

Case No. IPR2023-00995

Patent 10,846,941

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SONY INTERACTIVE ENTERTAINMENT, LLC,

Petitioner,

v.

QUANTUM IMAGING, LLC,

Patent Owner.

Case IPR2023-00995

Patent 10,846,941

PATENT OWNER'S PRELIMINARY RESPONSE

35 U.S.C. §313, and 37 C.F.R. 42.107(a)

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EXHIBIT LIST

Ex.	Description
2001	Petitioner's Preliminary Invalidity Contentions
2002	Memorandum from Katherine K. Vidal on Interim Procedure for Discretionary Denials in AIA Post-Grant Proceedings with Parallel District Court Litigation (June 21, 2022)
2003	Lex Machina, Patent Cases (All Judges) Time to Trial, U.S. District Court for the Western District of Texas, September 9, 2023
2004	Lex Machina, Patent Cases (Judge Alan D. Albright) Time to Trial, U.S. District Court for the Western District of Texas, September 9, 2023

I. INTRODUCTION

Pursuant to 37 C.F.R. §42.107, Patent Owner, Quantum Imaging, LLC (“Patent Owner”), submits this Preliminary Response (“POPR”) to Sony Interactive Entertainment LLC’s (“Petitioner”) June 5, 2023 Petition for *Inter Partes* Review (“IPR”) of U.S. Patent No. 10,846,941 (the “’941 Patent”) challenging claims 1, 3, 5, 7–12, and 23–26 as allegedly obvious under 35 U.S.C. §103 over PCT Patent Publication No. WO02/062436 (“Pisanich”) in view of the knowledge of a person of ordinary skill in the art (“POSITA”) (Ground 1), and allegedly obvious over Phantasy Star Online Manual (“Manual”) in view of the knowledge of a POSITA (Ground 2).

The Petition’s obviousness contentions are legally deficient because the Petition fails to show that the references, either alone or in view of the knowledge of a POSITA, make obvious the combination of every element as arranged within any of the challenged claims. Since the Petition fails to demonstrate a reasonable likelihood that any challenged claim is unpatentable, the Petition should be denied. 35 U.S.C. §314(a); 37 C.F.R. §42.108(c).

Further, the Petition fails to adequately state a claim for relief since the Petition provides insufficient detail, explanation, and support for its contentions as required by 35 U.S.C. §312(a)(3) and 37 C.F.R. §42.104(b)(4). Additionally, the Board should afford little or no weight to the testimony of Mr. David Crane as his

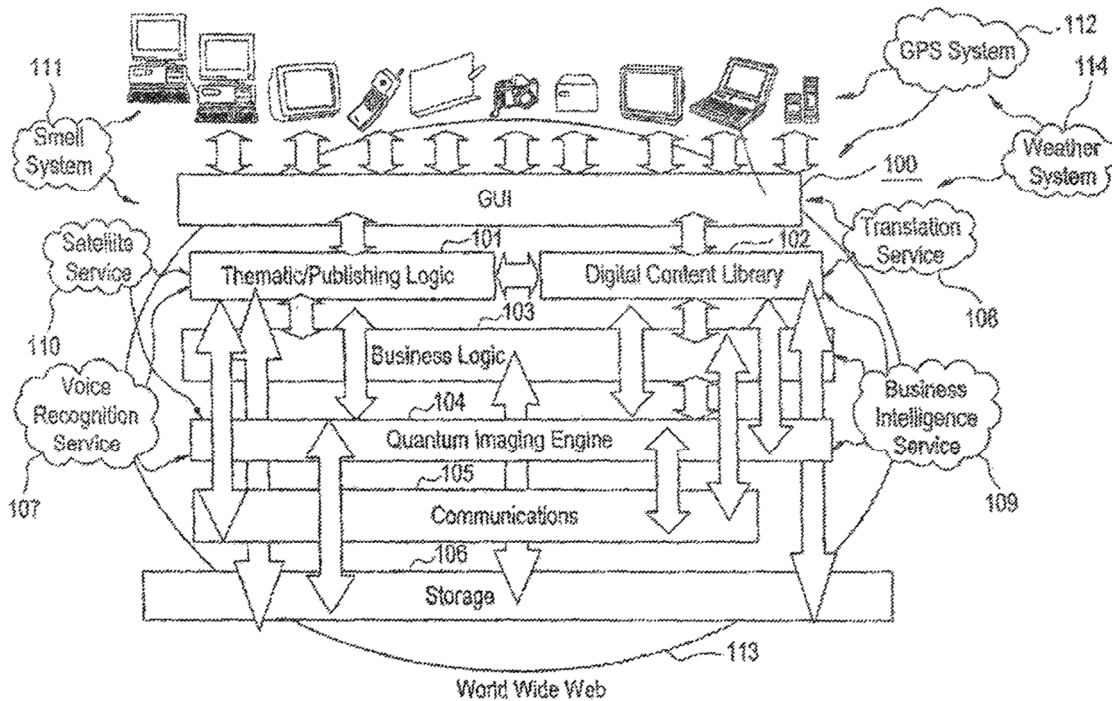
supporting Declaration (“Crane Declaration”; Ex. 1004) (i) provides solely conclusory assertions without any underlying factual support, (ii) attempts to buttress the prior art by providing, without support, limitations missing therefrom, and (iii) merely repeats verbatim the language of the Petition.

II. DESCRIPTION OF THE ’941 PATENT

The ’941 Patent generally relates to “an interactive software application platform which can be used in entertainment, business, publishing, and other applications to provide a virtual and real world experience to the user by integrating audio, video, two-dimensional (2D), and three dimensional (3D) technology, and other applications or services.” Ex. 1001, 1:26–31. The technology was created to enable a user to have a virtual real-world experience by developing ways to “integrate audio, video, 2D and 3D technology to maximize the real world experience for the user.” Ex. 1001, 1: 44-46.

The application platform disclosed in the ’941 Patent is implemented in software deployed at a client, across a client-server architecture, or throughout a distributed system. Ex. 1001, 11:48-53. As disclosed in the ’941 Patent, the interactive software application platform has a logical software architecture having logical “software layers” and service area modules that work together to provide an end user with a real world environment, one embodiment of which is illustrated in Figure 1:

FIG. 1



Ex. 1001, Figure 1; 11:48–12:23. The software layers illustrated in Figure 1 include (1) a graphical user interface (GUI); (2) a Thematic/Publishing Logic and a Digital Content Library; (3) a Business Logic; (4) a thematic or zone application builder and interpreter (i.e., a Quantum Imaging Engine); (5) Communications; and (6) a Data Storage. Ex. 1001, Figure 1; 11:60–65.

The logical software architecture disclosed in the '941 Patent provides a virtual thematic environment that allows, among other things, “the user to move through the 2D and/or 3D and/or integrated graphical representation of the actual real world environment and interact with it.” Ex. 1001, 7:39–41. Additionally, the software architecture provides that other applications may be integrated into the

virtual thematic environment, wherein those applications have their own separate user interfaces and are programmatically independent. Ex. 1001, 8:66–9:10; 10:6–12; 19:63–20:6.

III. DESCRIPTION OF CITED ART

A. Pisanich

Pisanich discloses integrating “real world information” into “a virtual environment provided for a game.” Ex. 1007, p. 2, ll. 17–18. Pisanich discloses a game relating to a competitive outdoor gaming activity, which integrates information upon request, such as data from remotely located conventional data providers that “gather and encode observations about the world (weather, airplane traffic, etc.).” *Id.*, ll. 17–18. For example, the flight simulation game of Pisanich may integrate information such as what Pisanich refers to as “‘real time’ data from traffic 100 and a weather 104 data provider systems.” *Id.*, ll. 13–15. The data from the data provider systems 100, 104 are gathered and accessed by a game data server 108, which transfers the data to a database storage area for later retrieval. *Id.*, ll. 20–21. More particularly, game data server 108 maintains its own databases of information concerning “observations about the world.” Ex. 1007, p. 7, ll. 17–19. For example, game data server 108 maintains its own air traffic 200 and weather 204 databases using data requested from traffic 100 and weather 104 data provider systems. *Id.* The databases of game data server 108 are populated by periodic data requests from data

provider systems 100, 104; the frequency of those requests and the time of those requests “are chosen and optimized to match the update times and frequency of the data providers 100, 104.” Ex. 1007, p. 8, ll. 5–7.

In short, Pisanich discloses integrating past or simulated “real world information” into a gaming application.

B. Description of Phantasy Star Online Manual (“Manual”)

The Manual purports to be an “instruction manual” for the video game *Phantasy Star Online*, published by the Sega Corporation for their Dreamcast gaming console. Ex. 1008, p. 2. The Manual describes the operational game-play of the *Phantasy Star Online* game, including the basic controls, character creation and modification, and other aspects of game-play. The Manual explains that players can play *Phantasy Star Online* either online or offline. Online, players are brought to a virtual lobby where they can organize teams with others to play the game cooperatively over the internet. *See id.* 8–10. As an instruction manual for end-user video game players, the Manual offers little, if any, technical information regarding the specification of the game itself or its execution by the console. The Manual does not delineate which functions are provided by software or hardware—it is silent as to this information.

IV. LEVEL OF ORDINARY SKILL

For purposes of this Preliminary Response, Patent Owner applies Petitioner's characterization of a POSITA.

V. CLAIM CONSTRUCTION

In the event the Board institutes review of this Petition, Patent Owner explicitly reserves the right to provide proposed constructions of claim limitations. For purposes of this POPR, Patent Owner notes that the following terms in the challenged claims have been construed by a district court in an action concerning closely related parent patents¹ sharing the same specification and figures (*Barbaro Technologies, LLC v. Niantic, Inc.*, No. 3:18-cv-02955 (N.D. Cal.)), hereinafter “*Niantic court*.” See Ex. 1011. In its order, the district court construed the following terms that also appear in the claims of Grounds 1 and 2.

