UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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SONY INTERACTIVE ENTERTAINMENT LLC,
Petitioner,

v.

BOT M8, LLC,
Patent Owner.

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IPR2020-00726
Patent 8,112,670 B2

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Before KALYAN K. DESHPANDE, DAVID M. KOHUT, and
AMBER L. HAGY, *Administrative Patent Judges.*

DESHPANDE, *Administrative Patent Judge.*

DECISION
Institution of *Inter Partes* Review
35 U.S.C. § 314(a)

I. INTRODUCTION

Sony Interactive Entertainment LLC ("Petitioner") filed a Petition requesting *inter partes* review of claims 1–5 of U.S. Patent No. 8,112,670 B2 (Ex. 1001, "the '670 patent"). Paper 1 ("Pet."). Bot M8, LLC ("Patent Owner") filed a Preliminary Response. Paper 9 ("Prelim. Resp."). With our authorization, Petitioner thereafter filed a Reply (Paper 11 ("Reply")) and Patent Owner filed a Sur-reply (Paper 12 ("Sur-reply")) to address issues involving 35 U.S.C. § 325(d).

We have authority under 35 U.S.C. § 314(a), which provides that an *inter partes* review may not be instituted "unless . . . there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition." After considering the Petition, the Preliminary Response, the Reply, the Sur-reply, and all associated evidence, we conclude Petitioner has demonstrated a reasonable likelihood that it would prevail in showing the unpatentability of claims 1–5 of the '670 patent. Thus, we authorize institution of an *inter partes* review of claims 1–5 of the '670 patent.

A. Related Matters

Petitioner and Patent Owner indicate that the '670 patent was the subject of a patent litigation filed by Bot M8, LLC, against Sony Corporation of America et al. in the Southern District of New York (No. 1:19-cv-07529), which was transferred to the Northern District of California (No. 3:19-cv-07027). Pet. 73; Paper 5, 1. Petitioner indicates that this case has been dismissed with respect to the '670 patent. Paper 8, 1.

B. The '670 Patent

The '670 patent discloses "an information process device in which it can be guaranteed that a fault inspection program properly operates even if a fault occurs in a memory device which is inspected through the fault inspection program." Ex. 1001, 1:36–40. Figure 1 shows an information process device according to an embodiment of the invention.
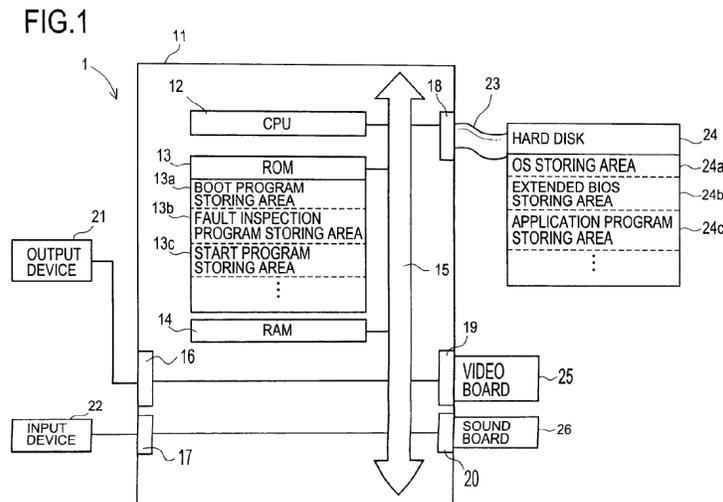
FIG.1

Figure 1 "is a block diagram of an information process device according to the embodiment." *Id.* at 2:15–16.

As depicted in Figure 1, information process device 1 includes central processing unit (CPU) 12, read-only memory (ROM) 13, and random access memory (RAM) 14 on motherboard 11. *Id.* at 2:36–39. CPU 12 controls information process device 1 and executes various programs, and therefore, "CPU 12 corresponds to a control device." *Id.* at 2:40–42. ROM 13 is a non-volatile memory that stores various control programs, including a boot program, a fault inspection program, and a start program. *Id.* at 2:43–51. Hard disk 24 is connected to motherboard 11 at port 18 through cable 23 and stores an operating system (OS), Basic Input Output System (BIOS), and an application program. *Id.* at 1:21–26, 3:19–25.

Information process device 1 begins to operate when CPU 12 executes the start program, and in turn, the boot program. *Id.* at 3:53–58. The boot program initializes the BIOS and the operating system. *Id.* at 3:59–64. The operating system is then loaded into RAM 14 and starts to operate. *Id.* at 3:65–66. Next, the fault inspection program begins to inspect "whether or not a damage occurs in the hard disk 24 or whether or not change or falsification of the program stored in the hard disk 24 is conducted." *Id.* at 4:1–9. If there is no fault in hard disk 24, the application program is loaded into RAM 14 and begins to execute. *Id.* at 4:15–19. Otherwise, if there is a fault in hard disk 24, an error is displayed on output device 21. *Id.* at 4:19–23. Here, because the fault inspection program is stored in ROM 13, independent from hard disk 24, "even if a fault occurs in the hard disk 24 . . ., it can be guaranteed that the fault inspection program properly operates." *Id.* at 4:25–31.

C. Illustrative Claims

Petitioner challenges claims 1–5 of the '670 patent. Pet. 4–72. Independent claims 1 and 4 are illustrative of the challenged claims and are reproduced below:

> 1. A gaming device configured to execute a game, the gaming device comprising:
>
>   a mother board on which a first memory device is provided;
>
>   a second memory device configured to store a game application program, the second memory device being connected to the mother board; and
>
>   a control device for executing a fault inspection program for the second memory device to inspect whether or not a fault occurs in the second memory device;

> wherein the fault inspection program is stored in the first memory device, and the control device completes the execution of the fault inspection program before the game is started.

Ex. 1001, 4:61–5:7.

> 4. A gaming device configured to execute a game, the gaming device comprising:
>
> a ROM configured to store a fault inspection program;
>
> a memory device which is electrically rewritable a game application program stored therein;
>
> a control device configured to execute the fault inspection program to inspect whether or not a fault occurs in the game application program stored in the memory device;
>
> wherein the control device executes the fault inspection program when the gaming device is started to operate and completes the execution of the fault inspection program before the game is started.

Id. at 5:15–6:10.

D. The Alleged Grounds of Unpatentability and Evidence of Record

The information presented in the Petition sets forth proposed grounds of unpatentability of claims 1–5 of the '670 patent under 35 U.S.C. § 103(a) as follows (*See* Pet. 3–72):[1]

Claim(s) Challenged	35 U.S.C. §	References
1–4	103(a)	Sugiyama,[2] Gatto[3]
5	103(a)	Sugiyama, Gatto, Yamaguchi[4]
1–4	103(a)	Morrow '952,[5] Morrow '771[6]

II. ANALYSIS

A. 35 U.S.C. § 325(d)

Petitioner and Patent Owner present arguments about our discretion under 35 U.S.C. § 325(d). Prelim. Resp. 14–24; Reply 1–5; Sur-reply 1–5. Pursuant to 35 U.S.C. § 325(d), "the Director may take into account whether, and reject the petition or request because, the same or substantially the same prior art or arguments previously were presented to the Office." In

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[1] Petitioner also relies on the Declaration of Andrew Wolfe, Ph.D. Ex. 1003.

