

Case No. IPR2023-00959

Patent No. 10,255,724

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 IPR2023-00959
Patent 10,255,724

PATENT OWNER'S PRELIMINARY RESPONSE

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

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2004	Lex Machina, Patent Cases (All Judges) Time to Trial, U.S. District Court for the Western District of Texas, September 9, 2023
2005	Lex Machina, Patent Cases (Judge Alan D. Albright) Time to Trial, U.S. District Court for the Western District of Texas, September 9, 2023

Patent Owner Quantum Imaging, LLC (“QI”) submits this Preliminary Response to the Petition for *inter partes* review of claims 1-7, 9-14, 16, 18, and 20-23 of U.S. Patent No. 10,255,724 (“’724 Patent”) filed by Sony Interactive Entertainment LLC (“Petitioner”). Paper 2 (“Pet.”).

I. INTRODUCTION

The ‘724 Patent discloses and claims an unconventional method of integrating content, including downloading the real-time information from a source external to a network-based thematic environment and inserting the same into the thematic environment. Ex, 1001, Abstract. The method includes, among other things, a novel feature of manipulating the content before inserting it into the thematic environment, thereby facilitating access to the content by different devices in the network. *Id.*

Institution of an *inter partes* review (“IPR”) is authorized when “the information presented in the petition ... and any response ... shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” 35 U.S.C. §314(a).

Petitioner does not satisfy the threshold for institution of this IPR because it has not shown there is a reasonable likelihood that it would prevail in establishing the unpatentability of at least one Challenged Claim. Institution of this IPR should be denied. Petitioner fails to show where the subject matter of the challenged claims is found in the prior art, fails to address the differences between the claimed subject

matter and the prior art, and fails to provide a reasoned analysis of how and why a person of ordinary skill in the art (“POSITA”) would combine the prior art in view of the knowledge of a POSITA, and show they would have had a reasonable expectation of success.

A. The ‘724 Patent

The ‘724 Patent is titled “Interactive virtual thematic environment,” and was issued by the United States Patent and Trademark Office (“PTO”) on April 9, 2019. Ex. 1001, codes 54, 45.

1. The ‘724 Patent discloses and claims a novel method of integrating information from sources external to a thematic virtual environment (such as a game) into the virtual thematic environment so that the information is accessible by any device

The ‘724 Patent is directed to “integrating information, including real-time information, into a virtual thematic environment using a computer system, including ... downloading the real-time information from a source external to the thematic environment; inserting the real-time information into the thematic environment; and displaying the information to a user within the thematic environment.” *Id.*, Abstract. In embodiments where the virtual thematic environment is a game, (*Id.*, 2:18-19), the ‘724 Patent allows players to “grab” data/objects from the web or other sources external to the gaming environment to be utilized in the game. *Id.*, claim 1. Any object on the Internet can be “cop[ied] or grab[bed],” and “manipulated” to be

accessible by any device, all “while maintaining the data and integrity of the object, within the application.” *Id.*, claim 1; 17:10-15.

2. The challenged claims

Of the challenged claims, claim 1 is the only independent claim, and is reproduced below:

1. A computer system having an interactive software application platform for providing a virtual thematic environment, comprising:

a processor which executes a program having a plurality of modules, said plurality of modules including:

at least one thematic/publishing logic module which contains virtual thematic environment rules configured for a gaming environment, the at least one thematic/publishing logic module being configured to allow a user to interact within said virtual thematic environment and upon a predetermined action within said virtual thematic environment, automatically exit the virtual thematic environment, and one of copy or grab data or objects from a website external to the virtual thematic environment, to be utilized in the virtual thematic environment;

wherein said data or said objects are automatically integrated into the virtual thematic environment during execution of the virtual thematic environment;

at least one *digital content library module which provides content management on the virtual thematic environment*; and

at least one *quantum imaging environment (QIE) module which interprets content such that said content is manipulated and accessed by any device*; and

a display which displays the virtual thematic environment as images.

Ex. 1001, claim 1 (emphasis added).¹

II. THE ASSERTED GROUNDS

Petitioner asserts the challenged claims are unpatentable based on the following grounds:

Challenged Claims	35 U.S.C. §	Reference(s)/Basis
1-7, 9-14, 16, 18, 20-23	103	Angles ² , POSITA knowledge
1-7, 9-14, 16, 18, 20-23	103	Robinson ³ , POSITA knowledge

¹ Unless otherwise noted, all emphases are added by QI.

² U.S. Patent No. 5,933,811 (Ex. 1007).

³ U.S. Patent No. 7,168,051 (Ex. 1008).

Pet. 4. Petitioner supports the grounds with the Declaration of David Crane (Ex. 1004).

A. Person of Ordinary Skill in the Art

For purposes of the POPR, QI applies Petitioner's characterization of a POSITA.

B. Claim Construction

For purposes of the POPR, QI raises no claim construction issues.

III. PETITIONER HAS FAILED TO ESTABLISH A REASONABLE LIKELIHOOD THAT ANY CLAIM IS UNPATENTABLE

A. Institution Standards

Review cannot be instituted unless the Petition demonstrates a reasonable likelihood that at least one of the challenged claims is unpatentable. 35 U.S.C. §314(a); 37 C.F.R. §42.108(c). The Board "will not take on the role of advocate for a party, trying to make out a case the party has not adequately stated." Standing Order ¶121.5.2 (B.P.A.I. Mar. 8, 2011). Rather, it is Petitioner's duty to provide sufficient grounds for the institution of a review "focus[ing] on concise, well organized, easy-to-follow arguments supported by readily identifiable evidence of record." *Cisco Sys., Inc. v. C-Cation Tech, LLC*, IPR2014-00454, Paper No. 12 at 11 (PTAB Aug. 29, 2014).