'941 Claim Term	Prior Construction
graphics user interface (GUI) module	“software that provides a graphical display and processes user inputs to

¹ The '941 Patent is a child of Patent 7,373,377, by divisionals and continuations, addressed in the *Niantic court*.

	allow a user to interact with the graphical display.”
quantum imaging environment (QIE) module	“a software layer which receives and interprets content such that the content is manipulated so as to be accessible on different types of devices for use within the virtual thematic environment.”
[three-dimensional] virtual thematic environment	“a theme-based virtual computer interface [perceived by a user to include at least one feature displayed in three-dimensions.]”
secondary application within the primary application	“secondary computer program within the primary computer program.”

See id. 4–14.

Petitioner has made the prior court constructions (Ex. 1010) of record in this proceeding but fails to use or distinguish over the existing constructions. Pointedly, Petitioner fails to set forth any constructions for the elements in the challenged claims. Instead, Petitioner simply proposes that “no express constructions of the

claims are necessary to assess whether the prior art reads on the Challenged Claims.”

Pet. 11. Further, Petitioner fails to make any statement proposing that the claim terms be construed according to their plain and ordinary meaning. It is entirely unreasonable to believe that there is not a single claim term requiring construction—even if it is simply given its plain and ordinary meaning—to resolve this Petition, particularly when at least one district court believed claim construction was required with regards to the same terms in other closely related patents, and the court in the Related Matter (Pet. 2), will do so in an order following the *Markman* hearing in September 2023 (Ex. 1010 at 2), prior to an institution decision in this IPR.

By failing to set forth any constructions, the Petition fails to explain how the challenged claims are to be construed in view of known constructions as required by 37 C.F.R. §42.104(b)(3). Worse, the Petition does not show how, as so construed, the challenged claims are unpatentable pursuant to the Petition’s stated statutory grounds. Despite the requirements of 37 C.F.R. §42.104(b)(3) and (b)(4), Petitioner fails to provide Patent Owner sufficient notice of how Petitioner construes the challenged claims and how Petitioner applies the asserted prior art in light of Petitioner’s constructions. Petitioner’s failure to provide constructions in this Petition for terms that are consistent with or are distinguishable over established constructions, or consistent with or distinguishable over the constructions offered by

Petitioner in the pending district court action, risks creating inconsistent results in the determination of the rights afforded by the claims of the '941 Patent.

VI. APPLICABLE LEGAL STANDARDS

The Board may only institute an *inter partes* review when a petitioner proves that there is a “reasonable likelihood that the petitioner would prevail with respect to at least one of the claims challenged in the petition.” 35 U.S.C. §314(a). Petitioner bears “the burden of proving a proposition of unpatentability by a preponderance of the evidence.” 35 U.S.C. §316(e). Inherent in this burden are the requirements that Petitioner set forth “[h]ow the challenged claim is to be construed” and then demonstrate “[h]ow the construed claim is unpatentable.” 37 C.F.R. §§42.104(b)(3) and (b)(4) (emphasis added).

Next, according to 35 U.S.C. §312(a)(3), a petition must be rejected unless the petition specifies, with particularity, each challenged claim, grounds for challenging such claims, and evidence supporting those challenges. Specifically, a petition must explain “[h]ow the construed claim is unpatentable” and “must specify where each element of the claim is found in the prior art patents or printed publications relied upon.” 37 C.F.R. §42.104(b)(4). “The Board may exclude or give no weight to the evidence where a party has failed to state its relevance or to identify specific portions of the evidence that support the challenge.” 37 C.F.R. §42.104(b)(5).

A showing of obviousness requires that (a) the prior art teach or suggest each limitation of the claims; (b) there exists an apparent reason to combine and/or modify the prior art as proposed; and (c) a person of ordinary skill would have a reasonable expectation of success that the proposed combination and/or modification of the prior art would operate for its intended purpose. *See KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007).

A petition based on obviousness also must “meaningfully” address the first two Graham factors: (i) the scope and content of the prior art, and (ii) any differences between the claimed subject matter and the prior art. *See, e.g., Google Inc. and Twitter, Inc. v. EveryMD.com, LLC*, IPR2014-00347, Paper 9 at 23–25 (PTAB May 22, 2014). Specifically, the petitioner must sufficiently specify where each element of each challenged claim is found in the prior art (including explaining the significance of the quotations and citations). *Id.* It is not the Board’s burden to “sift through the information” provided with a petition to find the differences between a challenged claim and the prior art. *Id.*; *see also, Liberty Mutual Insurance Co. v. Progressive Casualty Insurance Co.*, CBM2012-00003, Paper 7 at 2-3 (PTAB Oct. 25, 2012) (precedential).

Further, declarations with conclusory statements are entitled to little weight or no weight. *Xerox Corp. v. Bytemark, Inc.*, IPR2022-00624, Paper 9 at 15 (precedential) (citing 37 C.F.R. §42.65(a)). The Xerox opinion explains (citing *KSR*,

550 U.S. at 421 (2007)) on page 16: “This is particularly problematic in cases where, like here, expert testimony is offered not simply to provide a motivation to combine prior-art teachings, but rather to supply a limitation missing from the prior art.” *See also Arendi S.A.R.L. v. Apple, Inc.*, 832 F.3d 1355, 1361–62 (Fed. Cir. 2016) (holding that reliance on common sense in an obviousness analysis is “typically invoked to provide a known motivation to combine, not to supply a missing claim limitation”).

Finally, “[a]rguments must not be incorporated by reference from one document into another document.” 37 C.F.R. §42.6(a)(3). The “practice of citing the Declaration to support conclusory statements that are not otherwise supported in the Petition also amounts to incorporation by reference.” *Cisco Systems, Inc. v. C-Cation Techs.*, IPR2014-00454, Paper 12 at 9 (PTAB. Aug. 29, 2014) (designated informative).

VII. ARGUMENT

A. Institution of this Petition Should Be Denied Because Petitioner Fails to Show that the Challenged Claims are Unpatentable Over Any of Petitioner’s Prior Art Combinations.

Petitioner has failed to meet its burden because the Petition does not show that the prior art teaches or suggests each limitation of independent claims 1 and 23. As detailed below, Petitioner wholly fails to address certain limitations of the challenged claims at all. Where Petitioner actually addresses some of the limitations

of the challenged claims, Petitioner offers nothing more than conclusory statements of unpatentability and superficial factually deficient arguments, often supported only by verbatim restatement in the Crane Declaration.

Further, Petitioner's obviousness analysis is superficial, legally flawed, and unsupported by the claims as construed, the specification, and the prosecution history. The Petition is littered with conclusory statements of unpatentability that merely incorporate by reference large passages from the Crane Declaration and/or rests on the alleged common knowledge of a POSITA as a gap-filler to supply missing claim elements. Importantly, the Petition also fails to determine the differences between the prior art and the claimed invention or provide any rationale regarding a motivation to combine certain teachings. In fact, the Petition itself makes no mention at all of a motivation to combine common knowledge of a POSITA and either of the asserted references. For any one of the above reasons, and certainly for them in aggregate, the Petition should be denied institution.

B. Ground 1

1. Ground 1 of the Petition Fails to Address Many Elements of the Challenged Independent Claims at All.

The Petition fails to specify where each element of claim 1 and 23 is found in the prior art. Petitioner fails to provide sufficient details as to how the claims are obvious in relation to Pisanich, as required by 35 U.S.C. §312(a)(3) and 37 C.F.R.

§42.104(b)(4). Specifically, Petitioner fails to address the underlined language of the following limitations/elements of claim 1 as arranged in the claim²:

- Within its limitation 1[a] analysis (Pet. 17-19), Petitioner fails to address the claim elements “at least one thematic/publishing logic module” and “to constitute and provide” a virtual thematic environment.
- Within its limitation 1[c] analysis (Pet. 21-22), Petitioner fails to address the “graphics user interface (GUI) module”; the module including “software”; and “interact[ing]” with graphical display elements. Although Petitioner refers to the “rendering engine 316,” Petitioner never explains how the rendering engine 316 meets the claim limitation of the “GUI module” or the module “including software” or permitting a user to “interact” with graphical display elements.

² Petitioner employs a naming convention for categorizing distinct clauses within the claims (1[a], 1[b], etc.), Patent Owner adopts this same convention to facilitate straightforward assessment and comparison.

- Within its limitation 1[d] analysis (Pet. 23-25), Petitioner never addresses the “quantum imaging environment (QIE) module” or the “QIE module being a software layer”. Petitioner alleges that the “game data server 108 receives, interprets and manipulates the second content.” But Petitioner fails to explain how the game data server 108 meets the claim limitation of the “QIE module” or the “QIE module being a software layer.”
- Within its limitation 1[e] analysis (Pet. 26), Petitioner addresses the “digital content library module.” But Petitioner never addresses the claim elements “virtual thematic environment coordinated by the thematic/publishing logic module.”

Petitioner also fails to address the underlined language of the following elements/limitations of claim 23, as arranged in the claim:

- On page 33 of the Petition, regarding limitation 23[b], Petitioner simply refers to its analysis of limitation 1(a) (Pet. 17-19), but the claims have different words. Within its analysis, Petitioner fails to address the claim elements “to constitute” a virtual thematic environment.

- On page 33 of the Petition, regarding limitation 23[c], Petitioner simply refers to its incomplete analysis of claim 1 (Pet. 21-22), which fails to address the GUI module including software.
- On page 34 of the Petition, regarding limitation 23[f], Petitioner simply refers to its incomplete analysis of claim 1 (Pet. 23-25) which does not address the QIE module being a “software layer”.
- On page 34 of the Petition, Petitioner simply refers to its analysis of claim 1 (Pet. 23-25), which does not address the software layer configured to receive and interpret the “first content and the second content.” Rather, claim 1 requires that the QIE module is a software layer that receives, interprets, and manipulates the “second content,” not the “first content and second content” of limitation 23[f] as set forth by Petitioner.
- On Page 34 of the Petition, regarding limitation 23[e] of “the primary application receiving and using first real-time information to provide the second content, the secondary application receiving and using second real-time information to provide the first content, the first real-time information being different from the second real-time information;” Petitioner simply incorporates arguments from

limitation 1[b]. However, the underlined text above does not appear in limitation 1[b]; therefore, Petitioner's arguments concerning limitation 1[b] are insufficient to show that the Pisanich discloses all of the elements of limitation 23[e].