[2] JP 2000-35888, published Feb. 2, 2000 ("Sugiyama," Ex. 1005).

[3] WO 2004/004855 A1, published Jan. 15, 2004 ("Gatto," Ex. 1006).

[4] US 5,844,776, issued Dec. 1, 1998 ("Yamaguchi," Ex. 1036).

[5] US 2004/0054952 A1, published Mar. 18, 2004 ("Morrow '952," Ex. 1007).

[6] US 2003/0064771 A1, published Apr. 3, 2003 ("Morrow '771," Ex. 1008).

considering whether to exercise discretion to deny a petition under § 325(d),
the Board uses a two-part framework, namely:

> (1) whether the same or substantially the same art previously was presented to the Office or whether the same or substantially the same arguments previously were presented to the Office; and (2) if either condition of the first part of the framework is satisfied, whether the petitioner has demonstrated that the Office erred in a manner material to the patentability of challenged claims.

Advanced Bionics, *LLC v. MED-EL Elektromedizinische Geräte GmbH*, IPR2019-01469, Paper 6 at 8 (PTAB Feb. 13, 2020) (precedential). If a condition in the first part of the framework is satisfied, and absent a material error, the Director generally will exercise discretion not to institute *inter partes* review. *Id.* at 8–9. "At bottom, this framework reflects a commitment to defer to previous Office evaluations of the evidence of record unless material error is shown." *Id.* at 9.

Our analysis begins with a discussion of the prosecution history. Then we turn to the parties' contentions regarding § 325(d).

1. Relevant Prosecution History

The challenged '670 patent claims priority to U.S. Ser. No. 11/205,121, patented as the 7,664,988 ("the '988 patent"), which claims the benefit of priority from Japanese Patent Application No. 2004-245337, filed Aug. 25, 2004. Ex. 1001, codes (30), (63). We discuss the prosecution of both the '988 patent and the '670 patent below.[7]

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[7] We discuss the prosecution history of both patents because of the substantial similarity of the claims – evidenced by the double-patenting rejection asserted by the Examiner. Ex. 1002, 35–40.

a. The '988 Patent Prosecution History

During prosecution of the '988 patent, the Examiner allowed the claims on the second round of prosecution. Initially, the Examiner rejected claims 1 and 2 as being anticipated by Owada and claim 3 as being obvious over Owada in view of Pascal. Ex. 1025, 131–137. In addition, the Examiner signed an Information Disclosure Statement (IDS) that includes the asserted Sugiyama reference as "JP 2000-35888." *Id.* at 144. The Examiner noted that the Sugiyama reference was in Japanese with only an English abstract and that a translation was not provided. *Id.* The Applicant responded to the rejection explaining that Owada did not disclose "a memory that includes both a Boot Program and a Fault Inspection Program." *Id.* at 124–126 (bolding omitted).

The Examiner ultimately issued a final rejection of claims 1–2 as obvious over Bizzarri, in view of Alexander, claims 3–6 as obvious over Bizzarri, in view of Alexander and Yamato, and claim 7 as obvious over Bizzarri, in view of Alexander and Krau.[8] *Id.* at 77–84. More specifically, the Examiner found that Bizzarri's "E-BIOS" taught both the "boot program" executed when the information process device is started to operate and the "fault inspection program," which performs "fault inspection upon booting of information processing device 11." *Id.* at 77–78 (citing Ex. 2001, 5:9–20, 6:11–20).

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[8] Prior to the final rejection of the claims as obvious over Bizzarri, the Examiner issued a second non-final rejection, determining the amended claims 1–3 to be obvious over Chang in view of an official notice, and claims 4–6 to be obvious over Chang, an official notice, and further in view of Yamato. Ex. 1002, 105–110.

Subsequent to an interview with the Examiner, Patent Owner filed a request for continued examination with amended claims and argument explaining that the E-BIOS in Bizzarri did not teach both the claimed fault inspection program and boot program. *Id.* at 65, 74. Patent Owner argued that "the boot program and the fault inspection program are distinct." *Id.* at 66. Patent Owner further argued:

> In addition, Bizzarri merely describes that there are a number of possible reasons why the E-BIOS might fail to boot, but does not describe a device which executes a fault inspection program to inspect whether or not a fault occurs in the hard disk and a game application program stored in the hard disk.

Id. at 66 (underlining omitted). The Examiner issued a notice of allowance without indicating the reasons for allowance. *Id.* at 1–26.

b. The '670 Patent Prosecution History

During the prosecution of the '670 patent, the Examiner issued a double-patenting rejection over the '988 patent. Ex. 1002, 35–40. With the non-final rejection, the Examiner signed an IDS, which included US 5,732,268 ("Bizzarri") and JP2000-35888 – the Sugiyama reference in Japanese with an English abstract. *Id.* at 42. In response, Patent Owner filed a terminal disclaimer. *Id.* at 24–33. Following approval of the terminal disclaimer, the Examiner issued a notice of allowance on October 28, 2011. *Id.* at 7–23.

2. *Whether the same or substantially the same art previously was presented to the Office or whether the same or substantially the same arguments previously were presented to the Office*

We first consider whether Petitioner asserts the same or substantially the same art or arguments that previously were presented to the Office. *Advanced Bionics*, Paper 6 at 8.

In Ground 1, Petitioner relies on the combination of Sugiyama and Gatto. In Ground 2, Petitioner relies on Sugiyama in view of Gatto and in further view of Yamaguchi. In Ground 3, Petitioner relies on Morrow in view of Morrow '771. *See* Section I.D. Petitioner and Patent Owner agree that Gatto, Yamaguchi, Morrow, and Morrow '771 were not of record during prosecution. Pet. 45; Prelim. Resp. 16–19; Reply 1; Sur-reply 4. Thus, Gatto, Yamaguchi, Morrow, and Morrow '771 were not previously presented to the Office.

Patent Owner asserts that Sugiyama is the same or substantially the same art as previously presented to the Office. First, Patent Owner argues that the Examiner allowed the challenged claims over Sugiyama, which was cited on an IDS signed by the Examiner. Prelim. Resp. 1, 14–19; Sur-reply 1. Second, Patent Owner argues that Petitioner advances substantially similar and cumulative arguments that the Examiner considered in respect to the Bizzarri reference during prosecution of the parent application. Prelim. Resp. 14–19; Sur-reply 2–3. Specifically, Patent Owner argues that Petitioner asserts Sugiyama to disclose a boot program and a fault inspection program in the same way the Examiner asserted Bizzarri disclosed those limitations. Prelim. Resp. 18–19; Sur-reply 2–3.

