

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

GENIUS SPORTS LTD.,
Petitioner,

v.

SPORTSCASTR INC. d/b/a PANDA INTERACTIVE,
Patent Owner.

IPR2024-01311
Patent 11,039,218 B1

Before BARBARA A. PARVIS, JOHN A. HUDALLA, and
SHARON FENICK, *Administrative Patent Judges*.

FENICK, *Administrative Patent Judge*.

DECISION
Granting Institution of *Inter Partes* Review
35 U.S.C. § 314

I. INTRODUCTION

Genius Sports Ltd. (“Petitioner”) filed a Petition (Paper 1 (“Pet.”)) requesting *inter partes* review of claims 16–30 (“challenged claims”) of U.S. Patent No. 11,039,218 B1 (Ex. 1009, “the ’218 patent”). SportsCastr Inc. (d/b/a PANDA Interactive) (“Patent Owner”) filed a Preliminary Response. Paper 7 (“Prelim. Resp.”). After authorization (Ex. 1060), Petitioner filed a Preliminary Reply (Paper 8, “Prelim. Reply”) and Patent Owner a Preliminary Sur-reply (Paper 9, “Prelim. Sur-reply”) relating to discretionary denial issues.

We have authority to determine whether to institute review under 35 U.S.C. § 314 and 37 C.F.R. § 42.4. We may institute an *inter partes* review if “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.

Upon consideration of the contentions and the evidence of record at this preliminary stage, we determine that Petitioner has demonstrated a reasonable likelihood of prevailing on at least one of the challenged claims of the ’218 patent. Accordingly, we grant Petitioner’s request and institute an *inter partes* review of all challenged claims of the ’218 patent and with respect to all grounds set forth in the Petition.

II. BACKGROUND

A. *Real Parties-in-Interest*

Petitioner identifies itself as the real party-in-interest. Pet. 3. Patent Owner names itself as the real party-in-interest. Paper 4 (Patent Owner’s Mandatory Notices), 1.

B. Related Matters

Both parties identify, as a matter currently involving the '218 patent, *SportsCastr Inc. v. Genius Sports Ltd.*, No. 2:23-cv-00471 (E.D. Tex.) (“related parallel proceeding”). Pet. 4; Paper 4, 1. Patent Owner also identifies *SportsCastr Inc. v. Sportradar Group, AG et al.*, 2:23-cv-00472 (E.D. Tex.) as a matter involving the '218 patent. Paper 4, 1.

The parties also identify that Petitioner filed a second petition challenging the '218 patent, in IPR2024-01310. Pet. 3–4; Paper 4, 1. Petitioner filed a document that ranks the petitions in the instant case and IPR2024-01311 and provides an explanation of the material differences between the petitions. *See* Paper 3 (Petitioner’s Reasons for Parallel Petitions and Petition Ranking).

The parties also identify that Petitioner filed a second petition challenging claims of the '218 patent, IPR2024-01310 (PTAB). Pet. 4; Paper 4, 1. Petitioner filed a document which ranks the petitions in the instant case and IPR2024-01310 and provides an explanation of the material differences between the petitions. *See* Paper 3 (Petitioner’s Reasons for Parallel Petitions and Petition Ranking (“Ranking”)). Petitioner ranks the instant Petition second, but argues we should “institute both petitions” because (1) “the claims cannot be addressed in one petition because of the number and length of the claims” and “because of the nature of the claims themselves”; (2) “each petition challenges different claims”; and (3) “the petitions cite essentially the same art against all claims, minimizing the burden on the Board from instituting both petitions.” *Id.* at 1. Petitioner also argues “the Board’s analysis of the claims asserted in the [related parallel proceeding] would not be complete without considering both petitions.” *Id.* at 2.

The Consolidated Trial Practice Guide¹ (“CTPG”), issued in November 2019, guides that “one petition should be sufficient to challenge the claims of a patent in most situations.” CTPG 59. In the instant proceeding, however, we agree with Petitioner’s arguments regarding filing two petitions. For example, we find that each petition challenges different claims and that Petitioner’s division of its challenges into two petitions is supported by the length and nature of the claims. We also agree that Petitioner’s assertion of the same art minimizes the burden on the Board and the parties. Patent Owner does not respond to Petitioner’s arguments that we should institute both petitions. *See generally* Prelim. Resp. Because we agree with Petitioner’s arguments with respect to the claims and the identity of the prior art used, we consider the merits of the instant petition.

Petitioner further identifies four other petitions challenging patents related to the ’218 patent in IPR2024-01305, IPR2024-01307, IPR2024-01308, and IPR2024-01309. Pet. 4.

C. The ’218 Patent

The ’218 patent is titled “Systems, Apparatus and Methods for Rendering Digital Content Relating to a Sporting Event with Online Gaming Information.” Ex. 1009, code (54). The ’218 patent relates to allowing low-latency viewing of broadcast digital content streams of live events, and synchronization of event information with viewed streams. *Id.* at 13:17–21. Figure 1A of the ’218 patent is reproduced below.

¹ Available at <https://www.uspto.gov/TrialPracticeGuideConsolidated>.