For the underlined language set forth above, Petitioner offers neither reasoned argument nor reference to any language in Pisanich that teaches or even suggests this language. The Crane Declaration makes no attempt to identify where these limitations are in Pisanich and is equally deficient. Because Petitioner has not specified where each element of each challenged claim of Ground 1 is found in the prior art, institution should be denied. *See, e.g., Google Inc.*, IPR2014-00347, Paper 9 at 23–25; and 37 C.F.R. §42.104(b)(4).

2. Ground 1 of the Petition fails to show that Pisanich, alone or in view of the knowledge of a POSITA, teaches or suggests each and every element of the challenged claims.

The Petition fails to demonstrate that Pisanich, alone or in view of the knowledge of a POSITA, teaches or suggests each and every element of independent claims 1 and 23. The Petition fails to: (i) ascertain the differences between the claimed invention and Pisanich, (ii) articulate any rationale as to why the claimed invention would have been obvious to a POSITA at the relevant time, and (iii)

explain why a POSITA would be motivated to combine a POSITA's knowledge with Pisanich.

Claim 1

As noted above, with respect to VII(B)(i), there are many elements of claim 1 not addressed by the Petition. Further, Petitioner does not provide any evidence or rationale to support its obviousness allegations for the following elements and limitations of claim 1.

- a. Limitation 1[a]: Pisanich does not disclose or teach “provide a virtual thematic environment on a visual component, the virtual thematic environment being a theme-based virtual world environment.”**

In addition to not addressing all of the elements of limitation 1[a], the Petition fails to show that Pisanich, alone or in view of the knowledge of a POSITA, teaches or suggests the above elements. The Petition alleges certain claims of “Pisanich cover a method for simulating a real world environment in a virtual world represented in a game.” Pet. 17 (internal quotations omitted). Petitioner states “[a] POSITA would have understood that an electronic game is theme-based and it provides a theme-based virtual world environment.” *Id.* The only support Petitioner cites to is the Crane Declaration, and the Petition does not include any factual reasoning supporting the conclusion. Thus, with respect to the “virtual thematic environment being a theme-based virtual world environment,” Petitioner has

provided nothing more than a conclusory, unsupported statement of what a POSITA would have understood.

The cited portion of the declaration, in pertinent part, states that “[a] flight simulator embodied the themes and visuals of flying through the world, disclosing the claimed ‘provid[ing] a virtual thematic environment on a visual component, the virtual thematic environment being a theme-based virtual world environment.’” Ex. 1004, ¶125. Notwithstanding the fact that the relevant portion of the Crane Declaration makes no mention of any “visual component” (*see id.* ¶¶123–26), the Crane Declaration offers no further explanation regarding why a flight simulator that purportedly embodies the themes and visuals of flying through the world would disclose the “virtual thematic environment being a theme-based virtual world environment” as claimed in limitation 1[a]. Indeed, nothing in the cited section of the Crane Declaration supports Petitioner’s contention that a POSITA would have understood that an electronic game is theme-based and provides a theme-based virtual world environment. Here, Petitioner improperly attempts to use a POSITA’s common knowledge to supply a missing claim limitation without evidentiary support or satisfying the “searching” standard required by the Federal Circuit. *See Arendi*, 832 F.3d at 1363. Further, Petitioner impermissibly incorporates by reference the whole-sale language set forth in the Crane Declaration. Therefore, Petitioner’s

argument on this element of challenged independent claim 1 should be given little to no weight.

- b. Limitation 1[b]: Pisanich does not disclose or teach “a secondary application within the primary application, the secondary application being different from the primary application, the secondary application being launched from the primary application.”**

The Petition fails to show that Pisanich, alone or in view of a POSITA, teaches or suggests the above elements, at least because Petitioner’s arguments regarding the “secondary application” limitation are completely unsupported, based wholly on conclusory statements that attempt to impermissibly incorporate large portions of the Crane Declaration. Pet. 20-21.

In the *Niantic* case, the term “secondary application within the primary application” was previously construed as “secondary computer program within the primary computer program.” Ex. 1012, p. 12. Petitioner is aware of the construction and has failed to address or distinguish the *Niantic* court’s construction for this term. *See* 37 C.F.R. §42.100(b). Accordingly, Petitioner fails to meet the requirements of 37 C.F.R. §42.104(b)(3) and §42.104(b)(4) in that the Petition does not identify “how the challenged claim is to be construed,” as required by §42.104(b)(3), and “how the construed claim is unpatentable under the statutory grounds,” as required by (b)(4). Specifically, Petitioner fails to define the “secondary application” claim

element and does not explain how the claim term, as properly construed, is unpatentable.

But, in support of its claim that Pisanich teaches this “secondary application” element, Petitioner offers only the following: “As shown by Figure 3 of Pisanich reproduced above, there are multiple ‘managers’ or ‘engines,’ i.e., secondary applications, that are within the primary application, i.e., game 112.” Pet. 20. Petitioner’s assertion that Pisanich discloses a “secondary application within the primary application” is supported entirely by referencing an annotated version of Figure 3 of Pisanich. *See* Pet. 19. Although Petitioner claims that the various “engines” of Pisanich teach a “secondary application,” the figure annotated by Petitioner on page 19 of the Petition indicates that Petitioner believes that the “engines” of Pisanich also teach a separately claimed feature, a “graphics user interface (GUI) module,” as will be discussed *infra*. *See id.*

Moreover, Petitioner states without support that “[a]lthough such secondary application is different from the game itself, it can be launched from the game....” Pet. at 20. Petitioner’s unsupported assertion appears to be, therefore, that the various “managers” and “engines” of Pisanich are “secondary application[s]” that are different from the “primary application” (i.e., the game) and that these “managers” and “engines” can be launched from the game. This assertion by Petitioner is unsupported by either reasoned analysis or evidentiary support. Simply because

Petitioner says the “managers” and “engines” meet the “secondary application” element of challenged independent claim 1 does not, in and of itself, make it so. Petitioner fails to address how Pisanich meets the construction of “secondary application” element as construed by the *Niantic* court, and Petitioner points to no place in Pisanich that states that the “managers” and “engines” are “secondary applications”—relying entirely, instead, on the unsupported conclusory statement in the Crane Declaration. However, more than conclusory statements and factually unsupported assertions are necessary to grant a Petition.

- c. **Limitation 1[c]: Pisanich does not disclose or teach “the GUI module providing ... a second user interface associated with the secondary application and enabling the user to access the secondary application through the second user interface.”**

In addition to not addressing all of the elements of limitation 1[c], the Petition fails to show that Pisanich, alone or in view of the knowledge of a POSITA, teaches or suggests the above elements, at least because the Petitioner’s arguments in favor of an obviousness finding are, once again, completely unsupported and based on conclusory statements made in the Crane Declaration that is, again, impermissibly incorporated.

First, limitation 1[c] requires that the “second user interface” be provided by the “GUI module.” Petitioner does not address the requirement that the “GUI module” provides the “second user interface,” nor does it offer any construction for

the term or note that it was construed by the *Niantic* court. Indeed, the term “graphical user interface (GUI) module” was construed by the *Niantic* court as “software that provides a graphical display and processes user inputs to allow a user to interact with the graphical display.” Ex. 1012, p. 4–5; *See* 37 C.F.R. §42.100(b). As such, in view of the *Niantic* court construction, the meaning of the above claim element requires that the “second user interface” be a part of the graphical display that processes user inputs. As discussed below, Petitioner’s arguments concerning this “second user interface” limitation are inconsistent with the *Niantic* court’s construction of this term, and, therefore, the Petition should not be granted.

Petitioner broadly claims that Pisanich discloses a “second user interface,” stating: “[t]he traffic manager 300 also provides a second user interface associated with the secondary application through audio engine 336 and enabling the user to access the secondary application through the second user interface.” Pet. 22. Petitioner does not identify which element of Pisanich actually discloses the “second user interface” element or the limitation that the “secondary user interface” enables the user to access the “secondary application through the secondary user interface,” as required by limitation 1[c]. The only support offered by Petitioner (Pet. 22) for its claim that Pisanich discloses a “second user interface” is a passing reference to the following language from the Pisanich specification:

The traffic manager 300 also simulates the communications of air traffic within the game world, based on real time data. The external realization of this is through communications commands that are sent to the audio engine 336. The audio engine 336 uses these commands to output realistic audio communications messages to the user (for example, voice communications from air traffic control (ATC) and aircraft) based on the state of the player and other aircraft in the game. These messages include messages between ATC and the other aircraft and between ATC and the player 120.

Ex. 1007, 10:20–11:13. Petitioner offers no reasoned analysis or evidentiary support to explain why it believes that the above-quoted language from Pisanich discloses a “second user interface” other than by way of a general citation to the Crane Declaration. *See* Pet. 22. As incorporation by reference is impermissible, the cited material in the Crane Declaration should be given no weight.

Even if given any weight, the Crane Declaration states, in pertinent part, that “Pisanich disclosed an audio interface between the player and the audio engine 336 (one of the secondary applications) by way of Traffic Manager 300” and again cites the above-quoted section of the Pisanich specification. Ex. 1004, ¶142. Mr. Crane’s apparent interpretation of a second user interface is not limited to the second user interface being a part of the graphics user interface module, i.e., Mr. Crane is

interpreting the second user interface to be an audio interface. The Petition and Mr. Crane offer no claim construction or rationale as to why a “second user interface” provided by the “graphics user interface (GUI) module” of independent claim 1 does not require a graphical user interface. Petitioner appears, in fact, to read this requirement out of the claim. Further, neither Petitioner nor Mr. Crane claims that a POSITA would understand that a “second user interface” provided by a “GUI module” need not be graphical in nature.