Petitioner argues that Sugiyama was "submitted with only an English abstract but without an English-language translation of the reference itself." Reply 1–2 (citing Ex. 1025, 153, 164-171; Ex. 1002, 83) (underlining omitted). Petitioner emphasizes that Sugiyama was never discussed or used as a basis for rejection. *Id.* Further, Petitioner argues that Sugiyama is not substantially similar or cumulative to Bizzarri or the arguments regarding Bizzarri since "the Examiner only considered whether Bizzarri's single E-

BIOS program could satisfy both the claimed boot program and the claimed fault inspection program." *Id.* at 2. Whereas in the Petition, Petitioner argues that Sugiyama's fault inspection program is shown to be a program distinct from Sugiyama's boot program. *Id.* at 2–3.

We are not persuaded on the record before us that Sugiyama is cumulative to the teachings of Bizzarri. Patent Owner merely provides a limited analysis that Sugiyama is cumulative to Bizzarri because both references disclose detecting faults after a computer boots, and subsequently running a diagnostic and repair. Prelim. Resp. 17–18; Sur-reply 3. However, Bizzarri is directed to a system for remote diagnostics and repair, whereas Sugiyama is directed to updating local service programs for failure diagnosis and restoration. Ex. 1005 ¶¶ 1, 3, 4; Ex. 2001, 3:23–31. We are persuaded by Petitioner's argument that Sugiyama discloses a fault detection program distinct from its boot program. Reply 2–3. Although both Bizzarri and Sugiyama disclose executing a fault detection program after executing a boot program, we are not persuaded that this limited similarity renders the references cumulative such that they are "substantially the same" or cumulative under the meaning of 35 U.S.C. § 325(d).

Similarly, we find the record to be insufficiently developed to enable us to determine whether Sugiyama was before the Examiner such that the Examiner determined the patentability of the claims in view of Sugiyama. Although Patent Owner represents that the Applicant complied with the requirements of 37 C.F.R. § 1.98(a)(3)(ii),[9] Patent Owner has not provided

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[9] 37 C.F.R. § 1.98(a)(3)(ii) requires a "copy of the translation if a written English-language translation of a non-English-language document, or

any testimonial evidence that an English translation of Sugiyama was within the possession, custody, control of, or readily available to, the Applicant. Similarly, Petitioner provides no argument or evidence that the portions of Sugiyama relied on in the Petition were not "understood on its face" by the Examiner. *See* MPEP § 609.04(a).[10]

Furthermore, we are not persuaded that the mere inclusion of Gatto renders the challenged ground as not the same or substantially the same as previously presented to the Office. As discussed in more detail below, Petitioner relies on Gatto, in the alternative, to disclose a "gaming device" and a "motherboard." *See* Section II.C.3. Although Gatto was not previously presented to the Office (Pet. 45; Prelim. Resp. 16–19; Reply 1; Sur-reply 4), we are not persuaded that the Petition's reliance on Gatto to disclose a "gaming device" and a "motherboard" in itself renders this challenged ground as not the same or substantially the same as what was previously presented to the Office.

"[I]f the record of the Office's previous consideration of the art is not well developed or silent, then a petitioner may show the Office erred by overlooking something. . . ." *Advanced Bionics*, Paper 6 at 10. Although we do not agree with Patent Owner that Sugiyama is cumulative to Bizzarri, we find the record to be insufficiently developed as to whether Sugiyama was

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portion thereof, is within the possession, custody, or control of, or is readily available."

[10] If no translation is submitted, the examiner will consider the information in view of the concise explanation and insofar as it is understood on its face, e.g., drawings, chemical formulas, English language abstracts, in the same manner that non-English language information in Office search files is considered by examiners in conducting searches. MPEP § 609.04(a).

"previously presented to the Office." Accordingly, we proceed to evaluate whether the Office erred in a manner material to the patentability of the challenged claims.

3. *Whether the Office erred in a manner material to the patentability of challenged claims*

Although Petitioner argues that the second part of the *Advanced Bionics* framework is inapplicable (Reply 5), we determine that the information presented in the Petition indicates that the grounds involving Sugiyama are sufficiently strong such that, assuming Sugiyama was before the Office, the Examiner overlooked the specific teachings of Sugiyama in allowing the application to issue as a patent. *See Advanced Bionics*, Paper 6 at 8 n.9. For example, independent claim 1 recites "a control device for executing a fault inspection program for the second memory device . . . wherein the fault inspection program is stored in the first memory device." Independent claim 1 further recites that "the control device completes execution of the fault inspection program before the game is started." On this record, Petitioner demonstrates a reasonable likelihood that Sugiyama discloses these limitations. Specifically, Sugiyama discloses a terminal that includes a first memory device (ROM) that performs a fault inspection program for a hard disk drive before the karaoke game begins. Ex. 1005 ¶¶ 10, 11, Figs. 3, 5; *see* Pet. 20–25. Because the record is silent as to the Examiner's specific reasons for allowance and the extent of Examiner's consideration of the full teachings of Sugiyama, we determine that if Sugiyama was previously presented to the Office, the Examiner overlooked these specific teachings of Sugiyama.

4. Conclusion

Specifically, we determine that (1) Sugiyama is not cumulative to Bizzarri; (2) the record is insufficiently developed to determine whether Sugiyama was previously presented to the Office; (3) assuming Sugiyama was the same or substantially the same as what was previously before the Office, the merits of the challenged grounds that rely on Sugiyama are sufficiently strong to demonstrate that the Examiner overlooked specific teachings of Sugiyama in allowing the application; and (4) the Petition includes a ground challenging claims 1–4 that does not rely on Sugiyama, and, therefore, the Petition, as a whole, is not sufficiently implicated under 35 U.S.C. § 325(d) such that the entire Petition should be denied.[11] Based on the totality of evidence before us, we decline to exercise discretion under 35 U.S.C. § 325(d) not to institute *inter partes* review.

B. Claim Construction

We apply the claim construction standard used to construe the claims in a civil action under 35 U.S.C. § 282(b) articulated in *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc). *See* 37 C.F.R. § 42.100(b) (2020). Under the *Phillips* standard, claim terms must be given "the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention." 415 F.3d at 1313.

Petitioner does not offer specific claim constructions, but "applies the ordinary and customary meaning of the claim terms as understood by a PHOSITA." Pet. 4. More specifically, Petitioner relies on the specification

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[11] *See* D1, *SAS* Q&As (June 5, 2018),
https://www.uspto.gov/sites/default/files/documents/sas_qas_20180605.pdf

of the challenged patent when construing "boot program" and "fault inspection program." Pet. 20; Reply 5–7. Patent Owner offers constructions for the claim terms "boot program" and "fault inspection program." Prelim. Resp. 4–11; Sur-reply 6–7.