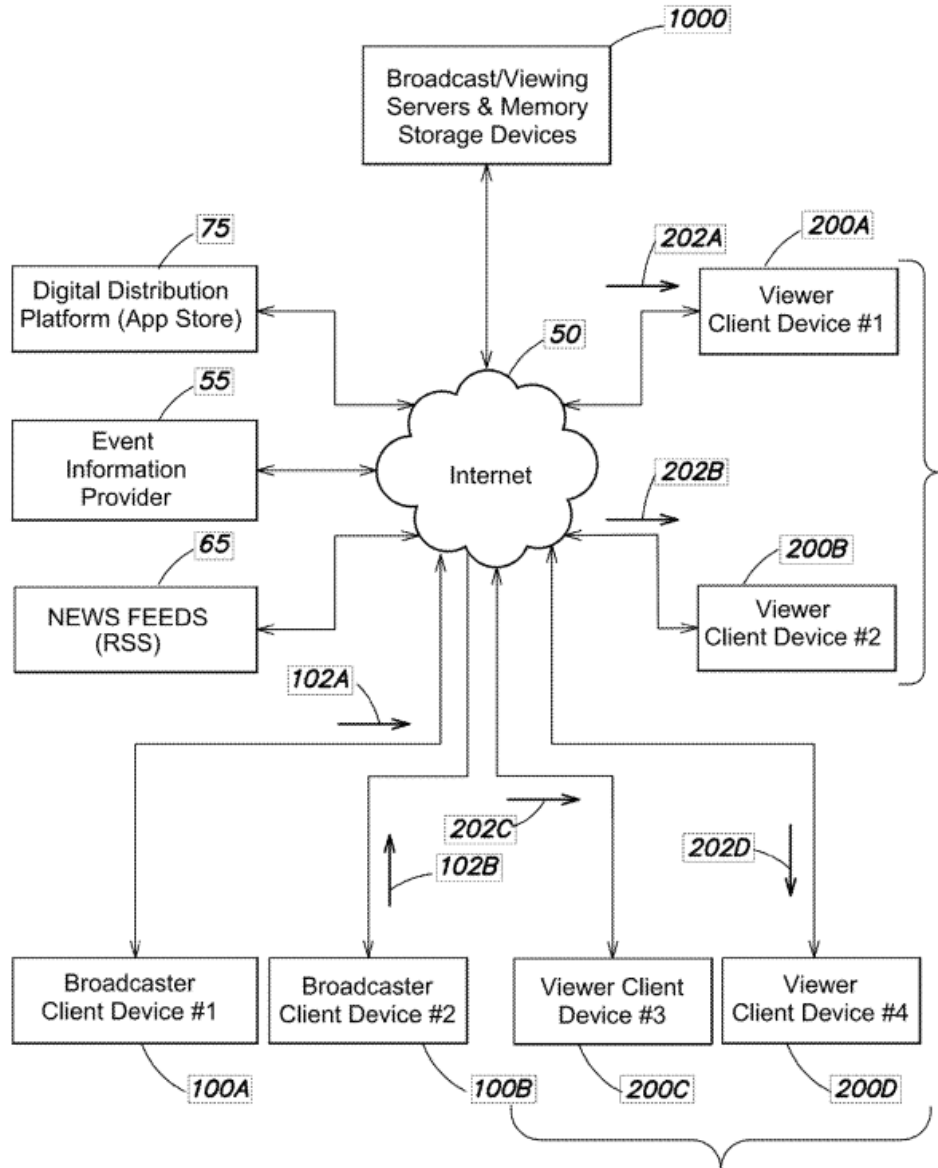


FIG. 1A

Figure 1A is a block diagram of a system to facilitate live streaming of digital content from multiple broadcasters to multiple viewers. *Id.* at 11:29–32.

The system shown in Figure 1A includes broadcaster client devices 100A and 100B, viewer client devices 200A–200D, broadcast/viewing servers and memory storage devices 1000, event information provider 55, one or more news feeds 65, and digital distribution platform 75, all coupled

together via Internet 50. *Id.* at 14:61–15:2. In Figure 1A, first broadcaster client device 100A provides first live stream of digital content 102A, and copies 202A and 202B of digital content 102A are received by viewer client devices 200A and 200B, respectively. *Id.* at 15:32–37. Similarly, second broadcaster client device 100B provides second live stream of digital content 102B, and copies 202C and 202D are received by viewer client devices 200C and 200D, respectively. *Id.* at 15:37–42. Broadcast/viewing servers and memory storage devices 1000 may retrieve news and/or event information germane to a live stream of digital content from news feeds 65 and event information provider 55 and convey the relevant news and/or event information to one or more client devices. *Id.* at 15:42–49.

Figure 2, reproduced below, is a block diagram of broadcast/viewing servers and memory storage devices 1000 in the system of Figure 1A. *Id.* at 11:36–38, 18:40–53.

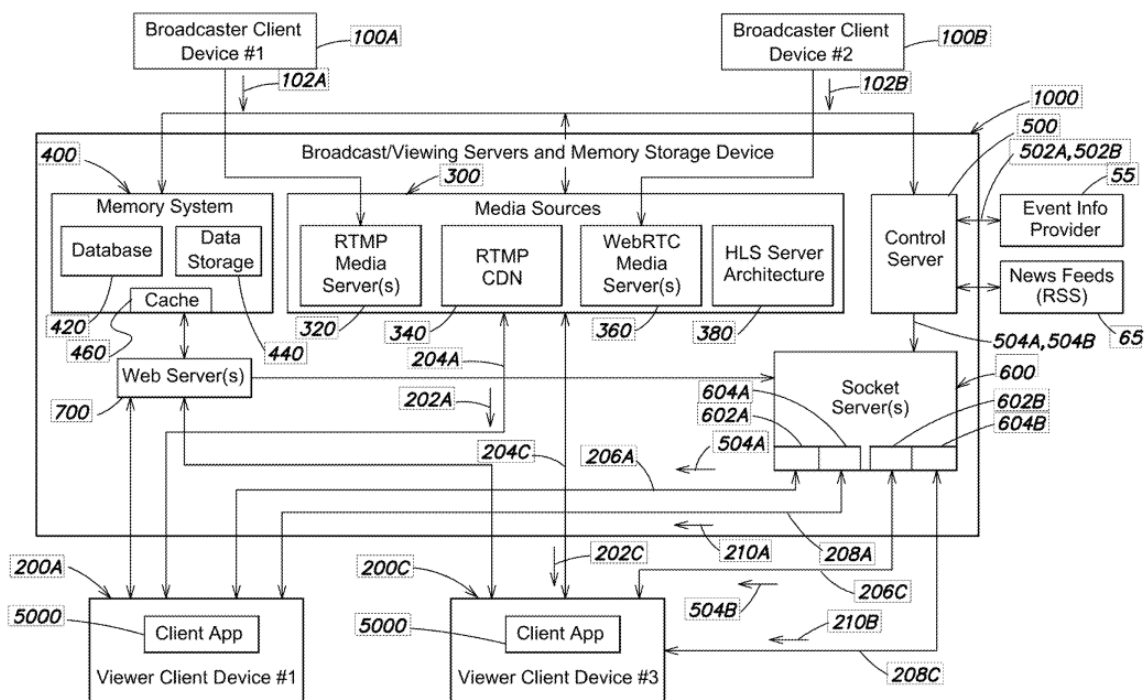


FIG. 2

Figure 2 is a block diagram of servers/memory storage devices 1000. *Id.* at 11:36–38, 18:40–53.