Given that the Petition does not account for the claim element that the “second user interface” is provided by a “GUI module,” it appears that Petitioner is implying, without explicitly stating, that a POSITA’s common knowledge would somehow erase the graphical nature of the “second user interface” provided by a “GUI module.” However, this is insufficient to address the “second user interface” being provided by a “GUI module” limitation—i.e., a wholly missing claim limitation without evidentiary support or satisfying the “searching” standard required by the Federal Circuit. *See Arendi S.A.R.L. v. Apple Inc.*, 832 F.3d 1355, 1363 (Fed. Cir. 2016) discussed supra. Simply put, Petitioner attempts to use a POSITA’s common understanding to gap-fill a limitation missing from the prior art. Petitioner’s argument, however, is not supported with “reasoned analysis and evidentiary support.” *Id.* When its conclusory statements are dismissed, it is plain that the

Petition does not demonstrate that the asserted prior art teaches a “second user interface” provided by a “GUI module”.

- d. Limitation 1[d]: Pisanich does not teach “the QIE module being a software layer that receives, interprets, and manipulates the second content so as to be accessible on different types of devices for use within the virtual thematic environment.”**

The Petition fails to show that Pisanich, alone or in view of the knowledge of a POSITA, teaches or suggests the above elements of limitation 1[d], at least because the Petition’s arguments regarding the obviousness of these claim elements are, once again, wholly unsupported, offering only conclusory statements while also attempting to impermissibly incorporate large portions of the Crane Declaration. Further, the Petition does not provide any rationale or explanation of why it would be obvious to a POSITA to modify Pisanich in the manner set forth in the Petition.

- e. “QIE module”—“receives, interprets, and manipulates the second content”**

Petitioner fails to show that Pisanich discloses the above “QIE manipulation” limitation, despite pointing to the following language from the Pisanich specification: “a game data server 108 continually gathers ‘real time’ data from traffic 100 and a weather 104 data provider systems. On request, the game data server 108 permits data available to a game 112, 116 and players 120, 124.” *Id.*, 20; Ex. 1007, 5:13–15.

That game server 108 gathers data and makes that data available to players of the game shows, at best, that content was received but does not disclose that second content is interpreted and manipulated by a “QIE module,” as required by the claim.

f. “QIE module”—“accessible on different types of devices for use within the virtual thematic environment”

Petitioner summarily states that “[a] POSITA would have understood that players 120, 124, etc. may access such second content on different types of devices for use with the game.” Pet. 23. The only support Petitioner offers for such an assertion is reference to the Crane Declaration, which the Petition once again attempts to inadmissibly incorporate its content without analysis. The Crane Declaration, in pertinent part, states:

As noted above, it was well known in the art as of the filing of the ’941 Patent to interpret and manipulate video game content for use on different types of devices. In addition, Pisanich explicitly taught that the real-time, real-world data collected by Game Data Server 108 could be served into different games, presumably on different devices.

Ex. 1004, ¶152 (emphasis added). The Crane Declaration offers presumptions instead of factual support for its conclusions.

Even if the declaration is considered, it does not show that a software layer manipulates the content. Rather, in ¶83, the declaration illustrates examples (from a

single unauthenticated website) of different screens that show six different versions of the same game, each version operating on a different type of computer. What is left unsaid, and perhaps why Mr. Crane chose to use the word “presumably,” is that it is unknown whether the different versions of the game were provided by (1) the same software for each computer, and/or (2) different hardware for each computer. It is indisputable, however, that the Petition cites no evidence that Pisanich addresses or teaches a software layer that receives, interprets, and manipulates the second content to be accessible on different types of devices.

In deciding whether to give the Crane Declaration any weight, it should be noted that it is riddled with conclusory statements and unsupported conclusions for this claim element—as well as throughout. *See*, for example, paragraph 84, which states: “As far back as the 1980s, conventional rendering technology was configured to interpret and manipulate game content so as to be accessible on different types of devices.” The declaration does not offer any support, rationale, or evidence for this statement. Despite its lack of support, Petitioner seeks to improperly use the statement, attributable to a POSITA’s common knowledge, to supply a wholly missing claim limitation without any evidentiary support. *See Arendi*, 832 F.3d at 1362–63; *see also Xerox Corp.*, No. IPR2022-00624 at 6.

Pisanich does not teach elements capable of manipulating game content so that it is accessible on different types of devices. While the Crane Declaration does

not particularly identify the “game data server 108” of Pisanich as disclosing a “QIE module,” it does point to the “game data server 108” as something that presumably discloses second content being accessible on different types of devices. Mr. Crane’s presumption appears to be based on his reliance on the following language of the Pisanich specification, which provides, in part:

Moreover, a second player 124 may play an entirely different game 116 (for instance, a car racing game, or a football game) than the game 112 being played by the first player 120. However, the different game 116 may request the same type of data (weather, for example) as the first game 112. The architecture of the present invention can be extended to meet the data requirements of other games.

Ex. 1007, 7:9–13 (emphasis added). Even if Pisanich discloses that second content may be accessible on different games, it does not necessarily disclose that second content is accessible “on different types of devices for use within the virtual thematic environment,” as required by claim 1. Accordingly, Mr. Crane’s statement that “Pisanich taught that Game Data Server 108 could be connected to multiple devices playing different games, and said server interpreted and manipulated content to said multiple devices as claimed[,]” is simply untrue—it is wholly unsupported by the specification of Pisanich. Ex. 1004, ¶153.

The Petition and Crane Declaration also argue that Pisanich’s disclosure of “for example, an aircraft, a car, or the like” discloses this limitation of “QIE module”—“accessible on different types of devices for use within the virtual thematic environment.” Pet. 23-24, citing Ex-1007, 6:18-22. But again, this statement is false as this language from Pisanich only discloses that different types of vehicles can be simulated for the games, not manipulating the content such that the content is accessible on different types of devices as required by claim 1.

- g. Limitation 1[e]: Pisanich does not teach “at least one digital content library module storing information, the information containing 2 dimensional and 3 dimensional content.”**

In addition to not addressing all of the elements of limitation 1[e], the Petition also fails to show that Pisanich, alone or in view of the knowledge of a POSITA, teaches or suggests the above “digital content library module” element as, once again, the Petitioner’s arguments urging a finding of obviousness are wholly unsupported, offering only conclusory statements while also attempting to impermissibly incorporate large portions of the Crane Declaration. Further, the Petition does not provide any rationale or explanation of why it would be obvious to a POSITA to modify Pisanich in the manner set forth in the Petition.

h. “digital content library module”

Petitioner claims, “Pisanich discloses a content management application, e.g., world manager 312, which, like the at least one digital content library module that stores information containing 2 dimensional and 3 dimensional content, ‘maintains information’ about the physical state of the world as known in the art. This includes information about the terrain, ground cover, hydrology, buildings roads, and navigation features.” Pet. 26 (quoting Ex. 1007, 16:3–5) (emphasis added). Petitioner offers no explanation as to why it believes that “world manager 312,” which maintains information, discloses a “digital content library module,” which is required to store information. Petitioner does not point to any language in Pisanich that shows that “weather manager 312” stores information of any kind.

i. “digital content library module”—“2 dimensional and 3 dimensional content”

Even if Pisanich discloses a “digital content library module storing information,” Petitioner does not show that the stored information contains “2 dimensional and 3 dimensional content,” as required by claim 1. In order to overcome this significant shortcoming in its argument, Petitioner claims that “[a] POSITA would have understood that such information on the ‘physical state of the world’ such as terrain has to be 2 dimensional and 3 dimensional content because terrain is by nature 3 dimensional.” Pet. 26. The only support offered by Petitioner

for that proposition is reference to paragraph 160 of the Crane Declaration, the pertinent part of which simply recites the same statement verbatim without any additional support or reference. *See* Ex. 1004, ¶160. Petitioner again resorts to improperly using a POSITA’s common knowledge to supply a wholly missing claim limitation without evidentiary support. *See Arendi*, 832 F.3d at 1362–63; *see also Xerox Corp.*, No. IPR2022-00624 at 6.

Here again, Petitioner attempts to use a POSITA’s common understanding to supply a limitation missing from the prior art Pisanich reference. Petitioner’s argument is wholly unsupported and does not provide a scintilla of “reasoned analysis and evidentiary support.” *Id.* Without more than its conclusory statements, Petitioner has not shown that Pisanich teaches a “digital content library module” containing “2 dimensional and 3 dimensional content.” Finally, the challenged independent claim 1 requires that the “digital content library module” contain “2 dimensional and 3 dimensional content.” Therefore, even if the “weather manager 312” of Pisanich includes “terrain information,” Petitioner has not shown that Pisanich also discloses a “digital content library module” that also stores “2 dimensional information.”

For the above-reasons, the Petitioner’s Petition to institute *inter partes* review of challenged independent claim 1 should be denied.

Claim 23

It appears that, since many elements of claim 1 are also found in claim 23, Petitioner chose not to specifically address many limitations of claim 23. Instead, Petitioner summarily notes that “Pisanich teaches this limitation” and then refers back to its arguments concerning the limitations found in the Petition as to claim 1. *See* Pet. 33–35. Accordingly, Patent Owner hereby incorporates its remarks above for elements of claim 23 that are not found in claim 1 and also found in claim 1. *See supra*. And as noted above, there are elements in claim 23 not addressed by the Petition.

Further, Petitioner does not provide any evidence or rationale to support its obviousness allegations for the following elements and limitations of claim 23.

j. Limitation 23[a]: Pisanich does not disclose or teach “a client system and a server system communicating to provide an interactive software application platform”

The Petition fails to show that Pisanich, alone or in view of the knowledge of a POSITA, teaches or suggests the “a client system and a server system” element of limitation 23[a]. Petitioner’s arguments regarding the obviousness of the limitation are wholly unsupported, offering only conclusory statements while also attempting to impermissibly incorporate large portions of the Crane Declaration. Further, the Petition does not provide any rationale or explanation of why it would be obvious to a POSITA to modify Pisanich in the manner set forth in the Petition.