1. "Boot Program"

Dependent claim 2 recites a "boot program executed when the gaming device is started to operate." Petitioner argues that the boot program should be afforded its plain and ordinary meaning as a start-up program that enables a computer to load larger programs. Pet. 4; Reply 5 (citing Ex. 1003 ¶¶ 155, 222–223 (citing Ex. 1028, 59; Ex. 1029, 121)). Petitioner explains that the Specification does not otherwise limit or diverge from the plain and ordinary meaning. Reply 5. Petitioner relies on the examples provided in the '670 Specification to support its construction that the boot program may load larger programs. *Id*. (citing Ex. 1001, 3:59–64).

Patent Owner contends that a boot program is "a program that initializes various devices including the extended BIOS and the operating system." Prelim. Resp. 10–11; Sur-reply 6. Patent Owner emphasizes that that definition is unambiguously stated in the Specification. Prelim. Resp. 10; Sur-reply 6. Patent Owner argues that this is consistent with a person of ordinary skill in the art's understanding of the term to involve a "computer execut[ing] the software that loads and starts the computer's more complicated operating system and prepares it for use." Prelim. Resp. 10 (quoting Ex. 2003, 3). Patent Owner contends that the "boot program" requires initialization of the operating system. *Id*. at 11.

For the purposes of this Decision, we adopt the plain and ordinary meeting of "boot program" as argued by Petitioner. We do not adopt Patent

Owner's narrower proposed construction, which defines the "boot program" to include initializing an extended BIOS and operating system. Although the boot program may initialize such devices, the Specification indicates more broadly that a boot program is a program that is executed when the device is started to operate, and is not necessarily limited to initializing an extended BIOS and operating system, as Patent Owner proposes. *See, e.g.,* Ex. 1001, 3:61–64. Accordingly, we adopt the plain and ordinary meaning of "boot program."

2. "Fault Inspection Program"

Independent claims 1 and 4 and dependent claim 2 recite a "fault inspection program." Petitioner asserts that the '670 patent explains that a "fault inspection program" is "a program for inspecting whether or not a fault such as damage, change or falsification occurs in the programs or data." Pet. 20; Reply 6–7. Petitioner argues that "fault" is not limited to mean only damage to the memory device and "change or falsification" to the programs. Reply 6–7. Petitioner emphasizes that the fault inspection program inspects faults in either the hardware or software because the Specification of the '670 patent does not disclose any requirement to inspect both hardware and software. Reply 7 (citing Ex. 1001, 1:17–18, 4:6–10, claims 1 and 4).

Patent Owner contends that a fault inspection program is "a program, other than a boot program, that inspects a memory device for faults, including damage to the memory device and change or falsification of programs stored thereon." Prelim. Resp. 7; Sur-reply 6. Patent Owner points to the prosecution history where Patent Owner explicitly stated during prosecution of the '988 Patent—"that 'the boot program and the fault

inspection program are distinct.'" Prelim. Resp. 8 (quoting Ex. 1025, 66; citing *Springs Window Fashions LP v. Novo Indus., L.P.*, 323 F.3d 989, 995 (Fed. Cir. 2003)); Sur-reply 7; Ex. 1025, 66. Patent Owner further argues that the Specification and figures of the '670 patent contrast the "fault inspection program" with the "boot program," as the two programs are stored in distinct portions of the ROM. Prelim. Resp. 8–10; Sur-reply 6–7.

On this record, we agree with Petitioner. The '670 patent indicates that the "fault inspection program" is "a program for inspecting whether or not a fault such as damage, change or falsification occurs in the programs or data." Ex. 1001, 1:22–25. We see nothing in the record that precludes the "fault inspection program" from also being a "boot program." Although Patent Owner presents arguments that it presented this argument during the prosecution of the '988 patent, we are not persuaded, on this record, to limit the scope of "fault inspection program" as previously argued. Accordingly, we construe "fault inspection program" to be "a program for inspecting whether or not a fault such as damage, change or falsification occurs in the programs or data."

C. *Alleged Obviousness of Claims 1–4 over Sugiyama and Gatto*

Petitioner contends that claims 1–4 of the '670 patent are unpatentable under 35 U.S.C. § 103(a) as obvious over Sugiyama and Gatto. Pet. 4–40. For the reasons discussed below, we determine that the evidence, on this record, indicates there is a reasonable likelihood that Petitioner would prevail in showing that claims 1–4 of the '670 patent are unpatentable under 35 U.S.C. § 103(a) as obvious over the combination of Sugiyama and Gatto.

1. *Sugiyama (Ex. 1005)*

Sugiyama is directed to "a service program for executing failure diagnosis, restoration, or the like to processing means in a communication terminal." Ex. 1005, code (57). Specifically, Sugiyama relates to a karaoke device that receives an application program, "for example, a karaoke performance processing program, a singing scoring program, or the like," over a communication network, and stores the application program on a hard disk drive. *Id.* ¶ 2.

In an embodiment, a karaoke terminal 3 includes "CPU (processing means and writing means) 20 for controlling portions of the device according to various programs," "ROM (non-volatile memory) 22," "RAM 23," and "hard disk drive (magnetic storage means) 24." *Id.* ¶ 10. ROM 22 stores "a startup program necessary for starting up the karaoke terminal," as well as "an initialization program P1 for initializing the hard disk drive 24 and an HDD inspection program P2 for examining the hard disk drive 24." *Id.* ¶ 11.

When karaoke terminal 3 is turned on, if no abnormality occurs, "the application program stored in the application storage area 24a of the hard disk drive 24 is loaded into the RAM 23, and normal karaoke performance processing is performed." *Id.* ¶ 22. If an abnormality does occur, "it is determined whether the abnormality is an abnormality relating to the hard disk drive 24." *Id.* ¶ 23. In such case, "the CPU 20 executes the HDD inspection program P2 stored in the ROM 22." *Id.* If there is no damage to the hard disk drive itself, for example, "when the stored data is destroyed, or the like, the initialization program P1 is executed by the CPU 20 . . . and initializes the hard disk drive 24." *Id.* ¶ 24. Backup data may then be

written to the hard disk drive. *Id.* If, on the other hand, "restoration is not possible, for example, when the hard disk drive 24 itself is damaged, the manufacturer of the karaoke terminal 3, a restoration company, or the like is requested for repairs." *Id.*

2. Gatto (Ex. 1006)

Gatto is directed to "[a] method for gaming terminals, gaming kiosks and lottery terminals to ensure that the code-signing verification process of downloaded game software can be trusted." Ex. 1006, code (57). Specifically, when a game operator decides to deploy a new game, a game terminal downloads the code for the game and "executes a program to verify the code signature of the downloaded code." *Id.* at 10:2–7. "If the downloaded code can be trusted (successfully passes the verification), it is stored locally in persistent memory in the gaming machine." *Id.* at 10:9–10. When the downloaded code is executed, "the stored signed code is retrieved . . . and its code signature is verified." *Id.* at 10:14–15. "If the retrieved downloaded code cannot be trusted, the code is trashed or quarantined"; otherwise, "[i]f the retrieved downloaded code can be trusted, it is executed." *Id.* at 10:15–17. But, because the code-signing verification process "itself might be a fraudulent verification process," Gatto also "verif[ies] that the code-signing verification platform can be trusted." *Id.* at 13:11–16.