Figure 2 shows servers/memory storage devices 1000 including, in relevant part, a plurality of media sources 300, control server 500, one or more web servers 700, and socket server 600. *Id.* at 19:26–32, 19:57–60, 20:16–19. Media sources 300 receive live streams of digital content (102A, 102B) from broadcaster client devices (100A, 100B) and provide copies (202A, 202C) to viewer client devices (200A, 200C). *Id.* at 19:26–32, 21:14–40. Web server 700 supports an application programming interface to facilitate communication between servers/memory storage devices 1000 and client devices. *Id.* at 18:64–19:6. Control server 500 retrieves news and/or event information germane to the live streams of digital content (102A, 202C) from news feeds 65 and event information provider 55. *Id.* at 19:57–64. Socket servers 600 facilitate communication of synchronized event information retrieved by control server 500 to broadcaster and viewer client devices. *Id.* at 20:16–36. For example, control server 500 may retrieve first score information 504A for a first live sporting event and provide it to socket server 600, which establishes event socket 602A. *Id.* at 21:56–22:4. First viewer client device 200A connects to event socket 602A via a URL, and first score information 504A is transmitted to first viewer client device 200A. *Id.*

D. Illustrative Claims

Petitioner challenges claims 16–30 of the '218 patent. Pet. 6. Claims 16 and 21 are independent, claims 17–20 depend, directly or indirectly, from claim 16, and claims 22–30 depend directly from claim 21. Ex. 1009,

60:35–63:6. Independent claims 16 and 21, reproduced below, are illustrative of the claimed subject matter.

16. [16.0²] A method for controlling a first viewer client device to display a video relating to a first sporting event together with first online gaming information germane to the first sporting event, the method comprising:

[16.1] A) transmitting at least one first instruction to the first viewer client device to cause the first viewer client device to receive a first copy of a first stream of digital content relating to the first sporting event via a first video communication channel; and

[16.2] B) transmitting at least one second instruction to the first viewer client device to cause the first viewer client device to receive the first online gaming information via a first event information communication channel between a first event socket of at least one socket server and the first viewer client device, [16.3] wherein the first event information communication channel is different than the first video communication channel.

Id. at 60:35–51.

21. [21.0³] A method, comprising:

[21.0] A) transmitting first instructions to a first client device that includes at least one first display to cause the at least one first display of the first client device to render a first video relating to a first sporting event and render online gaming information relating to the first sporting event, wherein the first instructions transmitted in A) cause the first client device to:

[21.1] receive, on a first communication channel, first digital content corresponding to the first video relating to the first sporting event;

² Herein we use Petitioner’s designations for the elements of claim 16. Pet. 38–41, 55–68; Ex. 1010, 4–5.

³ Herein we use Petitioner’s designations for the elements of claim 21. Pet. 24–31, 73–76; Ex. 1010, 5–6.

[21.2] render, on the at least one first display of the first client device, the first video relating to the first sporting event based on the first digital content received on the first communication channel;

[21.3] receive, on a second communication channel different from the first communication channel, second digital content corresponding to the online gaming information; and

[21.4] render, on the at least one first display of the first client device, the online gaming information based on the second digital content received on the second communication channel.

Id. at 61:24–47.

E. Evidence

Petitioner relies on the patent references summarized in the table below.

Name	Reference	Exhibit
Herzog	US 2015/0163379 A1, filed Dec. 11, 2013, published June 11, 2015	1015
Ellis	US 2014/0229992 A1, filed Apr. 22, 2014, published Aug. 14, 2014	1016
Spivey	US 2016/0036910 A1, filed Aug. 4, 2014, published Feb. 4, 2016	1017

Petitioner also relies on the Declaration of Stephen B. Wicker, Ph.D. (Ex. 1001) to support its contentions that the challenged claims are unpatentable. Patent Owner relies on the Declaration of Aviel Rubin, Ph.D. (Ex. 2001) in support of its contentions that Petitioner has not shown that the challenged claims are unpatentable.

F. Asserted Grounds

Petitioner asserts that the challenged claims of the '218 patent are unpatentable based on the following grounds summarized in the table below (Pet. 6):

Claim(s) Challenged	35 U.S.C. §⁴	References/Basis	Ground name
16–30	103	Ellis, Spivey	1
21, 22, 27, 28	102	Herzog	2A
25, 26, 30	103	Herzog, Ellis	2B
16–20, 23, 24, 29	103	Herzog, Spivey	2C

III. 35 U.S.C. § 325(d) ANALYSIS

Patent Owner argues that the Petition should be denied under 35 U.S.C. § 325(d) because the asserted references are the same as or cumulative of references previously considered by the Office. Prelim. Resp. 19–33; Prelim. Sur-Reply. Petitioner argues that discretionary denial under § 325(d) is not appropriate. Pet. 87–90; Prelim. Reply.

Under 35 U.S.C. § 325(d), the Board may exercise discretion to deny a petition that presents the same or substantially the same art or arguments as were previously presented to the Office. To evaluate arguments for discretionary denial under § 325(d), the Board uses a two-part framework:

⁴ The Leahy-Smith America Invents Act (“AIA”), Pub. L. No. 112-29, 125 Stat. 284 (2011), amended 35 U.S.C. § 103, effective March 16, 2013. Because the challenged claims of the '218 patent have an apparent effective filing date after March 16, 2013, the AIA version of § 103 applies. Ex. 1009, codes (22), (60), (63). Our determinations and findings herein would not change if the pre-AIA provisions applied.

- (1) whether the same or substantially the same art previously was presented to the Office or whether the same or substantially the same arguments previously were presented to the Office; and
- (2) if either condition of first part of the framework is satisfied, whether the petitioner has demonstrated that the Office erred in a manner material to the patentability of challenged claims. If a condition in the first part of the framework is satisfied and the petitioner fails to make a showing of material error, the Director generally will exercise discretion not to institute *inter partes* review.

Advanced Bionics, LLC v. MED-EL Elektromedizinische Geräte GmbH, IPR2019-01469, Paper 6 at 8–9 (PTAB Feb. 13, 2020) (precedential) (“*Advanced Bionics*”).

The *Becton, Dickinson* factors provide useful insight into how to apply the *Advanced Bionics* framework under 35 U.S.C. § 325(d). *Id.* at 9 (referencing *Becton, Dickinson & Co. v. B. Braun Melsungen AG*, IPR2017-01586, Paper 8, 17–18 (PTAB Dec. 15, 2017) (precedential as to § III.C.5, first paragraph) (“*Becton, Dickinson*”). *Becton, Dickinson* factors (a), (b), and (d) help to determine whether that the same or substantially the same art or arguments were not presented to the Office. *Advanced Bionics*, 10. These factors are: (a) the similarities and material differences between the asserted art and the prior art involved during examination; (b) the cumulative nature of the asserted art and the prior art evaluated during examination; and (d) the extent of the overlap between the arguments made during examination and the manner in which Petitioner relies on the prior art or Patent Owner distinguishes the prior art. *Becton, Dickinson*, 17–18.