Petitioner argues that Pisanich discloses that a “game data server 108 and the client computing device running the game 112 provides an interactive software application platform to player 120, who can interact with force feedback engine 324 and the player control/ game state manager engine 328 via joystick 340 and keyboard 344, respectively.” Pet. 32. To the extent that Petitioner claims that the “client computing device” and “game data server 108” disclose a client system and a server system, respectively, Petitioner offers no factual support other than the self-serving conclusory statement that it does. Petitioner’s term “client computing device” is without any support in Pisanich—it is not used, disclosed, or even suggested within the Pisanich reference. As such, it is a term “made up” by Mr. Crane and applied to Pisanich without any discussion or rationale provided for why it would be appropriate to label any element of Pisanich a “client computing device.” As it is unclear what element of Pisanich the Petitioner asserts discloses a “client computing device” it is impossible to determine how such a “client computing device” discloses the “client system” of the “interactive software application platform” of limitation 23[a]. Petitioner has left the Board with the task to determine what in Pisanich discloses a “client computing device”—an impermissible hunting exercise sufficient to deny institution. Moreover, even if Pisanich discloses a “client system” and a “server system,” Petitioner fails to show that the “client system and server system”

communicate “to provide an interactive software application platform,” as required by independent claim 23.

For the above-reasons, the Petitioner’s Petition to institute *inter partes* review of claims 1 and 23 based on Ground 1 should be denied.

k. All Remaining Claims That Rely on Pisanich Fail for the Same Reasons

Ground 1 relies on Pisanich as the primary reference. Claims 3, 5, 7–12 depend from independent claim 1, and claims 24–26 depend from independent claim 23. Because Pisanich does not render obvious independent claims 1 and 23, it cannot render obvious dependent claims 3, 5, 7–12, and 24–26, and institution based on Ground 1 should be denied.

C. Ground 2

1. The Petition Must Be Denied Because Petitioner Fails to Show That the Manual is Authenticated or is Actually Prior Art to the ‘941 Patent.

Exhibit 1008, the Manual, is not properly authenticated because Petitioner has not presented any evidence that the document is what Petitioner purports it to be—namely, a document shipped along with the *Phantasy Star Online* video game for Sega Dreamcast before the priority date of the ‘941 Patent. The Petitioner has failed to establish that the Manual is a prior art printed publication.

Mr. Harry’s testimony is the basis for Petitioner’s assertion that the Manual is prior art and the basis that Exhibit 1008 is a true and correct copy of the Manual

allegedly “published” in 2000. *See* Ex. 1009, ¶¶11–12. Mr. Harry describes himself as “an analyst with Global Technology Transfer Group (‘GTT’)” and a registered U.S. patent agent “with fifteen years of experience in the patent practice, including drafting and prosecuting patents and ensuring positive relationships, with a wide range of clients.” *See id.* ¶2; Ex. 1009, Attachment A. Mr. Harry is neither a records custodian for Sega nor the person responsible for archiving or retrieving Sega’s video game manuals or versions thereof. Notably, Mr. Harry did not testify that he consulted with people who were records custodians of Sega in preparing his declaration. Further, Mr. Harry did not testify that he had any knowledge of Sega’s video game packaging and distribution practices at the time *Phantasy Star Online* was purportedly sold or distributed.

Mr. Harry did testify that he personally ordered a copy of the *Phantasy Star Online* videogame, which purportedly included a copy of the Manual, for the Sega Dreamcast gaming console from an individual seller on the e-commerce website eBay. *Id.* ¶6. There is nothing to suggest that the individual seller from which Petitioner obtained the video game and Manual is trustworthy. There is also nothing in the record to indicate the individual seller’s business practices, i.e., whether he obtains one or more items and seals them together on his own to create the products he sells on eBay.

Accordingly, Mr. Harry cannot testify as a witness as to whether the product he purchased, and the entirety of its contents, was “intact and original from the factory,” even based “upon visual inspection,” when Mr. Harry does not testify that he has any knowledge regarding SEGA’s packaging or distribution practices at the time *Phantasy Star Online* was purportedly distributed, or when he has not testified that he has ever seen an “intact and original from the factory” version of the game. *See* Ex. 1009, ¶8. Similarly, Mr. Harry cannot testify that, in his opinion, “the manual would have been provided by SEGA with all copies of PSO that were sold.” *Id.* ¶12. To the extent that Mr. Harry is deemed competent to offer any testimony, such testimony would be limited to his opinion that Exhibit 1008 is identical to the document he received with his eBay order. Further, Mr. Harry cannot offer testimony to confirm or deny whether multiple versions of the Manual were associated with the *Phantasy Star Online* game or whether the Manual was updated at different times to reflect corrections of errors or upgrades to the video game. Mr. Harry’s testimony is incompetent to offer the Manual as prior art in this proceeding.

Further, the copyright notice relied on by the Petitioner to evidence the publication date is hearsay, not falling within any exception, and has no guarantees of trustworthiness. A copyright notice alone is insufficient to establish public accessibility as of a particular date. *See ServiceNow, Inc. v. Hewlett–Packard Co.*, IPR2015–00716, Paper 13 at 17 (“[w]e are not persuaded that the presence of a

copyright notice, without more, is sufficient evidence of public accessibility as of a particular date.”) (citing *LG Electronics, Inc. v. Advanced Micro Devices, Inc.*, IPR2015-00329, Paper 13 at 10–13). Petitioner attempts to overcome the hearsay deficiency of its evidence by supplementing its contention with other, admittedly “circumstantial,” evidence, including its reference to promotional advertising and copyright statements about the game Sonic Adventure 2, referenced on the last page of the Manual (Ex. 1008 at 19), and other video game industry publications concerning *Phantasy Star Online* game. See Pet. 37–38, n. 4. However, this “circumstantial evidence” is unrelated to the Manual itself—i.e., the Manual and its date of existence is wholly unrelated to the Sonic Adventure 2 video game or the video game industry publications concerning the existence of the *Phantasy Star Online* game itself.

Moreover, the Petitioner has not submitted any evidence to establish that the Manual qualifies as a printed publication pursuant to §102. See MPEP §2128 (“A reference is proven to be a ‘printed publication’ ‘upon a satisfactory showing that such document has been disseminated or otherwise made available to the extent that persons interested and ordinarily skilled in the subject matter or art, exercising reasonable diligence, can locate it.’”); *Elec. Frontier Foundation v. Personal Audio, LLC*, IPR2014-00070, Paper 21 at 20–24 (PTAB Apr. 18, 2014) (petitioner bears the burden of proving that a reference is a printed publication). Petitioner claims that the

“PSO Manual was distributed publicly at least as early as March 31, 2001,” relying on a purported copyright notice that appears near the end of the Manual. Pet. 36–37.

In *Hulu, LLC v. Sound View Innovations, LLC*, IPR2018-01039, Paper 29 (PTAB Dec. 20, 2019), the Board considered whether a reference was publicly accessible before the critical date of the challenged patent. The Board held that the petitioner had submitted sufficient evidence to establish a reasonable likelihood that the reference was publicly accessible, and thus qualified as prior art, where the reference, on its face, bore a copyright date, a printing date, an ISBN date, was from a well-known book series, and was distributed by an established publisher. *Id.* at 19.

The petitioner in that case argued that a reference meets the reasonable likelihood standard for institution where the reference bears conventional markers of publication, such as copyright date, edition identifiers, publication by a commercial publisher, and the assignment of an ISBN number. *Id.* at 17. The Board dismissed such sweeping arguments, instead, stating: “We do not hold that any particular indicia per se is sufficient at the institution stage.” *Id.* The Board made clear that all indicia on the face of a reference is considered as part of the totality of the evidence. *Id.*

To illustrate its point, the Board offered examples finding a reasonable likelihood that a reference was a printed publication, for the purposes of institution, when the evidence relied on in the petition provided strong indicia that the reference

was publicly accessible. For example., the Board discussed that it made such a determination when a package insert for a drug was supported with a screenshot of an FDA webpage from the Wayback Machine, a declaration from the office manager of the Internet Archive including the site’s archival records, and expert testimony asserting its public accessibility. *Id.* at 18 (discussing *Sandoz Inc. v. Abbvie Biotechnology Ltd.*, IPR2018-00156, Paper 11 at 8–13 (PTAB June 5, 2018). See also the Board’s similar discussion of *Syncro Soft SRL v. Altova GmbH*, IPR2018-00660, Paper 6 at 8–10 (PTAB Sept. 5, 2018).

The Board also provided instances in which it found that such a determination could not be made, for example, when the asserted reference was a conference paper that bore only a copyright date and a date on the cover. *Id.* (discussing *In-Depth Geophysical, Inc. v. ConocoPhillips Co.*, IPR2019-00849, Paper 14 at 4–13 (PTAB Sept. 6, 2019).

The copyright notice in question here states: “Copying and/or transmission of this game is a violation of applicable laws. ©SEGA CORPORATION, 2000.” Ex. 1008, p. 33, emphasis added. To the extent the date of the copyright notice shows anything, it may support that the associated product—the *Phantasy Star Online* video game—could have been distributed at that time, not that the Manual was publicly available at that time. Even then, Petitioner fails to submit any evidence as to when the *Phantasy Star Online* video game was actually sold. Petitioner asserts

two separate potential dates of public availability for the Manual: (1) “at least as early as March 31, 2001; and (2) “at least as early as December 2000/March 31, 2001.” But the Petitioner submits no evidence to support either of these two alleged dates. In fact, Petitioner does not submit any evidence that copies of *Phantasy Star Online* were ever sold, or that the game sold was the same as the game depicted in the Manual. *See Lantz Medical, Inc. v. Bonutti Research, Inc.*, IPR2015-00995, Paper 11 at 8 (PTAB Oct. 21, 2015) (Board found that a petitioner’s reliance on the sale of product insufficient to demonstrate that the operating manual was a “printed publication” within the meaning of 35 U.S.C. §102).