3. Analysis

As discussed below, the evidence set forth by Petitioner indicates there is a reasonable likelihood that Petitioner would prevail in showing that claims 1–4 are obvious over Sugiyama and Gatto. *See* Pet. 4–40.

  i. *Petitioner's Arguments*

The preamble of claim 1 recites a "gaming device configured to execute a game." Ex. 1001, 4:61. Petitioner argues, to the extent the preamble is limiting, that Sugiyama teaches "'a communication terminal' configured to execute an 'application program, for example, a karaoke performance processing program, a singing scoring program, or the like," which a "PHOSITA would have understood . . . is a type of 'game.'" Pet. 8 (citing Ex. 1005 ¶ 2; Ex. 1003 ¶ 126). Petitioner also argues, to the extent Sugiyama's communication terminal "is not considered a gaming device, Gatto discloses a "software verification process applicable to download gaming machine software and games, such as for use in a casino." *Id.* at 11 (citing Ex. 1006, 1:3–4, 9:27–28, 10:2–17, Fig. 1; Ex. 1003 ¶¶ 70, 127, 125–130). Petitioner asserts that a person with ordinary skill in the art would have modified Sugiyama's terminal to execute a gaming application program instead of a karaoke application program because "the modification is nothing more than simple substitution of one form of executable program for another, yielding a predictable result (i.e., a communication terminal configured to execute game application programs)." *Id.* at 11–12 (citing Ex. 1003 ¶¶ 125–130).

Claim 1 further recites "a mother board on which a first memory device is provided." Ex. 1001, 4:64. Petitioner contends that the combination of Sugiyama and Gatto discloses this limitation. Pet. 12–17. Petitioner argues that Sugiyama teaches a first memory device, specifically, a ROM that is connected to a bus within a communication terminal. *Id.* at 12–13 (citing Ex. 1005 ¶ 10). Petitioner further contends that Gatto discloses "a motherboard with non-volatile memory components (such as ROM or BIOS) provided thereon and persistent storage media (e.g., HDD or

flash memory) connected thereto." *Id.* at 14 (citing Ex. 1006, 4:25, 5:25–26, 6:26, 7:12–17, 13:28–30, 18:25–29, 20:26–30, 22:5–9, 23:19–25; Ex. 1003 ¶¶ 73–76, 131–135). Petitioner argues that a person with ordinary skill in the art would have modified Sugiyama to include the ROM connected to the motherboard because it "amounts to a combination of known elements (i.e., printed circuit boards and common computing components, such as a CPU, RAM, ROM, and HDD) according to known methods (i.e., electrically connecting the components on a main ('mother') board) to obtain a predictable result—that the components would have worked together in a gaming machine or other computer system, such as a karaoke terminal." *Id.* at 16 (citing Ex. 1003 ¶¶ 131–135).

Claim 1 also recites "a second memory device configured to store a game application program, the second memory device being connected to the mother board." Ex. 1001, 4:65–67. Petitioner argues that the combination of Sugiyama and Gatto discloses this limitation. Petitioner argues that Sugiyama teaches a second memory device, specifically a "'hard disk drive (HDD),' configured to store a game application program such as a karaoke 'singing scoring program.'" Pet. 17 (citing Ex. 1005 ¶¶ 2, 10, 12). Petitioner further argues that Gatto discloses connecting a second memory device to a motherboard for the same reasons discussed above. *Id.*

Claim 1 additionally recites "a control device for executing a fault inspection program for the second memory device to inspect whether or not a fault occurs in the second memory device." Ex. 1001, 5:1–3. Petitioner argues that Sugiyama teaches "a control device, namely the 'CPU,' for executing a fault inspection program such as 'HDD inspection program P2.'" Pet. 20 (citing Ex. 1005 ¶ 23). Petitioner argues that "'HDD

inspection program P2' inspects whether or not a fault occurs in the second memory device (i.e., 'hard disk drive (HDD)')." *Id.* (citing Ex. 1005 ¶ 23). As discussed above, a fault inspection program is "a program for inspecting whether or not a fault such as damage, change or falsification occurs in the programs or data." *Id.* Petitioner contends that Sugiyama discloses that the CPU executes a process for examining and restoring failures of an area for storing an application program, such as the HDD. *Id.* at 21 (citing Ex. 1005, abstract). Specifically, Petitioner argues Sugiyama discloses that, after an initial startup program, "'recovery processing' steps Sa2 and relevant steps Sa4 through Sa16 are executed by CPU 20." *Id.* (citing Ex. 1005 ¶¶ 22–28). According to Petitioner, first it is determined whether an abnormality has occurred in the terminal (step Sa2) and whether the abnormality relates to HDD 24 (step Sa4). *Id.* at 22 (citing Ex. 1005 ¶ 22, Fig. 5). That is, Petitioner argues that steps Sa2 and Sa4 through Sa11 are collectively a fault inspection program. *Id.* at 25 (citing Ex. 1005, Fig. 5). Alternatively, Petitioner argues that step Sa5 ("Execute HDD inspection program P2") is a fault inspection program by itself. *Id.* (citing Ex. 1005, Fig. 5).

Claim 1 further recites "wherein the fault inspection program is stored in the first memory device, and the control device completes the execution of the fault inspection program before the game is started." Ex. 1001, 5:4–7. Petitioner argues that Sugiyama "teaches that the fault inspection program (e.g., 'HDD inspection program P2' alone or in combination with processing steps Sa2 and Sa4 through Sa11 of Fig. 5) is stored in the first memory device (i.e., ROM)" and is separate from the hard disk drive. Pet. 26–28 (citing Ex. 1005 ¶¶ 11, 22, 23, 30, Fig. 3, Fig 5). Petitioner further argues

that the "'HDD inspection program 22' is executed in step Sa5, which occurs before the game begins in step Sa3." *Id.* at 28.