The ultimate determination of obviousness under 35 U.S.C. §103 is a question of law based on underlying factual findings. *In re Baxter Int'l, Inc.*, 678 F.3d 1357, 1362 (Fed. Cir. 2012) (citing *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 17-18 (1996)). “To satisfy its burden of proving obviousness, a petitioner cannot employ merely conclusory statements. The petitioner must instead articulate specific reasoning, based on evidence of record, to support the legal conclusion of obviousness.” *In re Magnum Oil Tools Int'l, Ltd.*, 829 F.3d 1364, 1380-81 (Fed. Cir. 2016). The “factual inquiry” into the reasons for “[combining] references must be thorough and searching, and the need for specificity pervades.” *In re Nuvasive, Inc.*, 842 F.3d 1376, 1381-82 (Fed. Cir. 2016) (internal quotations and citations omitted). The specific reasoning must include some rational underpinning to combine the prior art elements as claimed to support the conclusion of obviousness. *See KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007). It is Petitioner’s burden to demonstrate a motivation to combine, and a reasonable expectation of success. *See In re Magnum Oil Tools Int'l Ltd.*, 829 F.3d at 1381. Mere conclusory statements are insufficient. *Id.*, at 1380.

Petitioner asserts two obviousness grounds of unpatentability. Pet. 4. The Board need only consider the validity of the sole independent claim 1, as addressed

in Grounds 1 and 2. As shown below, the Petition fails to establish a reasonable likelihood that Petitioner will prevail. A trial therefore should not be instituted.

B. The Petition Should Not be Instituted on Ground 1 Because the Prior Art Fails to Disclose or Teach the Invention as Claimed.

Petitioner asserts the Ground 1 claims are obvious based on the sole reference Angles in view of the knowledge of a POSITA. Pet. 4. The asserted prior art fails to disclose or teach numerous limitations, either expressly or inherently, and a POSITA would not have been motivated to start with or combine the asserted reference and the knowledge of a POSITA to arrive at the claimed subject matter, nor would they have had a reasonable expectation of success in arriving at the claimed subject matter. The Petition fails to establish a reasonable likelihood that Angles in view of the knowledge of a POSITA would have rendered the challenged claims obvious. The Board should therefore deny institution based on Ground 1.

1. Angles

Angles is titled “System and method for delivering customized advertisements within interactive communication systems,” and was issued on August 3, 1999. Ex. 1007, codes 54, 45. Angles’s interactive communication system is directed to “delivering custom advertisements to consumers who use their computers to view information offered by different content providers existing on the Internet.” *Id.* 2:59-62. Angles’s system requires at least three separate computers for delivering custom

advertisements: consumer, content provider, and advertisement provider computers.

Id. 7:45-52. In Angles, custom advertisements are pre-selected for a consumer, and the same are integrated with content offered by a content provider computer prior to the consumer viewing of the content. *Id.* 21:38-52.

2. Angles fails to disclose, teach, or suggest several limitations of independent claim 1, nor does it render obvious claim 1

- a.** Angles fails to disclose or teach a processor which executes a program having a plurality of modules of limitation 1[a]

Petitioner alleges that Angles teaches limitation 1[a] because it discloses a plurality of operational modules utilized by a consumer computer including “a consumer browser module 40, a consumer member code 22, and an advertising storage medium 44.” Pet. 19-20. To the contrary, Angles uses the term operational module to refer to both software and hardware,⁴ whereas the ‘724 Patent uses the term module to refer to a software layer or application that provides a specific

⁴ A POSITA will understand that in computer hardware, a module is a component that is designed for easy replacement, whereas in computer software, a module is an extension to a main program dedicated to a specific function. *See* Ex. 2001. Further, a POSITA will understand that particularly with respect to programming, a module is a section of code that is added in as a whole or is designed for easy reusability. *Id.*

functionality. Ex. 1007, 13:25-29. Angles discloses only one software module utilized by the consumer computer: “the consumer browser module [which] is a software program which allows a consumer to access different content providers.”⁵ *Id.*, 10:46-50. By contrast, Angles makes clear that the advertising storage medium is hardware, because it is “a compact disk drive and a compact disk.” *Id.*, 11:52-53. Similarly, the consumer member code has no software functionality and is merely data: a code “assigned when the consumer registers with the advertisement provider computer,” which is stored in the consumer computer as a “cookie.” *Id.*, 10:65-11:4. Therefore, the consumer computer in Angles does not execute a single program having a plurality of modules and does not teach or suggest what is claimed by limitation 1[a], and the Petition fails to resolve the discrepancy. For at least this reason Ground 1 fails because it does neither “specify sufficiently where each element of each challenged claim is found” in Angles, nor include an explanation of the significance of the quotations and citations plucked from Angles. *Google Inc.*

⁵ Angles also discloses a consumer control module—which is not a standalone software. Angles’s consumer control module is merely a “software plug-in on the consumer computer” that “works in conjunction with a consumer browser.” Ex. 1007, 23:9-15.

and Twitter, Inc. v. EveryMD.com, LLC, IPR2014-00347, Paper 9, at 23-25 (PTAB May 22, 2014); *see also* 37 C.F.R. §§42.104(b)(4), 42.22.

Further, although Angles discloses other modules, they are located outside the consumer computer and thus are executed by different processors. For example, Angles discloses an advertising module, utilized only by an advertisement provider computer, that processes messages from consumer computers. Ex. 1007, 13:47-51; 14:59-61. For another example, Angles discloses a content server module, utilized only by a content provider computer, that is “a standard Web server software system which serves electronic pages.” *Id.*, 12:41-43. Given Petitioner’s contention that “a conventional computer” includes “a processor,” (Pet., 19), then Angles requires at least three processors to execute all programming modules disclosed therein. Accordingly (assuming, *arguendo*, that Angles discloses a single standalone program having a plurality of modules), Angles discloses at least three processors to execute its program—not one. Therefore, Petitioner’s failure to resolve the differences between Angles and the claimed subject matter is fatal to the obviousness challenge.

A petitioner who does not state the differences between a challenged claim and the prior art, and relies instead on the Patent Owner and the Board to determine those differences based on the rest of the submission in the petition risks having the corresponding ground of

obviousness not included for trial for failing to adequately state a claim for relief.

Liberty Mutual Insurance Co. v. Progressive Casualty Insurance Co., CBM2012-00003, Paper 7 at 2-3 (PTAB Oct. 25, 2012) (precedential).