Additionally, the Petition fails to identify “with particularity” the evidence it contends shows a reasonable likelihood that the Manual is a printed publication. See MPEP §2128. Petitioner’s evidence lacks particularity, as Petitioner does not provide any information as to how the Manual would have been disseminated or otherwise made available to the extent that a POSITA as defined by Petitioner (Pet. 10) can locate it.

Here, the Petitioner has merely produced an unclear copyright notice that appears to be referencing the game (Ex. 1008 at 33), and not the Manual. As discussed above, Petitioner’s other “circumstantial” evidence is also unconvincing.

Because Petitioner has failed to properly authenticate the Manual and, additionally, has failed to provide the required information to show the Manual is a prior art printed publication, the Petition under Ground 2 should be denied.

2. The Petition Also Fails to Address Many Elements of the Challenged Independent Claims as Being Obvious In View of the Manual.

The Petition also should be denied because the Petition fails to state an adequate claim for relief for the alleged obviousness of the challenged claims based on the Manual alone, or in view of the knowledge of a POSITA. Pointedly, Petitioner has failed to provide sufficient details as to how the claims are obvious in relation to the Manual, as required by 35 U.S.C. §312(a)(3), and 37 C.F.R. §42.104(b)(3) and (b)(4). Specifically, 37 C.F.R. §42.104(b)(4) requires that “[t]he petition must specify where each element of the claim is found in the prior art patents or printed publications relied upon.”

With respect to Ground 2, the Petition is woefully incomplete as Petitioner fails to address many elements of the claims in its Ground 2 analysis, including the following underlined language of the following elements/limitations of claim 1:

- Within its limitation 1[a] analysis (Pet. 40-42), Petitioner fails to address the elements “at least one thematic/publishing logic module”; “a virtual thematic environment”; and “to constitute and provide” a virtual thematic environment.

- Within its limitation 1[b] analysis (Pet. 42–44) regarding the “primary application” and the “secondary application,” Petitioner fails to address the secondary application having “first content.”
- Within its limitation 1[c] analysis (Pet. 44–46) regarding the “graphics user interface (GUI) module,” Petitioner fails to address the “GUI module” and the module including “software.” In its analysis, Petitioner alleges that “*Phantasy Star Online* renders a graphics user interface onto a visual component....” But Petitioner fails to explain how the *Phantasy Star Online* game, or any particular element thereof, meets the claim limitation of the GUI module “including software.”
- Within its limitation 1[d] analysis (Pet. 47–48) regarding the “quantum imaging environment (QIE) module,” Petitioner never addresses the “QIE module” or “the QIE module being a software layer.” In its analysis, Petitioner alleges that “*Phantasy Star Online* receives, interprets, and manipulates the second content....” But Petitioner fails to explain how the *Phantasy Star Online* game, or any particular element thereof, meets the claim limitation of the QIE module “being a software layer.”

- Petitioner addresses a portion of limitation 1[e] regarding the “digital content library module” (Pet. 48-49). But, in its analysis, Petitioner never addresses the elements “virtual thematic environment coordinated by the thematic/publishing logic module.”

Petitioner also fails to address the underlined language of the following limitations/elements of claim 23:

- On page 57 of the Petition, regarding limitation 23[b], Petitioner simply refers back to its analysis of limitation 1[a] (*see* Pet. 40–42), but within its analysis, Petitioner fails to address the claim element “to constitute” a virtual thematic environment.
- On page 56 of the Petition, regarding limitation 23[b], Petitioner simply refers back to its incomplete analysis of claim 1[c] (*see* Pet. 44–46), which fails to address the GUI module including “software.”
- On page 58 of the Petition, regarding limitation 23[f], Petitioner simply refers back to its incomplete analysis of claim 1[d] (*see* Pet. 47–48), which does not address the QIE module “being a software layer.”

- On page 58 of the Petition, regarding limitation 23[f], Petitioner simply refers back to its incomplete analysis of claim 1[d] (*see* Pet. 47–48), which does not address the software layer configured to receive and interpret the “first content and second content.” Rather, claim 1 requires the QIE module being a software layer that receives, interprets, and manipulates the “second content”—not the “first content and second content” of limitation 23[f].

Because Petitioner has not specified where each element of each challenged claim of Ground 2 is found in the prior art, institution on Ground 2 should be denied.

3. Ground 2 of the Petition Fails to show that the Manual, alone or in view of the knowledge of a POSITA, teaches or suggests elements of the Challenged Independent Claims.

The Petition fails to demonstrate that the Manual, alone or in view of the knowledge of a POSITA, teaches or suggests each and every element of independent claims 1 and 23. The Petition fails to (i) ascertain the difference between the claimed invention and the Manual, (ii) to provide any articulated rationale as to why the invention as claimed would have been obvious to a POSITA at the relevant time, and (iii) explain why a POSITA would be motivated to combine a POSITA’s knowledge with the Manual.

Claim 1

- a. **Limitation 1[a]: The Manual does not disclose or teach “at least one thematic/publishing logic module containing virtual thematic environment rules”;**

The Petition fails to show that the Manual, alone or in view of a POSITA, teaches or suggests the “thematic/publishing logic module containing virtual thematic environment rules” limitation of challenged independent claim 1, at least because the Petitioner’s arguments regarding the limitation “virtual thematic environment rules” are wholly unsupported, offering only conclusory statements while also attempting to impermissibly incorporate large portions of the Crane Declaration. Further, the Petition does not provide any rationale or explanation of why it would be obvious to a POSITA to modify the Manual in the manner set forth in the Petition.

Petitioner claims that the “PSO Manual discloses virtual thematic environment rules whereby in *Phantasy Star Online* players can communicate with other players and ‘overcome language barriers by using the five language “word select” feature,’ can ‘organize a team to play the game online or embark on Hunter’s Guild quests, all the while chatting to exchange information,’ and can also choose to play in ‘offline mode.’ Pet. 41–42 (quoting Ex. 1008, p. 2). Petitioner fails to explain how communicating with other players by using a “word select” feature and the ability to play *Phantasy Star Online* in “offline mode” discloses “virtual thematic

environment rules,” let alone rules that “coordinate actions to be taken to constitute and provide a virtual thematic environment on a visual component,” as required by limitation 1[a].

Petitioner further claims that “a POSITA would have understood that a virtual gaming environment was designed to implement rules simulating interactions with objects, terrain, weapons, projectiles, etc.” *Id.*, 42. The only support Petitioner offers for that assertion is a reference to the Crane Declaration, which, in pertinent part, simply recites Petitioner’s assertion without any additional support or technical reasoning—i.e., “As for the claimed virtual thematic environment rules, it was well known in the art that a virtual world gaming environment was designed to implement rules simulating interactions with objects, terrains, weapons, projectiles, etc.” Ex. 1004, ¶229. Such conclusory expert opinions without supplying analysis and rationale are particularly problematic because they are offered not simply to provide a motivation to combine prior art teachings, but rather to supply a limitation missing from the prior art. *See Xerox Corp. v. Bytemark, Inc.*, IPR2022-00624 (PTAB Aug. 24, 2022) (denying institution where expert declaration presented conclusory assertions without underlying factual support and repeated verbatim the petitioner’s argument.).

b. Limitation 1[b]: The Manual does not disclose or teach “a secondary application within the primary application”

The Petition fails to show that the Manual, alone or in view of the knowledge of a POSITA, teaches or suggests the “secondary application” element of limitation 1[b], at least because Petitioner’s arguments are wholly unsupported, offering only conclusory statements while also attempting to impermissibly incorporate large portions of the Crane Declaration.

Limitation 1[b] requires, in part, “a secondary application within the primary application.” In the *Niantic* case, the above claim term was construed as “secondary computer program within the primary computer program.” Ex. 1012, p. 12; See 37 C.F.R. §42.100(b). By ignoring the prior District Court’s claim construction, of which Petitioner was aware, Petitioner fails to address and distinguish the existing construction, and explain “[h]ow the challenged claim is to be construed” in violation of 37 C.F.R. §42.104(b)(3); and also fails to explain “[h]ow the construed claim is unpatentable under the statutory grounds...” in violation of 37 C.F.R. §42.104(b)(4). As a result, Petitioner fails to “specify where each element of the claim is found in the prior art patents or printed publications relied upon” in violation of 37 C.F.R. §42.104(b)(4).

- c. **Limitation 1[d]: The Manual does not disclose or teach “a quantum imaging environment (QIE) module, the QIE module being a software layer that receives, interprets, and manipulates the second content so as to be accessible on different types of devices for use within the virtual thematic environment”**

The Petition fails to show, at least, that the Manual, alone or in view of the knowledge of a POSITA, teaches or suggests the “QIE module” element of limitation 1[d], at least because Petitioner’s arguments regarding the following limitations are wholly unsupported, offering only conclusory statements while also attempting to impermissibly incorporate large portions of the Crane Declaration.

- d. **“QIE module”—“receives, interprets, and manipulates the second content”**

Petitioner fails to show that the Manual discloses the “QIE module” limitation. Petitioner offers only that the “PSO Manual discloses that *Phantasy Star Online* receives, interprets, and manipulates the second content, *i.e.*, real world information, in real time so as to be accessible on a player’s Dreamcast for use while playing *Phantasy Star Online*.” Pet. 47 (emphasis added). In support, Petitioner refers to a large swath of the Manual and explains that “Phantasy Star Online receives real time information for information counter, transporter, and organize team functions.” *Id.* Even if that were true, notwithstanding the fact that Petitioner fails to address how this disclosure meets the definition of a “QIE module” element, Petitioner arguably shows only that the Manual discloses that “second content” is

being received, not that it is also being interpreted and manipulated, as required by limitation 1[d].

e. “QIE module”—“accessible on different types of devices for use within the virtual thematic environment”

Petitioner summarily claims that the “accessible on different types of devices” limitation is met because the “PSO Manual discloses that *Phantasy Star Online* receives, interprets, and manipulates the second content, *i.e.*, real world information, in real time so as to be accessible on a player’s Dreamcast for use while playing *Phantasy Star Online*.” Pet. 47 (emphasis added). In support, Petitioner offers that “[a]s Mr. Crane explained, the game console such as Dreamcast can be of different hardware and/or software types.” *Id.* (citing Ex. 1004, ¶238).

