 1039 ¶ 32). Jacobi teaches “remote controls for automatic garage door openers, television remote controls, remote control devices for cable boxes, stereo equipment, VCRs, DVD players, as well as remote control devices that control a plurality of electronic ‘home entertainment’ devices.” Ex. 1039 ¶ 32. In addition, a person having ordinary skill in the art would have appreciated that Mollinari’s game controller is similar to a remote control for a home entertainment device as described in Jacobi. *Id.* Therefore, it would

have been obvious to a person having ordinary skill in the art at the time the invention was made to incorporate Jacobi's teachings into the game controller of Mollinari. *Id.*

We, therefore, agree with Petitioner's showing, and adopt it as our own, that the combination of Mollinari and Jacobi teaches the limitations claimed in claim 11.

Conclusion

Petitioner has proved, by a preponderance of the evidence that: claims 1–4, 6, and 7 are unpatentable over the combination of Mollinari and Nishiumi; claim 5 is unpatentable over the combination of Mollinari, Nishiumi, and Tu; claims 8–10 are unpatentable over the combination of Kerr and Lum; and claim 11 is unpatentable over the combination of Mollinari and Jacobi.

III. CONCLUSION

Based on the evidence and arguments, Petitioner has demonstrated by a preponderance of the evidence that claims 1–4, 6, and 7 of the '892 patent are unpatentable under 35 U.S.C. § 103(a) as obvious over Mollinari and Nishiumi; claim 5 of the '892 patent are unpatentable under 35 U.S.C. § 103(a) as obvious over Mollinari, Nishiumi, and Tu; claims 8–10 of the '892 patent are unpatentable under 35 U.S.C. § 103(a) as obvious over Kerr and Lum; and claim 11 of the '892 patent are unpatentable under 35 U.S.C. § 103(a) as obvious over Mollinari and Jacobi.

IV. ORDER

In consideration of the foregoing, it is
ORDERED that claims 1–11 of the '892 patent are held unpatentable;
and

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

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