A. Prosecution History

During the prosecution of the application that issued as the ’218 patent, an information disclosure statement (IDS) was submitted by the

applicant that identified a PCT Search Report and Written Opinion in PCT/US2018/033016 (“PCT Search Report”). *See* Ex. 1011,⁵ 178–185 (IDS), 204–231 (PCT Search Report).

In the PCT Search Report, US 2008/0062318 A1 (“Ellis-318, Ex. 2036”) is labeled as a document considered to be relevant, with a relevance marker “A,” identifying it as a “document defining the general state of the art which is not considered to be of particular relevance.” Ex. 1011, 207; Pet. 88; Prelim. Resp. 21. Petitioner and Patent Owner each state that the Ellis reference asserted in the Petition is a continuation application of Ellis-318. Pet. 6 n.4, 88; Prelim. Resp. 21; Prelim. Reply 1. We note that this does not appear to be the case, though the references are related insofar as each contains a claim of priority to the same two provisional applications. Ex. 1006, code (60); Ex. 2036, code (60). Patent Owner asserts that the two applications “share identical specifications and figures.” Prelim. Resp. 21–22; Prelim. Sur-reply 1; Ex. 1016; Ex. 2036 (Ellis-318).

Additionally, during the prosecution of the application that issued as the ’218 patent, the Examiner⁶ issued a non-final rejection indicating the allowability of the issued claims, while provisionally rejecting them on the basis of nonstatutory double patenting. Ex. 1011, 337–49. In this rejection,

⁵ Ex. 1011 is a certified file history for Application 17/141,631, which issued as the ’218 patent. *See* Ex. 1009, code (21). Patent Owner submitted Ex. 2035, which appears to be identical; we cite to Ex. 1011 for consistency.

⁶ Patent Owner makes certain arguments relating to the author of the PCT Search Report. *See, e.g.*, Prelim. Resp. 23 (referring to consideration “by the PCT Examiner”); Prelim. Sur-reply 1 (“*two* examiners considered Ellis-318”). For clarity, we note that our reference to “the Examiner” refers to examination at the USPTO.

the Examiner’s discussion included three references: US 2001/0001160 A1 (“Shoff,” Ex. 2037), US 2001/0039209 A1 (“DeWeese,” Ex. 2038), and US 2011/0083144 A1 (“Bocharov,” Ex. 2039). *Id.* at 341–48. The Examiner characterized Bocharov as “disclos[ing the] concept of streaming program content to [a] user’s device.” *Id.* at 341, 344, 346. The Examiner characterized DeWeese as “disclos[ing the] concept of streaming horse race program content and betting information to [a] user’s device.” *Id.* at 342, 345, 347. The Examiner characterized Shoff as “disclos[ing the] concept of providing the program information and its supplemental information to the user via two interface[s].” *Id.* at 343, 345, 347. Additionally, Bocharov was cited in the PCT Search Report with a relevance marker “X,” meaning “document of particular relevance,” and its disclosures were discussed extensively with reference to the pending claims in the PCT application. *Id.* at 207–29.

B. Advanced Bionics

Under the first part of the *Advanced Bionics* framework, previously presented art includes art listed on an IDS and “art made of record by the Examiner.” *Advanced Bionics*, 7–8.

We focus on issues relating to Spivey and Herzog, which we find to be dispositive.

1. Spivey

As discussed more extensively below, Sections IV.E and IV.H, Petitioner relies in two of the four asserted grounds on teachings from Spivey regarding Spivey’s message queue server device, topic queues, topic queue labels, and subscriptions by client devices to these queues, in combinations with Ellis for Ground 1 and with Herzog for Ground 2C. *See*,

e.g., Pet. 23–26, 29–34, 73–74, 76–79 (citing Ex. 1017 ¶¶ 27–28, 35, 36, 43, 46, 48, 49, 51–52, 61, 66, 74, 81–82, 84, 92, 96, Figs 4, 8, 9).

Patent Owner argues that because the PCT Search Report discussed Bocharov, the Examiner “considered the teaching in Bocharov regarding the use of servers to stream program content to user devices.” Prelim. Resp. 31. “Specifically, Bocharov disclosed the use of multiple generic servers to facilitate communication.” *Id.* (citing Ex. 2039 ¶ 17). Additionally, Patent Owner argues that Bocharov discloses that “[s]treaming media is multimedia that is constantly received by, and normally presented to, an end-user (using a client) while it is being delivered by a streaming provider (using a server).” Prelim. Resp. 30 (citing Ex. 2039 ¶¶ 2, 31); Prelim. Sur-reply 4. Patent Owner contends that in considering Bocharov, “the Examiner has already considered the disclosure of ‘control server’ and ‘socket server’ in the prior art in allowing the ’218 patent.” Prelim. Resp. 30.

However, we do not agree that the disclosures of Bocharov discussed in the PCT Search Report or referred to by the Examiner contain similar disclosures to those relied upon from Spivey by Petitioner. While Patent Owner correctly notes (Prelim. Sur-reply 4) that Bocharov is discussed extensively in the PCT Search Report, the PCT Search Report explicitly notes that Bocharov is not relied on for “event socket,” “socket server,” “event identifier,” among other related material, but rather explicitly relies on a different reference when discussing these elements of the claims at issue in the PCT application at the time. *See, e.g.*, Ex. 1011, 212, 214, 223, 224. Regardless of whether Bocharov teaches “the use of servers to stream program content to user devices” (Prelim. Resp. 31) or similar generic

disclosures, the specific disclosures of Spivey relied upon by Petitioner are, based on the present record, not present in Bocharov.

2. *Herzog*

As discussed more extensively below, Sections IV.F, IV.G, and IV.H, Petitioner relies in three of the four asserted grounds on disclosure from Herzog regarding Herzog's provision of video and data streams to a client over separate communication paths. *See, e.g.*, Pet 56–61, 77–78 (citing Ex. 1015 ¶¶ 12, 16, 19, 27, 45, 47–52, 67, 70, 80–81, 83, Figs. 1, 4, 6, 7).