An obviousness analysis is not complete by merely identifying teachings of the claim by the asserted references. What is further necessary is an articulated reason with some rational underpinning to combine the known elements in the way the claimed invention does to support a conclusion of obviousness; and this analysis must be made explicit. *KSR Int'l, Co.*, 550 U.S. at 418-19. It is Petitioner's burden to demonstrate that a skilled artisan would be motivated to combine the teachings to arrive at the claimed invention, and that a POSITA would have a reasonable expectation of success. *See In re Magnum Oil Tools Int'l, Ltd.*, 829 F.3d at 1381. Petitioner repeatedly states "[a]s Mr. Crane explains in his declaration..." but both the Petition and Mr. Crane's declaration are devoid of evidence and specific reasoning supporting the statements. Further, the Petition and declaration fail to provide an explicit analysis of how and why a POSITA would be motivated to modify Angles in view of the knowledge of a POSITA, and that a POSITA would have a reasonable expectation of success. Pet. 18. With limitation 1[a], and claim 1 as a whole, Petitioner has failed to identify what features of the prior art would need

to be modified in view of the knowledge of a POSITA, and explain how such modifications would work.

Angles thus fails to disclose, teach, or suggest a processor which executes a program having a plurality of modules as claimed, and Petitioner has failed to provide an explicit, non-conclusory analysis in the Petition of how and why the prior art would be combined with the knowledge of a POSITA to arrive at the invention as claimed.

- b.** Angles fails to disclose or teach at least one thematic/publishing logic module which contains virtual thematic environment rules configured for a gaming environment of limitation 1[b]

Petitioner alleges that Angles teaches limitation 1[b] because of the disclosure of a consumer browser module; Angles fails to disclose this first feature of limitation 1[b]. Pet. 20.

Angles's web browser module is merely an "access software," available only on the consumer's computer, which "allows a consumer to access different content providers." Ex. 1007, 10:46-55. Angles repeatedly states that the browser module has one and only one function: to enable the consumer to access "information provided by one of the content provider computers." *Id.*, 9:65-10:7; 8:41-43. Petitioner contends that Angles's on-line games constitute a virtual thematic environment and further concludes that these on-line games "include virtual

thematic environment rules.” Pet. 20-21. Assuming this is true, Angles also discloses that the “on-line games such as interactive car races” are offered by “the content provider computer.” Ex. 1007, 21:61-62. Therefore, whatever virtual thematic environment rules the on-line games of Angles may contain, they are executed by a processor that is remote from the consumer computer and is not included in the consumer browser module installed on the consumer computer.

In further support of its argument, Petitioner contends that Angles’s web browser is “where customized advertisements are integrated into offerings such as on-line games.” Pet. 20. But Angles discloses no such thing. Instead, in the same paragraph cited by the Petitioner, Angles discloses that integration of customized advertisements into on-line games is performed by “the content provider computer,” (Ex. 1007, 21:53-60), which again is remote from the consumer computer on which the browser module is available. Thus, Angles’s consumer browser module does not contain virtual thematic environment rules configured for a gaming environment, and as such it cannot be the at least one thematic/publishing logic module. Because Petitioner has failed to “specify sufficiently” where in Angles virtual thematic environment rules are found, Ground 1 of the Petition is fatally defective. *See In re EveryMD.com, LLC*, Paper 9, at 23-25; *see also* 37 C.F.R. §§42.104(b)(4), 42.22; §III.B.2.a.

Lastly, as discussed in §III.B.2.a, the Petition fails to resolve the differences between the prior art and the claimed invention or provide any rationale regarding a motivation to modify or combine certain teachings. Specifically, with limitation 1[b], Petitioner has failed to identify what features of the prior art would need to be modified in view of the knowledge of a POSITA, and explain how such modifications would work.

Angles thus fails to disclose, teach, or suggest at least one thematic/publishing logic module which contains virtual thematic environment rules configured for a gaming environment as claimed.

- c. Angles fails to disclose or teach copy or grab data or objects from a website external to the virtual thematic environment, to be utilized in the virtual thematic environment of limitation 1[b]

Angles fails to disclose this second feature of limitation 1[b]. As discussed above, Angles's browser module is merely an access software with only one function: to "allow a consumer to access different content providers through the communication medium." *Id.*, 10:46-55. Contrary to the thematic/publishing logic module of claim 1, Angles's browser module does not allow the consumer to interact with objects characters within a single game. Petitioner's expert admits that Angles's consumer browser module merely "displays an interactive gaming environment." Pet. 20 (citing Ex. 1004, ¶136). Therefore, unlike the claimed thematic/publishing logic

module, Angles does not disclose or teach that the browser module is configured to allow a user to interact with the virtual thematic environment.

Further, Angles does not disclose a consumer's ability to copy or grab data or objects from a website external to the virtual thematic environment, to be utilized in the virtual thematic environment. Pet. 21. With the claimed "virtual thematic environment" being a gaming environment, limitation 1[b] includes the capability for the consumer to grab or copy data or objects from external sources to the gaming environment and utilize the same in game. The '724 specification illustrates this point in several examples. *See, e.g.*, Ex. 1001, 30:43-50 ("[T]he user ... is provided with an object for the user to 'grab' ... at the sponsor's website or elsewhere, and then return the user to the thematic environment for use of the object."); *see also id.*, 9:52-65.

In contrast, while Angles discloses two embodiments for showing customized advertisements to the consumer, neither involves the consumer copying/grabbing an object from an external source and using the object in a gaming environment. In Angles's first embodiment, depicted by FIG. 1, "advertisement requests 26 are embedded into the content provider's electronic documents 32. When the consumer computer 12 receives the advertisement requests 26, the consumer computer 12 executes the advertisement request 26." Ex. 1007, 15:1-5; Pet. 15. As Petitioner

admits, upon execution of the advertisement request by the consumer computer, “a separate window [is created] which can display customized advertisements 30 on the consumer computer 12.” Pet. 22. Thus, Angles’s first embodiment never discloses the customized advertisement being utilized by the consumer in the virtual thematic environment.

Further, in Angles the consumer has no ability to copy or grab any objects, because it is “the advertisement provider [who] selects an appropriate advertisement based on the consumer’s profile and sends the customized advertisement to the consumer computer.” Ex. 1007, 15:1-5. To the extent Angles discloses that the consumer can be “immediately transported to an advertiser’s website,” Petitioner admits that such transportation is only for the purpose of “obtain[ing] additional information about an advertised product,” (Pet. 21; Ex. 1007, 4:9-14), and not for copying objects into the game.