First, limitation 1[d] requires that “second content” “be accessible on different types of devices for use within the virtual thematic environment.” The Manual teaches one type of device, *i.e.*, that “this software is designed only for use with the Dreamcast console.” Ex. 1008, p. 1. Even if Dreamcast consoles could have variable hardware and/or software, Petitioner offers no argument as to why it believes that the same gaming console discloses “different types of devices,” as required by limitation 1[d].

Second, Petitioner’s claim that “game consoles such as Dreamcast can be of different hardware and/or software types” relies entirely on a footnote in the Crane

Declaration, which provides: “It is well known in the art at the time that game systems/consoles such as Dreamcast sold into different countries were different hardware and/or software systems, including the use of different voltage sources, different language operating systems, and compatible with different television standards.” Ex. 1004, ¶238, n. 14. Mr. Crane does not supply any supporting evidence or explanation with respect to this statement. Thus, Mr. Crane is trying to fill a missing limitation without proper evidentiary support. Such conclusory expert opinion is particularly problematic because it is offered not simply to provide a motivation to combine prior art teachings, but rather to supply a limitation missing from the prior art, i.e., a software layer that receives, interprets, and manipulates second content so as to be accessible on different types of devices for use within the virtual thematic environment. *See Xerox Corp. v. Bytemark, Inc.*, IPR2022-00624 (PTAB Aug. 24, 2022) (denying institution where expert declaration presented conclusory assertions without underlying factual support and repeated verbatim the petitioner’s argument.).

Even if Mr. Crane’s conclusory and unsupported statement were true, neither Mr. Crane nor Petitioner explains why they believe that different hardware and/or software systems that permitted the Dreamcast to be utilized in different countries having differing voltage sources, languages, and television standards

would result in “a software layer that receives, interprets, and manipulates second content so as to be accessible on different types of devices.”

f. Limitation 1[e]: The Manual does not disclose or teach “at least one digital content library module storing information, the information containing 2 dimensional and 3 dimensional content”

The Petition fails to show that the Manual, alone or in view of the knowledge of a POSITA, teaches or suggests the “digital content library module” elements of limitation 1[e], at least because the Petitioner’s arguments are wholly unsupported, offering only conclusory statements while also attempting to impermissibly incorporate large portions of the Crane Declaration.

g. “digital content library module”

Petitioner claims the “PSO Manual discloses a content management application, e.g., ‘Item Pack,’ representing an inventory control system for items.” Pet. 48–49. Petitioner further claims “[l]ike the at least one digital content module of claim 1 of the ’941 Patent, the Item Pack stored and managed the inventory for each player, which included 2 dimensional (e.g., icons) and 3 dimensional content (e.g., weapons use) objects visible in the game environment.” *Id.*, 49. It is unclear whether Petitioner is asserting that the “Item Pack” discloses a “digital content library module” or simply a “content management application” that happens to be like the “digital content library module.” Although the “Item Pack” of *Phantasy Star*

Online may display a player’s weapons, items, etc., there is nothing to suggest that the “Item Pack” actually stores any information containing “2 dimensional and 3 dimensional content.” The Manual contains absolutely no technical information about the game, it is simply an instruction manual on how to play the game. Thus, the Manual does not teach or even suggest the “digital content library module”.

h. “digital content library module”— “2 dimensional and 3 dimensional content”

Even if the Manual discloses a “digital content library module storing information,” Petitioner does not show that said information contains “2 dimensional and 3 dimensional content,” as required by limitation 1[e]. Again, the Manual contains absolutely no technical information about the game; it is simply just an instruction manual on how to play the game, without any information as to how or if “2 dimensional and 3 dimensional content” is stored.

Claim 23

Petitioner fails to specifically address many of the limitations of claim 23, providing only that the Manual “teaches this limitation,” and a reference back to Petitioner’s arguments concerning claim 1. *See* Pet. 57–59. Accordingly, Patent Owner incorporates its remarks concerning Petitioner’s analysis of claim 1 for the elements in claim 23 that correspond to claim 1 (*see supra*). And as noted above, there are elements in claim 23 not addressed by the Petition. Further, Petitioner does

not provide evidence or rationale to support its obviousness allegations for the following elements of claim 23.

- i. **Limitation 23[a]: The Manual does not disclose or teach “a client system and a server system communicating to provide an interactive software application platform”**

The Petition fails to show that the Manual, alone or in view of the knowledge of a POSITA, teaches or suggests the above elements of limitation 23[a], at least because the Petitioner’s arguments regarding the above limitation are completely unsupported, offering only conclusory statements and attempting to impermissibly incorporate large portions of the Crane Declaration.

Petitioner claims that “PSO Manual further discloses that *Phantasy Star Online* operated in a client-server configuration, requiring users to log onto the ‘PSO Server’ with a serial number and access key.” Pet. 56. Even if the “PSO Server” discloses a “server system,” Petitioner has violated 37 C.F.R. §42.104(b)(3) by not explaining what a client system is, i.e., how the challenged claim is to be construed, and 37 C.F.R. §42.104(b)(4) by not explaining how the construed claim is unpatentable under the statutory grounds. Petitioner does not even address what a “client system” is, or whether or not the Manual discloses a “client system.” Moreover, even if the Manual discloses a “client system” (which it does not) and a “server system,” Petitioner fails to show that the “client system and server system

communicating to provide an interactive software application platform,” as required by limitation 23[a].

j. All Remaining Claims That Rely on the Manual Fail for the Same Reasons

Ground 2 relies on the Manual as the primary reference. Claims 3, 5, 7–12 depend from independent claim 1, and claims 24–26 depend from independent claim 23. Because the Manual does not render obvious independent claims 1 and 23, it cannot render obvious dependent claims 3, 5, 7–12, and 24–26, and institution based on Ground 2 should be denied.

D. The Board Should Exercise Discretion Under 35 U.S.C. §314 to Deny Institution

Institution of *inter partes* review is always discretionary. 35 U.S.C. §314(a). The Board should exercise its discretion under §314(a) to deny institution here.

1. The Board should exercise its discretion to deny institution of this Petition.

The Board should deny institution under §314(a) in view of its precedential decisions in *NHK Spring*³ and *Apple v. Fintiv*⁴ because the ‘941 Patent is involved

³ *NHK Spring Co., Ltd., v. Intrix-Plex Techs., Inc.*, IPR2018-00752, Paper 8 (PTAB Sep. 12, 2018) (precedential).

⁴ *Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 11 (PTAB Mar. 20, 2020) (precedential).

in a parallel district court proceeding (*Quantum Imaging LLC v. Sony Group Corporation, et al.*, Case No. 6:22-cv-00573-ADA-DTG (W.D. Texas, June 3, 2022)) that involves the same issues, arguments, and evidence that Petitioner has presented in this Petition. The parties and district court have already expended substantial time and resources, and a jury trial is scheduled for April 2024. Ex. 1010. A final written decision (“FWD”) in this proceeding is expected no earlier than December 2024, at least seven months after the jury trial begins. Duplicating the district court’s efforts would not be an efficient use of the Board’s resources and would not serve to fulfill the primary purpose of AIA proceedings: to provide a practical and efficient alternative to district court litigation.

In *NHK Spring* the Board denied institution primarily because the related district court case was nearing its final stages and would resolve all the issues before the Board. *NHK Spring Co.*, IPR2018-00752, Paper 8 at 20 (PTAB Sep. 12, 2018) (precedential); *see also id.*, 11-18 (applying discretion under 35 U.S.C. § 325(d)). Other cases—relying on *NHK Spring*—have also denied institution. For example, in *E-One, Inc. v. Oshkosh Corp.*, the Board applied *NHK Spring*’s analysis under 35 U.S.C. §314(a) to deny institution. IPR2019-00161, Paper 16 (PTAB May 15, 2019). In *E-One*, the Board reasoned:

[i]n the § 314(a) portion of its analysis, [*NHK Spring*] noted that a district court proceeding involving the same patent was scheduled to go to trial before a final decision would have been due in the Board proceeding, and the Board proceeding would involve the same claim construction standard, the same prior art references, and the same arguments as in the district court.

Id., 6. In both *NHK Spring* and *E-One*, factors warranting a denial of institution included: the district court investing considerable time and resources to handle the same issues presented in the IPR, and trials that were scheduled to be completed prior to a Board’s FWD. The facts here warrant denial just as decided in *NHK Spring* and *E-One*. Further, the Petition will not serve as an “effective and efficient alternative” to litigation, frustrating a primary objective of the AIA. *Gen. Plastic Indus. Co., Ltd. v. Canon Kabushiki Kaisha*, IPR2016-01357, Paper 19 at 16–17 (PTAB Sept. 6, 2017) (precedential).

In *Fintiv*, the Board emphasized six factors to consider under *NHK Spring* which are discussed below. *See Fintiv*, IPR2020-00019, Paper 11 at 5-16. The Board stated that “[t]hese factors relate to whether efficiency, fairness, and the merits support the exercise of authority to deny institution in view of an earlier trial date in the parallel proceeding.” *Id.*, 6. Here, each of these factors favors denial of institution

of this Petition. The Board should apply its discretion under 35 U.S.C. §314(a) to deny institution of the requested proceeding for the following reasons.

- a. Factor 1 weighs against institution, as no court has granted a stay and no evidence exists that a stay may be granted.**

The parallel district court proceeding has not been stayed. That proceeding includes four patents, three of which are not at issue in this Petition. Although Petitioner has filed multiple Petitions against the other patents-in-suit at the district court, Petitioner has not sought a stay in the district court pending resolution of the PTAB trial. There is a pending motion to stay pending resolution of the motion for intra-district transfer. But, the district court has not indicated whether it would grant a stay if *inter partes review* is instituted.