Patent Owner argues that “the Examiner has already considered prior art disclosure of a ‘webserver’ in allowing the ’218 patent.” Prelim. Resp. 29–30 (citing Ex. 1011, 344); Prelim. Sur-reply 4–5. Patent Owner contends that Bocharov discloses a server providing streaming media to a client over the Internet. Prelim. Resp. 30 (citing Ex. 2039 ¶¶ 2, 17).

Again, we do not agree that the cited disclosures of Bocharov are similar to those relied upon from Herzog by Petitioner. The PCT Search Report explicitly notes that Bocharov is not relied on for “wherein the first client device receives the first chat information on a first chat/system event communication channel different than the first video communication channel and the first event information channel,” but rather relies on a different reference when discussing this element of a claim at issue in the PCT application at the time. Ex. 1011, 227 (relating to then-pending PCT Claim 50), 228 (relating to then-pending PCT Claim 52).

3. *Conclusion*

Thus, in considering *Becton Dickinson* factors (a), (b), and (d), we conclude that (a) there are material differences between the asserted art, specifically, Spivey and Herzog, and the prior art involved during

examination; (b) none of the referenced discussed by the parties are cumulative of the asserted art, and (d) to the extent Bocharov might teach or suggest certain elements of the challenged claims, there is no overlap between arguments considered during examination and the manner in which Petitioner relies on Spivey or Herzog in this proceeding.

For these reasons, we determine that the same or substantially the same art as involved in this proceeding was not previously presented to the Office, and thus, we do not proceed to part two of an *Advanced Bionics* evaluation and we do not exercise our discretion to deny the Petition under § 325(d).

IV. ANALYSIS

A. *Legal Standards*

To show that a claim is anticipated under 35 U.S.C. § 102, the challenging party must demonstrate that each and every claim element, arranged as recited in the claim, is found in a single prior art reference. *Net MoneyIN, Inc. v. VeriSign, Inc.*, 545 F.3d 1359, 1369 (Fed. Cir. 2008). The limitations may be present in the reference “either explicitly or inherently.” *In re Schreiber*, 128 F.3d 1473, 1477 (Fed. Cir. 1997). We consider prior art references “together with the knowledge of one of ordinary skill in the pertinent art.” *In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994) (citing *In re Samour*, 571 F.2d 559, 562 (CCPA 1978)).

A patent claim is unpatentable as obvious if the differences between the claimed invention and the prior art are such that the claimed invention, as a whole, would have been obvious before the effective filing date to a person having ordinary skill in the art. *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). The question of obviousness is resolved on the basis

of underlying factual determinations including: (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of ordinary skill in the art; and (4) when in evidence, objective evidence of nonobviousness, i.e., secondary considerations.

Graham v. John Deere Co., 383 U.S. 1, 17–18 (1966).

B. Level of Ordinary Skill in the Art

Petitioner asserts that a person of ordinary skill in the art

would have had at least a bachelor’s degree, or equivalent, in electrical engineering, computer engineering, computer science, or a related field or an equivalent number of years of working experience, and one to two years of experience in networking environments, including at least some experience with live-streaming network architecture.

Pet. 17–18 (citing Ex. 1001 ¶¶ 72–76). Petitioner additionally asserts that, “[a]dditional education or experience in related fields could compensate for deficits in the above qualifications.” *Id.* at 18.

Patent Owner asserts:

A person of ordinary skill in the art would have a bachelor’s degree in electrical engineering, computer engineering, computer science, or equivalent degree and, in addition, approximately two years of work experience with Internet video streaming, Internet communication, and related protocols.

Prelim. Resp. 8 (citing Ex. 2001 ¶ 96).

The parties have not addressed whether the differences in these definitions impact the unpatentability analysis before us. We preliminarily adopt Patent Owner’s formulation of the level of skill in the art, which is more specific and appears consistent with the specification and prior art presented, but on the present record we would reach the same determination under Petitioner’s formulation of the level of skill.

C. Claim Construction

We interpret the challenged claims

using the same claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. 282(b), including construing the claim in accordance with the ordinary and customary meaning of such claim as understood by one of ordinary skill in the art and the prosecution history pertaining to the patent.

37 C.F.R. § 42.100(b). Under that standard, we generally give claim terms their ordinary and customary meaning, as would be understood by a person of ordinary skill in the art at the time of the invention, in light of the language of the claims, the specification, and the prosecution history.

Phillips v. AWH Corp., 415 F.3d 1303, 1312–14 (Fed. Cir. 2005) (en banc).

1. “socket”/“event socket”

Claim 16 includes the term “event socket.” Ex. 1009, 60:35–51.

Petitioner argues that “a POSA would have understood a ‘socket’ to be a uniquely addressable communication endpoint on a server where first event information is provided to a VCD [viewer client device].” Pet. 32 (citing Ex. 1001 ¶ 189). Thus, Petitioner argues, an “event socket” is “a socket where information about one sporting event is provided to a VCD.” *Id.* at 32–33.

At this time, Petitioner’s proposed constructions of “socket” and “event socket” (Pet. 32–33) are not disputed by Patent Owner. Prelim. Resp. 8; *see id.* at 50–51 (using Petitioner’s proposed construction).

At this preliminary stage in the proceeding, we use Petitioner’s proposed construction for “socket” and “event socket.”

2. “online gaming information”

Claim 16 recites “first online gaming information germane to the first sporting event,” and claim 21 recites that “online gaming information relating to the first sporting event.” Ex. 1009, 60:35–51, 61:24–47.

Patent Owner argues that, due to the structure of the claim, “online gaming information” is a distinct subset of “event information.” Prelim. Resp. 55–56. Patent Owner additionally contends that such information would be “e.g., event information relevant to online gaming, such as odds, wins and losses, or other information relevant to placing bets.” *Id.* at 56 (citing Ex. 2001 ¶ 240). Patent Owner appears to contend that Petitioner’s citation of “sports score and game status information” (from Ellis) would not correspond to such “online gaming information.” *Id.* at 56–57 (citing Pet. 26). Patent Owner additionally contends, with reference to Herzog, that “lap number, car speed and acceleration” relating to a car race would not teach or suggest “online gaming information.” *Id.* at 58.