In Angles’s second embodiment, depicted by FIG. 9, upon receiving the customized advertisement, “the content provider computer 14 can integrate the customized advertisements 30 into offerings such as on-line games,” and then “forwards the electronic page 32, combined with the customized advertisement 30 to the consumer computer 12 to be displayed.” Pet. 16-17. In this embodiment, the customized advertisement is “pre-selected for that consumer” and is incorporated

into an online game “prior to sending the electronic page⁶ 32 to the consumer.” Ex. 1007, 21:43-52. Thus, unlike limitation 1[b], Angles does not disclose the consumer’s copying or grabbing of objects from external sources into the game. Further, this embodiment does not enable the consumer to exit the virtual thematic environment, under Petitioner’s stated interpretation of the term “exit,” which is “to remove the player from the game environment to bring objects or data back into the gaming environment.” Pet. 12. The reason is simple: in Angles, the objects are incorporated into the game environment “prior to sending the electronic page 32 to the consumer,” without any involvement from the consumer. Ex. 1007, 21:43-52. This is further illustrated by Angles’s FIG. 9, where no communication link is established between the consumer computer and the advertisement provider computer. Pet. 16.

Lastly, as discussed in §III.B.2.a, the Petition fails to resolve the differences between the prior art and the claimed invention or provide any rationale regarding a motivation to modify or combine certain teachings. Specifically, with limitation 1[b], Petitioner has failed to identify what features of the prior art would need to be

⁶ Angles provides on-line games as an example of electronic page. Ex. 1007, 21:60-65.

modified in view of the knowledge of a POSITA, and explain how such modifications would work.

Angles thus fails to disclose, teach, or suggest copy or grab data or objects from a website external to the virtual thematic environment, to be utilized in the virtual thematic environment as claimed, and Petitioner has failed to provide an explicit, non-conclusory analysis in the Petition of how and why the prior art would be combined with the knowledge of a POSITA to arrive at the invention as claimed.

- d. Angles fails to disclose or teach automatic integration of objects into the virtual thematic environment during execution of the virtual thematic environment of limitation 1[c]

Petitioner alleges that Angles teaches limitation 1[c] because of the disclosure that “provider computer 14 can integrate the customized advertisements 30 into offerings such as on-line games.” Pet. 22-23. But Petitioner fails to establish that Angles’s integration happens as the claims explicitly require: both automatically and during the execution of the virtual thematic environment. Petitioner’s only effort in support of its obviousness argument is citing its expert to make a conclusory statement that “Mr. Crane explains in his declaration, the integration of the customized advertisements with the offerings happens automatically during execution.” *Id.*, 23. As previously discussed, this is not enough.

As a threshold matter, there is no detailed discussion in the Petition supporting the conclusion, requiring QI and the Board to go in search of the supporting analysis in Mr. Crane's declaration (which is also conclusory). This amounts to an incorporation by reference in violation of 37 C.F.R. §42.6(a)(3). *Cisco Sys.*, Paper 12 at 9 (providing that "practice of citing the Declaration to support conclusory statements that are not otherwise supported in the Petition also amounts to incorporation by reference."). This reason alone suffices to deny institution. *See Parus Holdings, Inc. v. Google LLC*, 70 F.4th 1365, 1370-71 (Fed. Cir. Jun. 12, 2023).

These statements offered by Petitioner's expert "are conclusory and unsupported, add[] little to the conclusory assertion for which [they are] offered to support, and are entitled to little weight." *Xerox Corp. et al. v. Bytemark, Inc.* IPR2022-00624, Paper 9 at 15 (PTAB Aug. 24, 2022) (precedential). Similar to *Xerox*, Petitioner's only evidence in support of its assertion that integration of the customized advertisements occurs during the execution of the offerings is the bare statement of its expert: "A POSITA would understand that when customized advertisements are integrated into offerings such as on-line games, video programming, ..., virtual reality environments and the like, that is occurring during execution of the offerings." Ex. 1004, ¶145. This echoes the conclusory, unsupported

statement made by Dr. Jones in *Xerox*. *Xerox*, Paper 9 at 15. There, in support of its assertion that “blocking the purchaser would require recording the blocking in a record in the user’s account,” the petitioner offered only Dr. Jones’s declaration, where he simply stated that “a POSITA would understand that such a blocking would require recording the blocking in a data record associated with that user’s account.” *Id.*, 15. The Board disregarded Dr. Jones’s statement as conclusory because he did not “cite to any additional supporting evidence or provide any technical reasoning to support his statement.” *Id.* For the same reason as in *Xerox*, the unsupported conclusory statements of Petitioner’s expert here should be disregarded and entitled to no weight.

Petitioner’s lack of support for its assertion that Angles’s integration of customized advertisement into on-line games happens both automatically and during the execution of the games is unsurprising, since Angles discloses the exact opposite. *First*, the word “automatic” appears only four times in Angles’s specification:

“[W]hen the user wishes to access the Internet, an attached modem is **automatically** instructed to dial the telephone number associated with the local Internet host server.” Ex. 1007, 1:47-50.

“When the consumer purchases a good ..., the consumer’s bank account is **automatically** debited and the payee’s bank account is **automatically** credited.” *Id.*, 6:19-22.

“[T]he communication medium 20 can include ... automatic teller machine networks, and the like.” *Id.*, 9:29-34.

None of these uses of the term “automatic” corresponds to integration of customized advertisement into on-line offerings. As Angles used the term “automatic” when specifically describing a feature as such, its absence in association with advertisements means they were not automatic. Because Petitioner has failed to “specify sufficiently” where in Angles this claim limitation is found, and because Petitioner has failed to explain the significance of the quotations and citations plucked from Angles—notably in comparison with the ‘724 Patent specification—Ground 1 of the Petition is fatally defective. *See In re EveryMD.com, LLC*, Paper 9, at 23-25; *see also* 37 C.F.R. §§42.104(b)(4), 42.22; §III.B.2.a.

Further, in discussing FIG. 9 (which is the embodiment disclosing the integration of customized advertisement into on-line offerings), Angles discloses that any such integration is initiated by the content provider: “Upon receiving the customized advertisement, the content provider incorporates the customized advertisement 30 into an electronic page 32.” *Id.*, 21:38-40. Ironically, Petitioner cites this exact passage from Angles, (Pet. 22), which indicates that incorporation is initiated at the command of the content provider—not automatically by the content provider computer.