Regarding the motion to stay pending resolution of motion for intra-district transfer, consistent with its position regarding stays in general, the Board should decline to speculate whether the district court will grant a stay in this proceeding. *See, eClinicalWorks, LLC v. Decapolis LLC*, IPR2022-00229, Paper 10 at 8 (April 13, 2022) (“We will not attempt to predict, based on the facts in allegedly similar prior situations, how the Texas District Court would rule should a stay be requested in the WDTX Cases.”); *see also, Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 15 at 12 (PTAB May 13, 2020) (remarking judges decide stays based on the facts at

issue in each case, and the Board refuses to infer how district courts will act in different cases with different facts).

It is more likely that a stay would not be granted in the district court if trial is instituted here. This factor weighs in favor of discretionary denial of institution.

b. Factor 2 weighs against institution, as trial in the district court is scheduled to begin months before the final written decision deadline.

Trial is set to begin in the parallel district court proceeding in April 2024. Ex. 1010. This trial date is currently at least seven (7) months before an expected December 2024 FWD would issue in this IPR. Proceedings with similar substantial gaps between trial and FWD have found Factor 2 weighs in favor of denying institution. *See, Bentley Motors Limited and Bentley Motors, Inc. v Jaguar Land Rover Limited*, IPR2019-01539, Paper 16 at 7-8 (PTAB October 2, 2020) (finding that a trial date eight months before the statutory deadline for a FWD was a factor weighing in favor of discretionary denial); *Apple Inc. v. Maxell, Ltd.*, IPR2020-00203, Paper 12 at 9–10 (PTAB July 6, 2020) (eight months); *Cisco Systems, Inc. v. Oyster Optics, LLC*, IPR2021-00319, Paper 9 at 10-12 (PTAB Jun. 8, 2021) (seven months); *Cisco Systems, Inc. v. Ramot At Tel Aviv University LTD.*, IPR2020-00123, Paper 14 at 7-8 (PTAB May 15, 2020) (six months). Here, just as in *NHK Spring*, “[i]nstitution of an inter partes review under these circumstances would not be consistent with ‘an objective of the AIA ... to provide an effective and efficient

alternative to district court litigation.” *NHK Spring*, IPR2018-00752, Paper 8 at 20. As the Board recognized in *Fintiv*, “[i]f the court’s trial date is earlier than the projected statutory deadline, the Board generally has weighed this fact in favor of exercising authority to deny institution under *NHK*.” *Fintiv*, IPR2020-00019, Paper 11 at 9.

Importantly, there is no evidence that the parties’ trial will be extended, let alone delay of trial would extend past the statutory deadline for the FWD. *See Cisco Systems, Inc.*, IPR2021-00319, Paper 9 at 10-12 (weighing *Fintiv* factor 2 in favor of exercising discretion to deny Petition). Further, Petitioner points out that at the filing of the Petition, the Related Matter was at its early stages; as discussed below, the Board recognizes the progress made in the district court at the time of the institution decision, not the time of the filing of the Petition.

There is no reason to believe the April 2024 trial will be postponed, much less postponed significantly enough to close the four-month gap such that the FWD would issue before the trial. *See Fintiv*, Paper 11 at 13 (“We generally take courts’ trial schedules at face value absent some strong evidence to the contrary.”); *see also, Cisco Systems, Inc. v. Monarch Networking Solutions, LLC*, IPR2020-01227, Paper 11 at 9-11 (PTAB Mar. 4, 2021) (declining to speculate whether the district court will grant the pending motion to transfer and weighing *Fintiv* Factor 2 in favor of

denial of institution).⁵ Without a stay pending IPR, litigation continues, and there will be a continued expenditure of court resources. This factor weighs in favor of discretionary denial of institution.

c. Factor 3 weighs against institution, as parties to the district court litigation have already invested significant time and resources.

The parties and the district court have invested significant time and resources. In *Fintiv*, the Board stated, “if, at the time of the institution decision, the district court has issued substantive orders related to the patent at issue in the petition, this fact favors denial. Likewise, district court claim construction orders may indicate

⁵ This timing continues to hold under the guidance in the Director’s June 21, 2022, memo titled “Interim Procedures for Discretionary Denials in AIA Post-Grant Proceedings with Parallel District Court Litigation” (“Fintiv Memo;” Ex. 2002). The Fintiv Memo directs the Board to “consider the median time from filing to disposition” in the district court (Ex. 2002 at 3), which for patent cases in the Western District of Texas is 25.4 months (Ex. 2003), and for patent cases before Judge Albright is 24.7 months (Ex. 2004). Counting from the June 3, 2022, filing of the parallel district court case results in an average time to trial before the end of July 2024, well in line with the scheduled April 2024 trial and still roughly five months before any expected FWD here.

that the court and parties have invested sufficient time in the parallel proceeding to favor denial” of institution. *Id.*, 9-10. Further, “[t]his investment factor is related to the trial date factor, in that more work completed by the parties and court in the parallel proceeding tends to support the arguments that the parallel proceeding is more advanced, a stay may be less likely, and instituting would lead to duplicative costs.” *Id.*, 10.

The investment by the parties and the court will be significant by the time either an institution decision or a FWD is issued. For example, by the time an institution decision is rendered in December 2023, the parties will have (1) completed Claim Construction briefing after depositions, (2) have had the Court rule on Sony’s motion to transfer after related discovery and depositions, (3) conducted a *Markman* hearing, (4) received claim constructions (the court’s procedure is to provide preliminary construction shortly in advance of the Markman hearing and then provide final constructions at the hearing), (5) exchanged Final Infringement and Invalidity Contentions, and (7) closed fact discovery, which closes November 29, 2023. Ex. 1010. Further, fact discovery opened for all purposes on October 14, 2022. This factor weighs in favor of discretionary denial of institution.

- d. Factors 4-6 weigh against institution, as there is significant overlap between this IPR and district court proceedings, the parties involved are the same, and the asserted grounds fail.**

The dispute in this proceeding and the district court case involves the same parties and overlapping issues. (Factors 4 and 5). It is undisputed that Petitioner is a defendant in the parallel district court litigation. Moreover, Petitioner has presented substantially the same art and grounds of unpatentability in this Petition that it is asserting in the district court case – that the claims of the '941 Patent are allegedly obvious over at least the prior art Pisanich and the PSO Manual. Ex. 2001 at 20. Thus, the claims and prior art addressed by PTAB will not materially differ from what is being addressed in the parallel district court litigation.

Petitioner has failed to make a stipulation in the Petition in full accordance with *Sotera* and has not filed such a stipulation in the district court. Petitioner identifies concerns about overlapping issues with the conditional statement: “if the Board institutes IPR in this proceeding, Petitioner will cease asserting in the Related Matter the prior art for the claims on which the IPR is instituted.” Pet. 63–34. But this statement falls short of the estoppel that follows from 35 U.S.C. §315(e)(2) whereby a petitioner is prohibited from asserting a “claim is invalid on any ground that the petitioner raised or reasonably could have raised during [the] inter partes review.” While Petitioner has stipulated invalidity positions raised at the district

court that are also brought before the Board, Petitioner's stipulation is narrow – it covers only prior art references for the claims on which the IPR is instituted but leaves out prior art they “reasonably could have raised.” *See Verizon Business Network Services LLC, v. Huawei Technologies Co. LTD.*, IPR2020-01278, Paper 12 at 11-13 (PTAB Jan. 26, 2021) (“Petitioner's stipulation reduces concerns regarding overlapping issues, but it does not eliminate them.”). Therefore, under Petitioner's stipulation, it would not be precluded from asserting other printed publications in the pending district court litigation. Petitioner only minimally reduces the concerns of inefficiency and the possibility of conflicting decisions; thus, its stipulation should not be given significant weight. *See Sand Revolution II, LLC v. Continental Intermodal Grp. – Trucking, LLC*, IPR2019-01393, Paper 24 at 12 n.5 (noting that a broad stipulation better addresses concerns of duplicative efforts and potentially conflicting decisions in a much more substantial way).

Because the district court will address the same issues, arguments, and evidence months before the Board's FWD would be due, instituting review here would not efficiently use the Board's resources. Nor would it be an effective and efficient alternative to district court litigation.

The Board noted in *Fintiv* with respect to Factor 6 that:

[I]f the merits of a ground raised in the petition seem particularly strong on the preliminary record, this fact has favored institution.... [I]f the

merits of the grounds raised in the petition are a closer call, then *that fact has favored denying institution* when other factors favoring denial are present.

Fintiv, IPR2020-00019, Paper 11 at 14-15 (emphasis added). As shown above, the Petition fails on the merits for numerous reasons. These weaknesses, and these remaining factors weigh in favor of discretionary denial of institution.

For the reasons illustrated above, the Board should exercise its discretion to deny institution under §314(a) in favor of the upcoming trial in the pending district court litigation.

VIII. CONCLUSION

For the foregoing reasons, institution of this IPR should be denied.

Case No. IPR2023-00995
Patent 10,846,941

Date: September 13, 2023

Respectfully submitted,

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Case No. IPR2023-00995

Patent 10,846,941

CERTIFICATE OF WORD COUNT

Pursuant to 37 C.F.R. §42.24(d), the undersigned hereby certifies that the foregoing Patent Owner's Preliminary Response contains 13,808 words using the word count feature of Microsoft Word.

Dated: September 13, 2023

/s/ Kevin S. Tuttle

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CERTIFICATE OF SERVICE

Pursuant to 37 C.F.R. §42.6(e), the undersigned hereby certifies that the above-captioned Quantum Imaging LLC's Patent Owner Preliminary Response, and its cited exhibits, were served via electronic mail, in view of the July 31, 2023 Power of Attorney (Paper 6) and accompanying Motion to Withdrawal (Paper 7), and Order (Paper 8), on September 13, 2023, at the following email correspondence addresses of record:

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