It does not appear that the ’218 patent defines or describes “online gaming information.” The closest references in the specification are two mentions of “game-related activities” that are said to include “online gaming, board games, chess matches, [and] role-playing games.” Ex. 1009, 4:31–32, 8:16–17. These references do not support Patent Owner’s assertion that “online gaming information” should be construed as requiring a relationship to placing bets. Dr. Rubin does not provide any evidence to support the opinion that online gaming information would be “information relevant to placing bets.” Ex. 2001 ¶ 240. However, even using Patent Owner’s definition of “online gaming information” as requiring such information to be “relevant to placing bets” (Prelim. Resp. 56), Petitioner establishes a reasonable likelihood of prevailing in its unpatentability

challenges, as we discuss in greater detail below. For purposes of this Decision, we apply Patent Owner’s construction.⁷

3. *Additional Claim Terms*

Petitioner states that “[t]he claim terms of the ’218 should be given their plain and ordinary meaning as understood by a person of skill in the art (‘POSA’).” Pet. 7. Petitioner does not propose an express construction for any other claim term. *See generally id.*

Patent Owner states “[e]xcept for the ‘event socket’ term for which Patent Owner applies Petitioner’s implied construction . . . , for purposes of this preliminary response, Patent Owner agrees that no terms require construction and construes all other terms consistent with their plain and ordinary meaning.” Prelim. Resp. 8.

We decline to provide further analysis or an express construction of any other claim term as doing so is not needed to resolve the dispute between the parties. *Realtime Data, LLC v. Iancu*, 912 F.3d 1368, 1375 (Fed. Cir. 2019) (“The Board is required to construe ‘only those terms . . . that are in controversy, and only to the extent necessary to resolve the controversy.’”) (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999)).

4. *Post-Institution Claim Construction Arguments*

The parties may provide additional arguments regarding the proper construction of the claim terms discussed above or other claim terms. To the

⁷ During the trial, the parties may wish to address whether this term is directed to the content of information and whether it should be accorded patentable weight. *See, e.g., C R Bard Inc. v. AngioDynamics, Inc.*, 979 F.3d 1372, 1381–82 (Fed. Cir. 2020) (how to determine whether information claimed for communicative content should be accorded patentable weight).

extent that the parties rely upon claim construction arguments during the course of trial, these arguments should be explicit and should appear in a clearly designated section of briefing. Such arguments should “point out the specific portions of the specification, prosecution history, and relevant extrinsic evidence” to be considered, with explanations of the relevancy of that evidence to the arguments presented. *See* CTPG, 44–49.

D. Overview of Asserted Prior Art

1. Ellis (Exhibit 1016)

Ellis is titled “Systems and Methods for Providing Enhanced Sports Watching Media Guidance,” and discloses systems and methods for accessing and displaying enhanced sports-related media content. Ex. 1016, codes (54), (57). Figure 1 of Ellis, reproduced below, illustrates an interactive media system. *Id.* ¶¶ 15, 39.

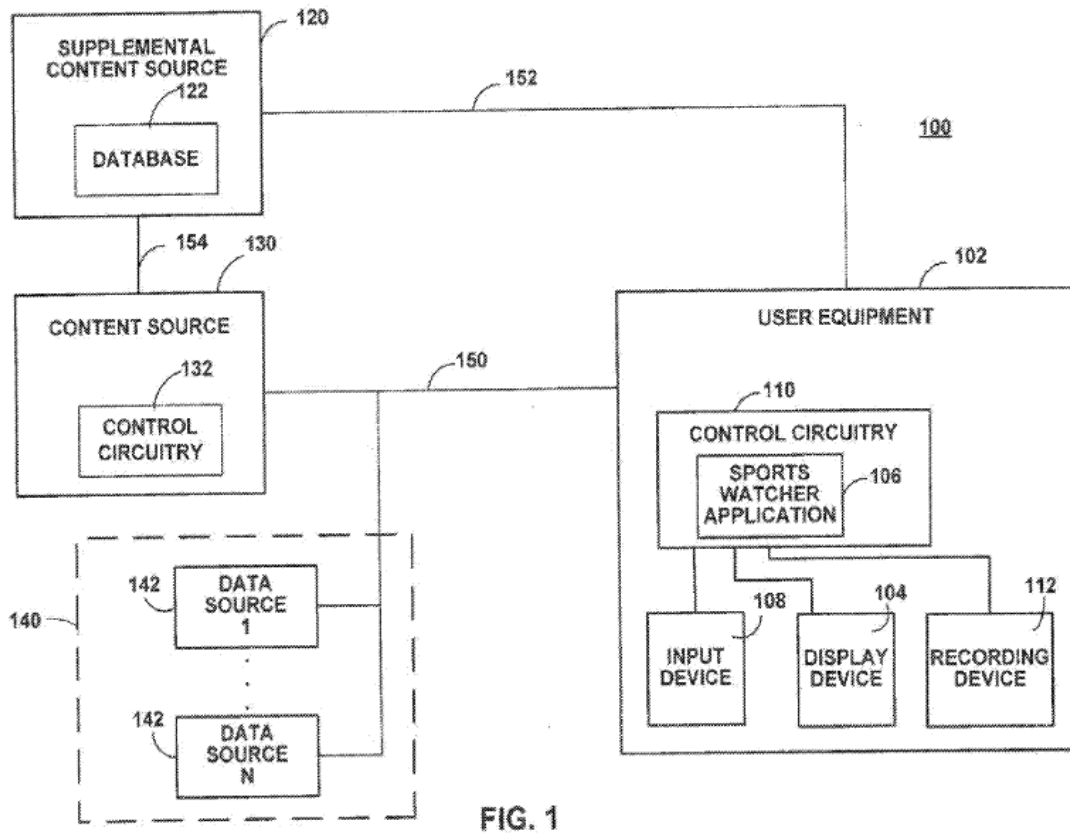


FIG. 1

Figure 1 is a block diagram illustrating interactive media system 100. *Id.* ¶¶ 15, 39.

Figure 1 shows interactive media system 100 including user equipment 102, content source 130, supplemental content source 120, and data sources 140. *Id.* ¶ 39. User equipment device 102 receives media content, such as video broadcast programming, from content source 130 via communication path 150. *Id.* ¶¶ 39–40, Fig. 1. User equipment device 102 also receives content, such as real-time sports scores and game summary information, from supplemental content source 120 via communication path 152. *Id.* ¶¶ 39, 41, Fig. 1. Data sources 140 provide data for applications running on user equipment 102. *Id.* ¶ 46.

2. *Spivey (Exhibit 1017)*

Spivey is titled “Techniques to Broadcast Live Event Data in Real-Time,” and discloses a system for broadcasting live event data in real-time. Ex. 1017, codes (54), (57). According to Spivey, its techniques “increase the speed at which live event data (e.g. sports scores and breaking news), are broadcast to mobile devices by using topic queues and open duplex communication connections, among other innovative techniques.” *Id.* ¶ 27. Figure 1 of Spivey is reproduced below. *Id.* ¶¶ 3, 34.