Additionally, Angles specifically discloses that integration of customized advertisements into on-line offerings happens “prior to” the consumer’s executing the on-line offerings—and not during execution by the consumer:

The content provider computer 14 then forwards the electronic page 32, combined with the customized advertisement 30 to the consumer computer 12. The consumer computer 12 then displays the electronic page 32 and customized advertisement 30 to the consumer. Because transferring the customized advertisement 30 from the advertisement provider computer 18 to the content provider computer 14 happens prior to sending the electronic page 32 to the consumer, the electronic page 32 appears to the consumer like all other electronic pages 32 on the Internet 33, except that it contains the customized advertisement 30 which has been pre-selected for that consumer. Ex. 1007, 21:40-52.

Lastly, as discussed in §III.B.2.a, the Petition fails to resolve the differences between the prior art and the claimed invention or provide any rationale regarding a motivation to modify or combine certain teachings. Specifically, with this limitation, Petitioner has failed to identify what features of the prior art would need to be modified in view of the knowledge of a POSITA, and explain how such modifications would work.

Angles thus fails to disclose, teach, or suggest automatic integration of objects into the virtual thematic environment during execution of the virtual thematic environment as claimed, and Petitioner has failed to provide an explicit, non-

conclusory analysis in the Petition of how and why the prior art would be combined with the knowledge of a POSITA to arrive at the invention as claimed.

- e. Angles fails to disclose or teach at least one digital content library module which provides content management on the virtual thematic environment of limitation 1[d]

Petitioner alleges that Angles teaches limitation 1[d] because of the disclosure of “an advertising storage medium ... like a compact disk drive and a compact disk.” Pet. 23-24. But Petitioner fails to show how Angles’s advertising storage medium provides content management on the virtual thematic environment. Instead, Petitioner merely describes the function of Angles’s advertising storage medium. (*See id.*, 23-24). Because Petitioner’s argument is merely descriptive without explaining the significance of the quotations and citations plucked from Angles vis-à-vis the advertising storage medium—notably in comparison with the ‘724 Patent specification—Ground 1 of the Petition is fatally defective. *See In re EveryMD.com, LLC*, Paper 9, at 23-25; *see also* 37 C.F.R. §§42.104(b)(4), 42.22; §III.B.2.a.

According to Angles, an advertising storage medium merely “stores a variety of advertisements which can be retrieved and displayed by the consumer computer,” (Ex. 1007, 11:50-55), upon receiving an advertisement command from the advertising module, (*see id.*, 23:39-41)—located on the advertisement provider

computer.⁷ *See id.*, 13:47-52. Further, as Petitioner admits, Angles discloses that the retrieved advertisement is being displayed on “a separate window”—independent of the virtual thematic environment (i.e., on-line games). Therefore, under Petitioner’s own interpretation of the art, Angles does not disclose content management on the virtual thematic environment.

Further, the digital content library of the ‘724 Patent, unlike Angles’s advertising storage medium, contains the “real-time thematic environment database” and “maintains the state of each thematic environment, user, and the thematic virtual world.” *Id.*, 25:21-25.

Lastly, as discussed in §III.B.2.a, the Petition fails to resolve the differences between the prior art and the claimed invention or provide any rationale regarding a motivation to modify or combine certain teachings. Specifically, with this limitation, Petitioner has failed to identify what features of the prior art would need to be modified in view of the knowledge of a POSITA, and explain how such modifications would work.

⁷ Angles discloses an advertising storage medium only in connection with the first embodiment where the consumer computer is in direct communication with the advertisement provider computer. *See* Ex. 1007, FIG. 1.

Angles thus fails to disclose, teach, or suggest at least one digital content library module which provides content management on the virtual thematic environment as claimed, and Petitioner has failed to provide an explicit, non-conclusory analysis in the Petition of how and why the prior art would be combined with the knowledge of a POSITA to arrive at the invention as claimed.

- f. Angles fails to disclose or teach at least one quantum imaging environment (QIE) module which interprets content such that said content is manipulated and accessed by any device of limitation 1[e]

Petitioner alleges that Angles teaches limitation 1[e] because of the disclosure of the web browser module. Pet. 24-25. Petitioner relies on its expert's conclusory statement that "the Web Browser module taught by Angles performs the function described by the quantum imaging module, interpreting content such that said content is manipulated and accessed by any device as claimed." Ex. 1004, ¶152. Thus, Petitioner asserts that Angles's web browser module teaches or suggests two separately claimed limitations of the '724 Patent: the thematic/publishing logic module, (Pet. 20-22; *see also* §III.B.2.b), and the QIE module. Pet. 24-25. Petitioner fails to address how two separately recited claim elements are met by the same prior art feature. *Becton, Dickinson & Co. v. Tyco Healthcare Grp., LP*, 616 F.3d 1249 (Fed. Cir. 2010) ("Where a claim lists elements separately, 'the clear implication of

the claim language’ is that those elements are ‘distinct component[s]’ of the patented invention.”) (citations omitted).

That the QIE must be separate from the thematic/publishing logic module is explicitly recited in the claims, and repeatedly underscored by the ‘724 Patent specification. It discloses that the invention ought to be “implemented on a 6-tier modular system (i.e., six layers).” Ex. 1001, 11:47-52. These six layers are further enumerated as “1) a graphical user interface (GUI) 100, 2) **a Thematic/Publishing Logic** 101 and a Digital Content Library 102, 3) a Business Logic 103, 4) a thematic or zone application builder and interpreter (i.e., a **Quantum Imaging Engine 104**), 5) Communications 105, and 6) a Data Storage 106.” *Id.*, 11:53-58. Thus, Petitioner’s argument that Angles’s web browser module serves as both thematic/publishing logic and QIE modules must be rejected, notably in light of Petitioner’s failure to establish that a POSITA would have considered obvious at the time of filing that the functions attributed to thematic/publishing logic and QIE modules can be performed by the same software layer. Because Petitioner has failed to “specify sufficiently where [this] element of [the] challenged claim is found” in Angles, the Ground 1 of the Petition is fatally defective. *In re EveryMD.com, LLC*, Paper 9, at 23-25; *see also* 37 C.F.R. §§42.104(b)(4), 42.22.

Further, and more importantly, Angles's web browser module does not manipulate content such that the said content be accessed by any device. At best, Angles decodes the HTML codes "embedded within the informational content of the document." Ex. 1007, 6:32-45. These HTML codes, which are embedded within the content "[d]uring document authoring stage" by the content provider, (*Id.*), "specify[] how the Web browser is to display the document." *Id.* Therefore, contrary to Petitioner's argument, Angles's web browser module located on the consumer computer does not specify or determine how the content is displayed on the consumer computer. Any such specification or determination is made "[d]uring document authoring stage," by the content provider's embedding the HTML codes within the content. *Id.*, 18:23-24.