Petitioner argues that "[i]t would have been obvious to a PHOSITA to implement the communication terminal of *Sugiyama* as a gaming device instead of (or in addition to) a karaoke device" because "the modification is nothing more than simple substitution of one form of executable program for another, yielding a predictable result." Pet. 12. In addition, Petitioner argues that "*Gatto* recognizes that communication terminals have been capable of receiving new games and updated software via downloads and executing such downloaded programs since the late 1980s." *Id.* (citing Ex. 1006, 1:6–8). Alternatively, Petitioner asserts that Gatto discloses that "it is significantly easier to detect fraudulent code prior to its execution than prevent someone to introduce the fraudulent code somewhere amongst the gigantic storage disk space, by numerous means, and at unpredictable times." *Id.* at 31 (quoting Ex. 1006, 29:13–18).

    ii.   *Patent Owner's Arguments*

Patent Owner argues that "Petitioner does not identify a 'program' in Sugiyama's system as corresponding to the claimed 'fault inspection program.'" Prelim. Resp. 25. Patent Owner argues that Petitioner's citing to steps Sa2 and Sa4 as the fault inspection program is incorrect because those steps are performed by Sugiyama's startup program.[12] *Id.* at 28. Patent Owner asserts that Petitioner mischaracterizes these steps as being carried

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[12] Patent Owner also argues that steps Sa7 through Sa11 cannot be construed as a "fault inspection program" because they are executed by initialization program P1. Prelim. Resp. 30. As Petitioner indicates, however, those steps are "applicable to inspecting the hard disk drive 24." *See* Pet. 24.

out by a service program performing recovery processing steps. *Id.* Patent Owner explains that the startup program performing steps Sa2 and Sa4 is not a "service program," but is the startup program relied upon by Petitioner to teach the claimed boot program. Prelim Resp. 29.

On this record, we are not persuaded by Patent Owner's argument. Patent Owner's argument is predicated on our adoption of its claim construction for the term "fault inspection program" as necessarily distinct from a boot program, which we declined to adopt, as discussed above. *See* Section II.B2. Furthermore, as argued by Petitioner, Sugiyama discloses that first it is determined whether an abnormality has occurred in the terminal (step Sa2), and then it is determined whether the abnormality relates to HDD 24 (step Sa4). Pet. 22 (citing Ex. 1005 ¶ 22, Fig. 5). That is, Petitioner argues that steps Sa2 and Sa4 through Sa11 are collectively a fault inspection program. *Id.* at 25 (citing Ex. 1005, Fig. 5). We are not persuaded by Patent Owner that steps Sa2 and Sa4 are limited to being part of the "startup program," and even if we were persuaded of that point, we disagree that the "startup program" cannot include the "fault inspection program" independent of HDD inspection program P2. *See* Prelim. Resp. 25–27.

Patent Owner further argues that Petitioner's alternative theory, that HDD inspection program P2 is the "fault inspection program" is incorrect. *Id.* at 27. Patent Owner further argues that the HDD inspection program P2 is executed only after an abnormality has been determined and thus is not responsible for inspecting whether a fault occurs. Prelim. Resp. 27–28. In other words, Patent Owner asserts that because the fault has already been

detected before the HDD inspection program executes, the HDD inspection program cannot be the claimed fault inspection program. *Id*.

On this record, we disagree with Patent Owner. Sugiyama discloses that, in step Sa5, the HDD inspection program P2 is executed. Ex. 1005, Fig. 5. Although an abnormality is detected in steps Sa2 and Sa4, we are not persuaded, on this record, that step Sa5 does not also execute a program to detect faults. Rather, step Sa5 involves ascertaining the details of the abnormality, which requires identifying the abnormality itself. *Id*. ¶ 23.

Patent Owner also argues that "Petitioner has not demonstrated that Sugiyama in view of Gatto teaches or suggests a 'control device [that] completes the execution of the fault inspection program before the game is started,' as recited in independent claims 1 and 4 of the '670 Patent." Prelim. Resp. 31. Patent Owner explains that Sugiyama's "recover processing program is executed in response to 'a user operating the operation unit 26,' i.e. not 'automatically.'" *Id*. at 31–32. On this record, we disagree with Patent Owner. Sugiyama discloses that "if no abnormality occurs in the karaoke terminal 3 (step Sa2), the application stored in the application storage area 24a of the hard disk drive 24 is loaded in to the RAM23, and normal karaoke performance processing is performed (step Sa3)." Ex. 1005 ¶ 22; *see* Pet. 28–31. That is, the application processing is not started until the "fault detection program" has completed.

In addition, Patent Owner asserts that "Gatto's technique along with Sugiyama's HDD inspection program P2 suffers from the same deficiencies as Sugiyama alone, namely the combination still utilizes Sugiyama's Startup program, which cannot be a 'fault inspection program.'" Prelim. Resp. 34.

We are not persuaded by Patent Owner's argument on this record for the same reasons discussed above.

4. Conclusion

We are persuaded by Petitioner, on this record and for purposes of institution, that the combination of Sugiyama and Gatto discloses the limitations of claim 1, and a person with ordinary skill in the art would have combined Sugiyama and Gatto for the reasons set forth by Petitioner. *See* Section II.C.3. We are similarly persuaded by Petitioner, on this record and for purposes of institution, that the combination of Sugiyama and Gatto discloses the limitations of claims 2–4. As such, we are persuaded, on this record, that Petitioner has demonstrated a reasonable likelihood that it would prevail in demonstrating claim 1–4 are unpatentable as obvious over Sugiyama and Gatto.

D. Alleged Obviousness of Claim 5 over Sugiyama, Gatto, and Yamaguchi

Petitioner contends that claim 5 of the '670 patent is unpatentable under 35 U.S.C. § 103(a) as obvious over Sugiyama, Gatto, and Yamaguchi. Pet. 40–44. For the reasons discussed below, the evidence, on this record, indicates there is a reasonable likelihood that Petitioner would prevail in showing that claim 5 of the '670 patent is unpatentable under 35 U.S.C. § 103(a) as obvious over Sugiyama, Gatto, and Yamaguchi.

1. Yamaguchi (Ex. 1036)

Yamaguchi is directed to "[a] static memory device [that] has compatibility with a disk drive installed in an electronic apparatus as an external storage unit." Ex. 1036, code (57). In an embodiment, "mother board 1 performs a variety of control operations and is provided with a

connector 1*a*," and "hard disk drive 22 . . . can also be connected to the connector 1*a* through the flat cable 8." *Id.* at 6:15–22.

2. *Analysis*

Claim 5 recites the limitations of independent claim 4, and further recites "wherein the ROM is provided on a mother board having a connector, and the memory device is connectable to the mother board through the connector of the mother board." Ex. 1001, 6:11–14. Petitioner argues that "Sugiyama in view of Gatto teaches a ROM provided on a motherboard and a hard disk drive (HDD) (i.e., memory device[]) connected thereto." Pet. 41. Petitioner further argues that, "to the extent disclosure of a specific 'connector' is required to satisfy claim 5, the same is disclosed in Yamaguchi." *Id.* at 41–42. Petitioner contends that Yamaguchi discloses connector 22a that connects hard disk drive 22 to motherboard 1 via flat cable 8, where the motherboard includes ROM 13. *Id.* at 42 (citing Ex. 1036, 6:6–8, 6:21–23).