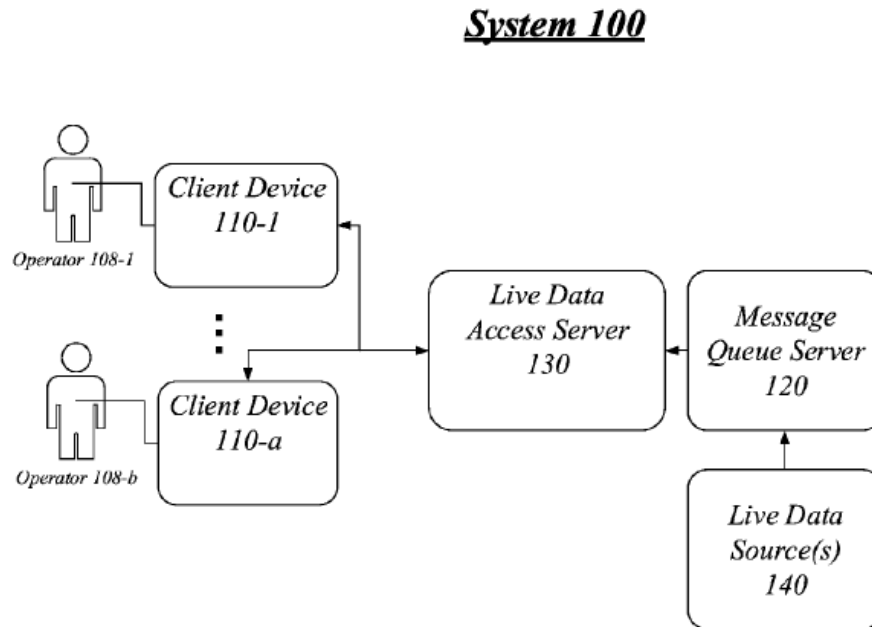


FIG. 1

Figure 1 illustrates system 100 for broadcasting live event data. *Id.* ¶¶ 3, 34.

Figure 1 shows system 100 including client devices 110-1 through 110-a, message queue server 120, and live data access server 130 coupled via one or more networks. *Id.* ¶ 34. Message queue server 120 receives live data from live data source(s) 140 and processes the live data so that it can be provided to client devices 110-1 through 110-a. *Id.* ¶¶ 35–37. Live data

access server 130 interfaces between message queue server 120 and client devices 110-1 and 110-a. *Id.* ¶ 38.

Figure 4 of Spivey, reproduced below, illustrates operating environment 400. *Id.* ¶¶ 6, 53.

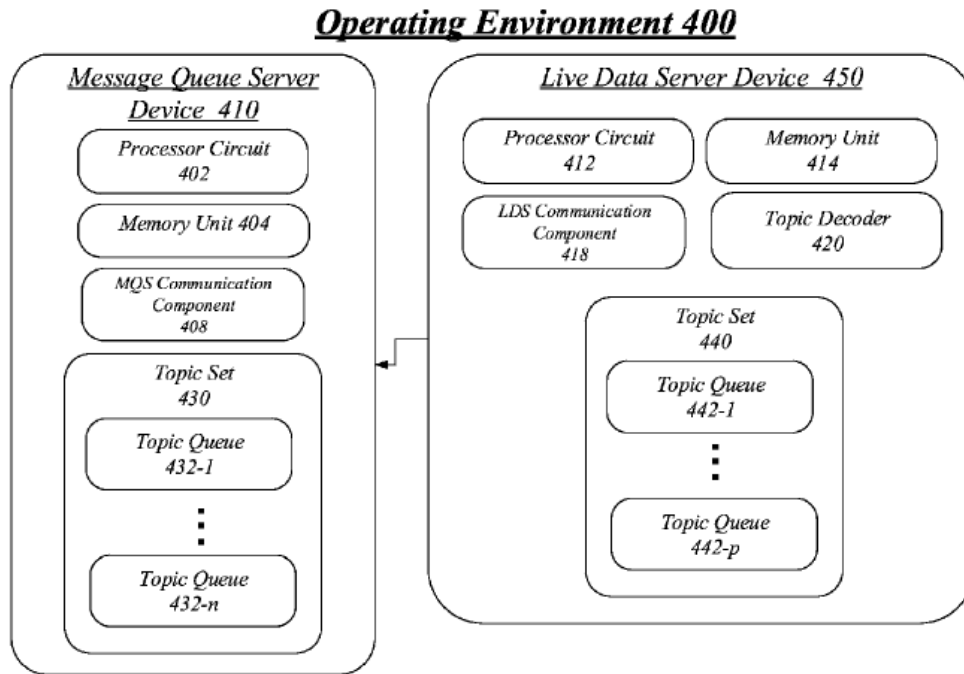


FIG. 4

Figure 4 illustrates operating environment 400. *Id.* ¶¶ 6, 53.

Figure 4 shows operating environment 400, in which message queue server 120 is implemented as message queue server device (“MQSD”) 410 and live data server device 450. *Id.* ¶ 53. Message queue server device 410 includes communication component 408, topic set 430, and topic queues 432. *Id.* ¶ 54. Live data server device 450 includes live data server communication component 418 that allows live data server device 450 to receive live data and transmit it to message queue server device 410. *Id.* ¶ 55. Live data server device 450 also includes topic decoder 420, topic set 440, and topic queues 442. *Id.* ¶ 56.

3. Herzog (Exhibit 1015)

Herzog is titled “Time Synchronization of Video and Data Inside a Mobile Device,” and discloses a mobile device including a processor configured to receive and format live video data, audio data, and meta-data for display on the mobile device, and synchronize selected meta-data with the video and audio for simultaneous display. Ex. 1015, codes (54), (57). Figure 4 of Herzog, reproduced below shows a system 40 that provides communications for mobile devices. *Id.* ¶¶ 9, 43.