Moreover, since Angles's web browser can merely "display" the content, (Pet. 25)—as opposed to manipulate the content, as discussed above—Petitioner's argument contradicts its expert's proposed construction as well as the claim construction order issued by the District Court of the Northern District of California issued on Feb. 12, 2020, in *Barbaro Technologies, LLC v. Niantic, Inc.*, No. 3:18-cv-02955 (N.D. Cal.), interpreting this term as "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." Ex.

1004, ¶¶67; Ex. 1010, 7. Similarly, since the document authoring stage happens “prior to sending the electronic page 32 to the consumer,” (*Id.*, 21:43-52), Angles cannot possibly teach manipulation of the content based on the type of the consumer computer device.

Lastly, as discussed in §III.B.2.a, the Petition fails to resolve the differences between the prior art and the claimed invention or provide any rationale regarding a motivation to combine certain teachings. Specifically, with this limitation, Petitioner has failed to identify what features of the prior art would need to be modified in view of the knowledge of a POSITA, and explain how such modifications would work.

Angles thus fails to disclose, teach, or suggest at least one quantum imaging environment (QIE) module which interprets content such that said content is manipulated and accessed by any device as claimed, and Petitioner has failed to provide an explicit, non-conclusory analysis in the Petition of how and why the prior art would be combined with the knowledge of a POSITA to arrive at the invention as claimed.

Because Angles fails to disclose, teach, or suggest the several limitations of independent claim 1 discussed above, and does not render obvious claim 1, institution based on Ground 1 should be denied.

3. All Remaining Claims That Rely on Angels Fail for the Same Reasons

Because challenged claims 2-7, 9-14, 16, 18, 20-23 of Ground 1 depend from independent claim 1, and rely on Angels for at least the teachings of the several limitations of claim 1 above, these claims are not rendered obvious by Angels.

C. The Petition Should Not be Instituted on Ground 2 Because the Prior Art Fails to Disclose or Teach the Invention as Claimed

Petitioner asserts the Ground 2 claims are obvious based on the sole reference Robinson in view of the knowledge of a POSITA. Pet. 4. The asserted prior art fails to disclose or teach numerous limitations, either expressly or inherently, and a POSITA would not have been motivated to start with or combine the asserted references and the knowledge of a POSITA to arrive at the claimed subject matter, nor would they have had a reasonable expectation of success in arriving at the claimed subject matter. The Petition fails to establish a reasonable likelihood that Robinson in view of the knowledge of a POSITA would have rendered the challenged claims obvious. The Board should therefore deny institution based on Ground 2.

1. Robinson

Robinson is titled “System and method to configure and provide a network-enabled three-dimensional computing environment,” and was issued on January 23, 2007. Ex. 1008, codes 54, 45. Robinson’s system is directed to a situation where

“the user’s computer screen displays a 3D room or scene,” and where “[t]he user can ‘enter’ the space, rather than merely ‘view it.’” *Id.* 1:59-62. To create an interactive computing environment, Robinson’s system requires nothing more than utilizing avatars that “are virtual representations of users, allowing them to interact with other users across a network.” *Id.*, 9:29-33. In Robinson, the user can customize the VR environment by using a conventional “drag-and-drop” functionality, which necessarily requires clicking and unclicking on “a conventional mouse” by the user *Id.* 15:1-31.

2. Robinson fails to disclose, teach, or suggest several limitations of independent claim 1, nor does it render obvious claim 1

- a.** Robinson fails to disclose or teach at least one thematic/publishing logic module which contains virtual thematic environment rules configured for a gaming environment of limitation 1[b]

Petitioner alleges that Robinson teaches the above features of limitation 1[b] because of the disclosure of “real-time avatars” that “support interactive online communities such as online games.” Pet. 45. But Robinson’s avatars are merely “virtual representations of users, allowing them to interact with other users across a network,” (Ex. 1008, 9:31-33), and are chosen by the users after they view a “3D VR environment.” *Id.*, 15:48-52. In light of this disclosure by Robinson, Petitioner fails to explain how Robinson’s avatars can contain virtual thematic environment

rules configured for a gaming environment, as the same is required for this claim limitation.

First, and as a threshold matter, the word “rule,” (or any of its synonyms, such as, “law,” “regulation,” “principle,” or “policy”) does not appear anywhere in Robinson. Thus, Petitioner’s attempt to assert that Robinson discloses or suggests virtual thematic environment rules necessarily fails. And more importantly, Petitioner admits that interactions between Robinson’s avatars are “subject to environmental rules, including rules that govern gravity, terrain-following, and collisions with other avatars, walls, and such.” Pet. 45-46. Therefore, Robinson’s avatars cannot possibly contain any virtual thematic environment rules, because their interactions are “subject to” such rules. For this reason alone, the Ground 2 of the Petition is fatally defective, because it does neither “specify sufficiently where each element of each challenged claim is found” in Robinson (including an explanation of the significance of the quotations and citations plucked from Robinson). *In re EVERYMD.COM*, Paper 9, at 23-25; *see also* 37 C.F.R. §42.104(b)(4), 42.22.

Second, Petitioner’s only effort in support of its obviousness argument is citing its expert to make a conclusory statement that “[a]s explained by Mr. Crane in his declaration ‘it was well known in the art that interactions between avatars in a virtual environment were subject to environmental rules, including rules that govern

gravity, terrain-following, and collisions with other avatars, walls, and such.” Pet. 45-46. Otherwise, there is no detailed discussion in the Petition supporting Petitioner’s conclusion, requiring QI and the Board to go in search of the supporting analysis in Mr. Crane’s declaration (which is also conclusory). Petitioner incorporates arguments by reference and therefore violates 37 C.F.R. §42.6(a)(3). *Cisco Sys.*, Paper 12 at 9. This reason alone suffices to deny institution. *See Parus Holdings, Inc.*, 70 F.4th at 1370-71.