Petitioner argues that "it would have been obvious to a PHOSITA that the motherboard and HDD memory device must have been connected to communicate, and a PHOSITA would have been motivated to look to known connectors that provide this necessary connection." *Id.* at 44. Petitioner argues that Yamaguchi "provides express disclosure of well-known and obvious design choices that would have been easy to implement and, given the common and predictable nature of the electrically connecting computing elements using motherboards at the time of the '670 Patent, would have had a reasonable expectation of success in doing so." *Id.* Patent Owner, at this stage, does not rebut Petitioner's contentions.

3. Conclusion

We are persuaded by Petitioner, on this record and for purposes of institution, that the combination of Sugiyama, Gatto, and Yamaguchi discloses the limitations of claim 5, and a person with ordinary skill in the art would have combined Sugiyama and Gatto for the reasons set forth by Petitioner. *See* Section II.D.2. As such, we are persuaded, on this record and for purposes of institution, that Petitioner has demonstrated a reasonable likelihood that it would prevail in demonstrating claim 5 is unpatentable as obvious over Sugiyama, Gatto, and Yamaguchi.

E. Alleged Obviousness of Claims 1–4 over Morrow '952 and Morrow '771

Petitioner contends that claims 1–4 of the '670 patent are unpatentable under 35 U.S.C. § 103(a) as obvious over Morrow '952 and Morrow '771. Pet. 45–72. For the reasons discussed below, the evidence, on this record, indicates there is a reasonable likelihood that Petitioner would prevail in showing that claims 1–4 of the '670 patent are unpatentable under 35 U.S.C. § 103(a) as obvious over the combination of Morrow '952 and Morrow '771.

1. Morrow '952 (Ex. 1007)

Morrow '952 is directed to "verifying a device by verifying the components of that device," for example, "processors, persistent storage media, volatile storage media, random access memories, read-only memories (ROMs), erasable programmable ROMs, data files," etc. Ex. 1007 ¶ 6. The device may be "a gaming machine, wherein the verification of the gaming machine is performed before game play is allowed." *Id.* at ¶ 19.

In an embodiment, device 10 includes "one or more processors 62, persistent storage media 80 and 90, volatile storage media such as random access memories (RAMs) 76, read-only memories (ROMs) 77 or electrically

erasable programmable ROMs (EEPROMS) such as basic input/output systems (BIOS) 64." *Id.* ¶ 37. Device 10 also includes data files 54, such as software program files 92–96 and operating system files 98. *Id.*

Further, "[e]ither within the device 10, or in the diagnostic system 140 attachable to the device 10, are executable instructions or a software program 70 for verification of the components (verification software 70), which may itself be one of the components 50 to verify if it is internal to the device 10." *Id.* ¶ 38. "Preferably, the verification software 70 is stored in a basic input/output system (BIOS) 64 device or chip." *Id.* This "mak[es] it hard to bypass the verification process" "because the code in the BIOS 64 is usually the first code executed upon boot or start-up of the device 10." *Id.* Thus, "operating system files 98 may be verified before loading or booting, or before any software program 92 is run from the persistent storage media 90. This makes the verification software 70 completely independent of data files 54 stored on the persistent storage media 90 which are being verified." *Id.* ¶ 64.

2. Morrow '771 (Ex. 1008)

Morrow is directed to "gaming machines having the ability to reconfigure entire games, pay tables and/or artwork." Ex. 1008 ¶ 1. In an embodiment, a gaming platform 70 "enables casino owners to draw off of the large library of casino game functions available in a traditional master processing unit (MPU) stand-alone platform, while adding the graphics and sound capabilities of a personal computer." *Id.* at ¶ 29. Gaming platform 70 includes processor 90 that has a CD-ROM drive for storing "graphics, sound files, presentation software for at least one game, and [a] basic operating system." *Id.* ¶ 31. Processor 90 also has a "customized BIOS chip, referred

to as BIOS +, which provides typical PC boot functions, as well as verification and decryption algorithms." *Id.* "The gaming platform 70 performs many verification processes during boot-up and game operation," and "an algorithm that originates on the BIOS+ conducts verification of all files on the CD-ROM." *Id.* ¶ 37.

3. Analysis

The evidence set forth by Petitioner indicates there is a reasonable likelihood that Petitioner would prevail in showing that claims 1–4 are obvious over Morrow '952 and Morrow '771. *See* Pet. 45–72.

i. Petitioner's Arguments

The preamble of claim 1 recites a "gaming device configured to execute a game." Ex. 1001, 4:61. Petitioner argues, to the extent the preamble is limiting, that Morrow '952 teaches "gaming machine 10" configured to execute a game. Pet. 47 (citing Ex. 1007, Fig. 4).

Claim 1 further recites "a mother board on which a first memory device is provided." Ex. 1001, 4:64. Petitioner argues that Morrow '952 teaches "a first memory device, namely 'electrically erasable programmable ROMs (EEPROMS) such as basic input/output systems (BIOS) 64.'" Pet. 49 (citing Ex. 1007 ¶ 37). Petitioner alternatively argues that "[a] PHOSITA would recognize that Morrow discloses that the BIOS+ 64 chip is placed on a motherboard," or "this disclosure would have been obvious to a PHOSITA, especially in light of the explicit teachings in the related Morrow *'771* reference." *Id.* at 50–51 (citing Ex. 1003 ¶¶ 95–100, 198–204). Morrow '771 discloses that the "BIOS+ on the Pentium motherboard verifies the CD-ROM before the contents of the CD-ROM can be loaded in to the Pentium RAM." *Id.* at 51 (quoting Ex. 1008 ¶ 31). Petitioner argues

that a person with ordinary skill in the art would have been motivated to look to Morrow '771 "to further understand the commonly described technology including of the preferred hardware environment for the commonly described BIO+ chip." *Id.* Accordingly, Petitioner asserts that the combination of Morrow '952 and Morrow '771 "amounts to a combination of known elements . . . according to known methods (i.e., electrically connecting the components on a main ('mother') board) to obtain a predictable result." *Id.* (citing Ex. 1003 ¶¶ 201–204).

Claim 1 also recites "a second memory device configured to store a game application program, the second memory device being connected to the mother board." Ex. 1001, 4:65–67. Petitioner argues that Morrow '952 "teaches a second memory device, namely 'persistent storage media 90,' configured to store game software application program 92," and that "[a] PHOSITA would recognize that Morrow discloses that this memory device is connected to the motherboard." Pet. 52 (citing Ex. 1007 ¶¶ 37–38, Fig. 1; Ex. 1003 ¶ 207). Petitioner further argues that, alternatively, "this disclosure would have been obvious to a PHOSITA, especially in light of the explicit teachings in Morrow '771." *Id.* at 52–53. As argued with the preamble, Petitioner contends that Morrow '771 discloses a Pentium motherboard, and a person with ordinary skill in the art would have connected a second memory device to the motherboard for the same reasons discussed above. *Id.* at 55–56.