Third, even if Petitioner’s unwarranted incorporation by reference is overlooked, statements offered by Petitioner’s expert “are conclusory and unsupported, add[] little to the conclusory assertion for which [they are] offered to support, and are entitled to little weight.” *Xerox*, Paper 9 at 15. Similar to *Xerox*, Petitioner’s only evidence in support of its assertion that Robinson’s avatars contain virtual thematic environment rules configured for a gaming environment is the opinion of its expert: “It was well known in the art that interactions between avatars in a virtual environment were subject to environmental rules, including rules that govern gravity, terrain-following, and collisions with other avatars, walls, and such.” Ex. 1004, ¶246; *see also* Pet. 45-46. This echoes the statement made by Dr. Jones in *Xerox*, which the Board disregarded for failure to “cite to any additional supporting evidence or provide any technical reasoning to support his statement.”

Xerox, Paper 9 at 15. For the same reason as in *Xerox*, the statements here made by Petitioner's expert should be disregarded and entitled to no weight.

For the reasons previously discussed in §III.B.2.a, Petitioner's obviousness analysis is incomplete. Petitioner states "[a]s explained by Mr. Crane in his declaration..." but fails to provide an explicit analysis of how and why a POSITA would be motivated to modify Robinson in view of the knowledge of a POSITA, and that a POSITA would have a reasonable expectation of success. Pet. 45-46. Petitioner has failed to identify what features of the prior art would need to be modified in view of the knowledge of a POSITA, and explain how such modifications would work.

Robinson thus fails to disclose, teach, or suggest at least one thematic/publishing logic module which contains virtual thematic environment rules configured for a gaming environment as claimed, and Petitioner has failed to provide an explicit, non-conclusory analysis in the Petition of how and why the prior art would be combined with the knowledge of a POSITA to arrive at the invention as claimed.

- b.** Robinson fails to disclose or teach automatic integration of objects into the virtual thematic environment during execution of the virtual thematic environment of limitation 1[c]

Petitioner alleges that Robinson teaches limitation 1[c] because of the disclosure of “the drag-and-drop functionality.” Pet. 47. But Petitioner fails to show that this functionality causes integration of objects into the virtual thematic environment to occur both automatically and during the execution of the virtual thematic environment, as required by the claim. *Id.* Instead of providing evidence from Robinson in support of its assertion, Petitioner entirely relies solely on conclusory statements made by its expert that “automatic integration occurs during execution of the virtual thematic environment.” Pet. 47 (citing Ex. 1004, ¶251). There is no detailed discussion whatsoever in the Petition supporting Petitioner’s conclusion, requiring QI and the Board to go in search of the supporting analysis in Mr. Crane’s declaration (which is also conclusory). This amounts to an incorporation by reference in violation of 37 C.F.R. §42.6(a)(3). *Cisco Sys.*, Paper 12 at 9. This reason alone suffices to deny institution. *See Parus Holdings*, 70 F.4th at 1370-71. Even if this is overlooked, statements offered by Petitioner’s expert “are conclusory and unsupported, add[] little to the conclusory assertion for which [they are] offered to support, and are entitled to little weight.” *Xerox*, Paper 9 at 15. For the same reason

as in *Xerox*, the statements here made by Petitioner’s expert should be disregarded and entitled to no weight.

Notably, Petitioner cites its expert’s conclusory statement to allege that Robinson’s “integration of the customized advertisements with the offerings happens automatically without human initiation or intervention.” Pet. 47. Petitioner further argues in a footnote that construing the term “automatically” to mean “without human initiation or intervention” is “consistent with the PTAB’s decision ... that if ‘integration ... is effected by physical operation of the user,’ it ‘is thus not automatic.’” *Id.* Setting aside whether Petitioner correctly characterizes the Board’s prior decision for a related patent, Petitioner’s cited evidence does not even line up with its position. Petitioner’s expert states that Robinson’s integration occurs “upon the ‘drop’ (i.e., release of the mouse button, for example).” Ex. 1004, ¶251. Since “release of the mouse button” constitutes a physical operation by the user, Robinson’s integration cannot occur automatically under Petitioner’s own implicit construction. In fact, Robinson’s drag-and-drop functionality is an example of human initiation or intervention, because, as Robinson explains, the user must click on the mouse button to drag an object and then release the same to drop the object. Ex. 1008, 15:14-20. Because Petitioner has failed to “specify sufficiently” where in Robinson this claim limitation is found—notably in view of Petitioner’s own

construction for the same—Ground 2 of the Petition is fatally defective. *See In re EveryMD.com, LLC*, Paper 9, at 23-25; *see also* 37 C.F.R. §§42.104(b)(4), 42.22; §III.B.2.a.

Lastly, like Ground 1 of the Petition and for reasons adequately discussed in §III.B.2.a, the Petition fails to resolve the differences between the prior art and the claimed invention or provide any rationale regarding a motivation to combine certain teachings. Specifically, with this limitation, Petitioner has failed to identify what features of the prior art would need to be modified in view of the knowledge of a POSITA, and explain how such modifications would work.

Robinson thus fails to disclose, teach, or suggest automatic integration of objects into the virtual thematic environment during execution of the virtual thematic environment as claimed, and Petitioner has failed to provide an explicit, non-conclusory analysis in the Petition of how and why the prior art would be combined with the knowledge of a POSITA to arrive at the invention as claimed.

- c. Robinson fails to disclose or teach at least one digital content library module which provides content management on the virtual thematic environment of limitation 1[d]

Petitioner alleges that Robinson teaches limitation 1[d] because of the disclosure of a “registry object.” Pet. 48. But Petitioner fails to show how Robinson’s registry object provides content management on the virtual thematic environment,

as required by the claim. Instead, Petitioner merely describes the function of Robinson's registry object. *Id.* Because Petitioner's argument is merely descriptive without explaining the significance of the quotations and citations plucked from Robinson vis-à-vis its registry objects—notably in view of the '724 Patent specification—Ground 2 of the Petition is fatally defective. *See In re EveryMD.com, LLC*, Paper 9, at 23-25; *see also* 37 C.F.R. §§42.104(b)(4), 42.22; §III.B.2.a.

Further, Petitioner's conclusory assertion that Robinson's registry object is the same as the claimed digital content library module is substantially undermined by statements from Petitioner's expert identifying Robinson's "3D desktop program" to teach this claim limitation. Ex. 1004, ¶254. The Board must resolve this inconsistency against Petitioner.

Lastly, like Ground 1 of the Petition and for reasons adequately discussed in §III.B.2.a, the Petition fails to resolve the differences between the prior art and the claimed invention or provide any rationale regarding a motivation to combine certain teachings. Specifically, with this limitation, Petitioner has failed to identify what features of the prior art would need to be modified in view of the knowledge of a POSITA, and explain how such modifications would work.

Robinson thus fails to disclose, teach, or suggest at least one digital content library module which provides content management on the virtual thematic

environment as claimed, and Petitioner has failed to provide an explicit, non-conclusory analysis in the Petition of how and why the prior art would be combined with the knowledge of a POSITA to arrive at the invention as claimed.

- d. Robinson fails to disclose or teach at least one quantum imaging environment (QIE) module which interprets content such that said content is manipulated and accessed by any device of limitation 1[e]

Petitioner alleges that Robinson teaches limitation 1[e] because of the disclosure of “an interpreter [that] interprets incoming data for presentation to the desktop.” Pet., 48-49. As both Petitioner and its expert acknowledge, the District Court of the Northern District of California construed “quantum imaging environment (QIE) module” in a related patent on Feb. 12, 2020, in *Barbaro Technologies, LLC v. Niantic, Inc.*, No. 3:18-cv 02955 (N.D. Cal.). Ex. 1010, 7:

“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.”

Petitioner purports that it “demonstrates that the asserted prior art in Grounds 1 and 2 meets the court’s construction of the claim terms as discussed below” (Pet., 12), and likewise its expert states: “For this analysis I assume the QIE to be construed as ‘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.’” Ex. 1004, ¶67. But this lip service is

where the matter ends: neither the Petitioner nor its expert go on to explain at all whether and how Robinson might actually satisfy this construction.

First, Petitioner has failed to “specify sufficiently” where in Robinson a QIE is disclosed as a software layer, and because Petitioner has failed to explain the significance of the quotations and citations plucked from Robinson, Ground 2 of the Petition is fatally defective. *See In re EveryMD.com, LLC*, Paper 9, at 23-25; *see also* 37 C.F.R. §§42.104(b)(4), 42.22; §III.B.2.a.

Further, and more importantly, Petitioner has made no showing that Robinson’s interpreter manipulates content based on the receiving user’s device type as required by the *Barbaro* court’s construction. Quite the contrary, the interpreter in Robinson merely manipulates content based on the content type: “The interpreter can convert these [flat] webpages 322, on the fly, to three-dimensional functionality.” Ex. 1008, 8:5-8. Robinson’s interpreter is a component of the “user object,” (i.e., located on the user’s device), (*Id.*, 7:24-67; *see also id.*, FIG. 3), that allows the user’s device (e.g., a 3D desktop) “to interpret incoming data from the Internet 320, for presentation” to the user’s device. *Id.*, 7:56-57. Therefore, since the interpreter is located on the user’s device, Robinson cannot logically disclose manipulation of the content based on the type of the consumer computer device as required under this claim limitation as construed by the *Barbaro* court. Accordingly,

Robinson does not and cannot disclose determining the user's device type needed for QIE's content manipulation. Hence, Petitioner fails to resolve this difference between Robinson and the claimed subject matter, thus "failing to adequately state a claim for relief." *Liberty Mutual Insurance*, Paper 7 at 2-3; *see also* §III.B.2.a.

Lastly, like Ground 1 of the Petition and for reasons adequately discussed in §III.B.2.a, the Petition fails provide any rationale regarding a motivation to combine certain teachings. Specifically, with this limitation, Petitioner has failed to identify what features of the prior art would need to be modified in view of the knowledge of a POSITA, and explain how such modifications would work.

Robinson thus fails to disclose, teach, or suggest at least one quantum imaging environment (QIE) module which interprets content such that said content is manipulated and accessed by any device as claimed, and Petitioner has failed to provide an explicit, non-conclusory analysis in the Petition of how and why the prior art would be combined with the knowledge of a POSITA to arrive at the invention as claimed.

Because Robinson fails to disclose, teach, or suggest the several limitations of independent claim 1 discussed above, and does not render obvious claim 1, institution based on Ground 2 should be denied.

3. All Remaining Claims That Rely on Robinson Fail for the Same Reasons

Because challenged claims 2-7, 9-14, 16, 18, 20-23 of Ground 2 depend from independent claim 1, and rely on Robinson for at least the teachings of the several limitations of claim 1 above, these claims are not rendered obvious by Robinson.

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*⁸ and *Apple v. Fintiv*⁹ because the '724 Patent is involved 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

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

⁹ *Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 11 (PTAB Mar. 20, 2020) (precedential).

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 is set to begin. 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 Sys., Inc. v. Oyster Optics, LLC*, IPR2021-00319, Paper 9 at 10-12 (PTAB Jun. 8, 2021) (seven months); *Cisco Sys., 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*

Sys. 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.

In sum, there is no reason to believe the April 2024 trial will be postponed, much less postponed significantly enough to close the seven-month gap such that the FWD would issue before the trial. *See Fintiv* at 13 (“We generally take courts’ trial schedules at face value absent some strong evidence to the contrary.”); *see also, Cisco Sys., 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).¹⁰ Without a stay pending IPR, litigation will continue and will have

¹⁰ 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. 2003). The *Fintiv* Memo directs the Board to “consider the median time from filing to disposition” in the district court (Ex. 2003 at 3), which for patent cases in the Western District of Texas is 25.4 months (Ex. 2004), and for patent cases before

an 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 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.

Judge Albright is 24.7 months (Ex. 2005). Counting from the June 3, 2022 filing of the parallel district court case (Ex. 1006) 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.

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. Petitioner's decision to challenge venue has significantly increased the investment of the parties in the district court case. Further, fact discovery opened for all purposes on October 14, 2022. This factor weighs in favor of discretionary denial of institution. 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 '724 Patent are allegedly obvious over at least the prior art Angles and Robinson. Ex. 2002 at 9-10. 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 of 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. 68. 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, or other prior art, 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 be an efficient use of 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.

IV. CONCLUSION

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

Case No. IPR2023-00959
Patent No. 10,255,724

Date: September 13, 2023

Respectfully submitted,

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CERTIFICATE OF WORD COUNT

Pursuant to 37 CFR §42.24(d), the undersigned hereby certifies that the foregoing Patent Owner's Preliminary Response contains 10,989 words using the word count feature of Microsoft Word.

Dated: September 13, 2023

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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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