Claim 1 additionally recites "a control device for executing a fault inspection program for the second memory device to inspect whether or not a fault occurs in the second memory device." Ex. 1001, 5:1–3. Petitioner argues that Morrow '952 teaches "CPU 60 (i.e., control device) for

executing verification software program 70 (i.e., fault inspection program) for the persistent storage media 90 (i.e., second memory device) to inspect whether or not a damage, change or falsification (i.e., fault) occurs in the hardware of the media 90 . . . [or] any software programs or data stored on media 90" Pet. 56. Specifically, Petitioner contends that Morrow '952 discloses that CPU 60 executes verification program 70 in BIOS+ 64. *Id.* at 57 (citing Ex. 1007 ¶ 38, Fig. 1). According to Petitioner, Morrow '952 discloses that hardware components are verified by reading an identification number for each hardware component, software is verified by reading a digital signature, and when the read value does not match an expected value, a tilt condition message is generated. *Id.* at 58–60 (citing Ex. 1007 ¶¶ 41, 46, 49, 51; Ex. 1003 ¶¶ 101–111).

Claim 1 further recites "wherein the fault inspection program is stored in the first memory device, and the control device completes the execution of the fault inspection program before the game is started." Ex. 1001, 5:4–7. Petitioner argues that Morrow '952 "teaches that the fault inspection program (i.e., 'verification software 70') is stored in the first memory device (i.e., 'BIOS+ 64')," and "that the control device (i.e., 'CPU') completes the execution of this program before the game is started." Pet. 62–66. Specifically, Petitioner argues that Morrow '952 discloses that "CPU 60 (control device) completes the execution of verification software 70 before the game is started, explaining that the verification is done 'before any software program is run form the storage media.'" *Id.* at 63–64 (citing Ex. 1007 ¶¶ 27, 64).

Claim 2 depends from independent claim 1 and recites "wherein the first memory device stores a boot program executed when the gaming device

is started to operate, and wherein the control device executes the fault inspection program after the boot program is executed." Ex. 1001, 5:8–12. Petitioner argues that Morrow '952 teaches "a gaming device according to claim 1 (*see* Claim 1), wherein the BIOS+ 64 (i.e., first memory device) stores a file allocation reader 76 (i.e., boot program) executed when the gaming device is started to operate and that CPU 60 (i.e., control device) executes the verification program 70 (i.e., fault inspection program) only after the file allocation reader 76 is executed." Pet. 66. Specifically, Petitioner contends that Morrow '952 discloses that the "file allocation reader 76 is a computer program which comprises a set of executable instructions for processing the file allocation structure such that used by the operating system 98." *Id.* at 68 (quoting Ex. 1007 ¶ 63) (underlining omitted). Petitioner argues that Morrow '952 discloses an operating system that uses a "'file access system' that is used at boot up to 'perform file access operations.'" *Id.* (citing Ex. 1007 ¶ 25; Ex. 1003 ¶¶ 219–224).

  ii. *Patent Owner's Arguments*

   Patent Owner argues that "Petitioner has not demonstrated that Morrow ['952] in view of Morrow '771 teaches a 'fault inspection program,' as the term is properly construed." Prelim. Resp. 35. Patent Owner explains that the references "are only concerned with verifying programs and do not teach inspecting a memory device for damage." *Id*. Patent Owner argues that Morrow's determination that "the identification number is not readable" is not an example of inspecting the media for damage because Morrow does not disclose any such inspection. *Id*. at 35–36. Patent Owner asserts "Morrow does not state that it does (or can) determine that an error in a data

file means that the media is damaged" and thus cannot meet the claimed "fault inspection program." *Id*. at 36–37.

On this record, we are not persuaded by Patent Owner's argument. As discussed above, we construe "fault detection program" to mean "a program for inspecting whether or not a fault such as damage, change or falsification occurs in the programs or data." *See* Section II.B.2. Petitioner argues that Morrow '952 discloses that "[v]erification failure may be due to, for example, an error in the data file (i.e., damage) or tampering (i.e., change or falsification) of the data file and/or media 90." Pet. 61 (citing Ex. 1007 ¶ 52). That is, according to Petitioner, Morrow '952 determines fault based on damage, change, or falsification. These faults are within our construction of "fault detection program." Accordingly, on this record, we are persuaded that Morrow '952 discloses the verification of hardware or software is by a "fault detection program."

Patent Owner also argues that "Petitioner's allegation that claim 2 is obvious over Morrow ['952] in view of Morrow '771 relies entirely on its overbroad construction of the term 'boot program,' which contradicts the intrinsic record." Prelim. Resp. 37. Patent Owner argues that Morrow's "file allocation reader" is executed before booting the operating system. *Id*. Patent Owner explains that because Morrow's "file allocation reader" does not initialize the operating system, it does not meet the claimed boot program. *Id*. at 38.

On this record, we are not persuaded by Patent Owner's argument. Morrow '952 discloses that the processor 60 accesses the file allocation reader 76 to open the file allocation structure. Pet. 67–68 (citing Ex. 1007 ¶ 63). This allows for the system to verify operating system files before any

software program is run. Ex. 1007 ¶ 64. Accordingly, on this record, we are persuaded by Petitioner that Morrow '952 discloses execution of the fault inspection program after the boot program is executed.

4. Conclusion

We are persuaded, on this record and for purposes of institution, by Petitioner that the combination of Morrow '952 and Morrow '771 discloses the limitations of claims 1 and 2, and a person with ordinary skill in the art would have combined Morrow '952 and Morrow '771 for the reasons set forth by Petitioner. *See* Section II.E.3. We are similarly persuaded, on this record and for purposes of institution, by Petitioner that the combination of Morrow '952 and Morrow '771 discloses the limitations of claims 3 and 4. As such, on this record, we are persuaded that Petitioner has demonstrated a reasonable likelihood that it would prevail in demonstrating claims 1–4 are unpatentable as obvious over Morrow '952 and Morrow '771.

III.ORDER

After due consideration of the record before us, and for the foregoing reasons, it is:

ORDERED that, pursuant to 35 U.S.C. § 314, an *inter partes* review is hereby instituted as to claims 1–5 of the '670 patent with respect to all grounds set forth in the Petition; and

FURTHER ORDERED that, pursuant to 35 U.S.C. § 314(a), *inter partes* review of the '670 patent is hereby instituted commencing on the entry date of this Order, and pursuant to 35 U.S.C. § 314(c) and 37 C.F.R. § 42.4, notice is hereby given of the institution of a trial.

For PETITIONER:

Eric Buresh
Jason Mudd
Kathleen Fitterling
ERISEIP, P.A.
Eric.Buresh@eriseip.com
Jason.Mudd@eriseip.com
Kathleen.Fitterling@eriseip.com

For PATENT OWNER:

James Hannah
Jonathan Caplan
Jeffrey Price
KRAMER LEVIN NAFTALIS & FRANKEL LLP
jhannah@kramerlevin.com
jcaplan@kramerlevin.com
jprice@kramerlevin.com