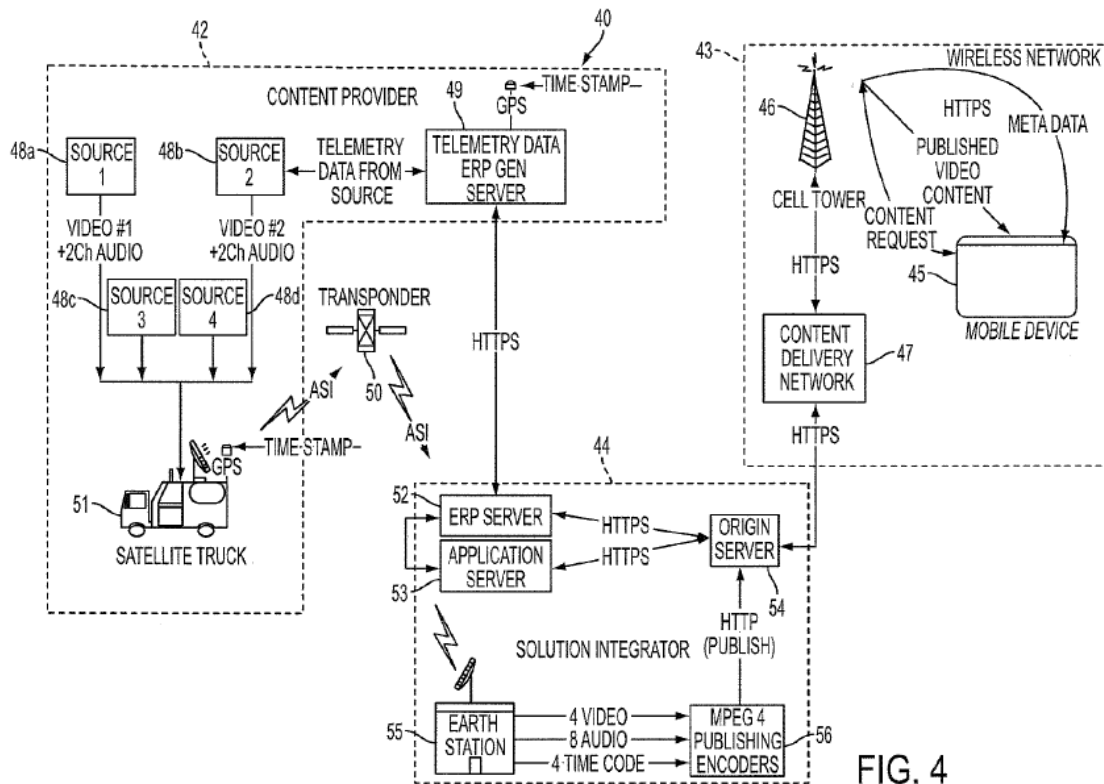


FIG. 4

Figure 4 shows system 40 that provides communications to exemplary mobile device 45. *Id.* ¶¶ 9, 43.

As shown in Figure 4, system 40 provides communications to mobile device 45 in wireless network 43 via content delivery network 47. *Id.* ¶ 43. System 40 includes content provider 42, which provides video and audio data of an event occurring in real time, along with meta-data. *Id.* ¶ 45.

Content provider 42 provides video/audio streams from imaging sources 48a–48d. *Id.* ¶ 46. Content provider 42 also includes an Enhanced Result Protocol (ERP) generator server 49 configured to receive meta-data from imaging sources 48a–48d. *Id.* ¶ 47. ERP generator server 49 extracts meta-data parameters that may be of interest to a user, formats the extracted meta-data into a Hypertext Transfer Protocol Secure (HTTPS) protocol, and transmits the formatted meta-data to solution integrator 44. *Id.* Solution integrator 44 transmits the video/audio stream and meta-data to content delivery network 47 for delivery to mobile device 45. *Id.* ¶¶ 48–51.

E. Asserted Obviousness over Ellis and Spivey (Ground 1)

Petitioner asserts that claims 16–30 are unpatentable as obvious over Ellis and Spivey. Pet. 23–55. Patent Owner disputes Petitioner’s showing. Prelim. Resp. 34–57.

1. Independent Claim 16 – Obviousness over Ellis and Spivey

a) Motivation to Combine

Petitioner’s proposed combination of the teachings of Ellis and Spivey involves implementing Ellis’s supplemental content source using Spivey’s server devices that use websocket connection technology. Pet. 24–26 (citing, *inter alia*, Ex. 1001 ¶¶ 106–111; Ex. 1016 ¶¶ 39, 41, Fig. 1; Ex. 1017, Fig. 4). In particular, Petitioner argues that a person of ordinary skill in the art would have implemented Ellis’s supplemental content source 120 with Spivey’s live data server device 450 and message queue server device 410, such that data would have been delivered using a websocket connection. *Id.* at 24–28 (citing, e.g., Ex. 1001 ¶¶ 106–115; Ex. 1016 ¶¶ 39–41, 156, Fig. 1; Ex. 1017 ¶¶ 28, 96, Fig. 4). Ellis describes that its supplemental content source 120 provides real-time data feeds with sports-

related information, such as sports scores. *See, e.g.*, Ex. 1016 ¶ 41.

Similarly, Spivey describes that its system including live data server device 450 and message queue server device 410 provides live event data, such as data about sporting events. *See, e.g.*, Ex. 1017 ¶ 28, Fig. 4.

Petitioner makes three arguments in support of its position that a person of ordinary skill in the art would have made its proposed combination. Pet. 24–28 (citing Ex. 1001 ¶¶ 106–115). First, Petitioner argues that its proposed combination would have been made to improve latency issues in Ellis’s system. *Id.* at 24–26. Second, Petitioner argues that Ellis and Spivey relate to the same subject matter and the references solve the same or similar problems. *Id.* at 27. Third, Petitioner argues that its proposed combination would have been obvious because it “would have required only the simple substitution of known elements to obtain predictable results.” *Id.* at 27–28. Petitioner takes the position that these same arguments support that a person of ordinary skill in the art would have had a reasonable expectation of success. *Id.* at 28.

Patent Owner argues that Petitioner has not shown that a person of ordinary skill in the art would have combined the teachings of Ellis and Spivey. Prelim. Resp. 35–45. First, Patent Owner argues that Petitioner’s proposed combination is inoperable and departs from the express teachings of Ellis because Petitioner’s proposed combination removes Ellis’s supplemental content source 120 having database 122 and replaces it with “Spivey’s database-less system.” *Id.* at 35–38. Second, Patent Owner argues Petitioner’s reasons for the combination do not “withstand scrutiny” in part because of differences in the references’ teachings and because Petitioner does not show a person of ordinary skill in the art would have had

a reasonable expectation of success. *Id.* at 38–43. Third, Patent Owner argues Petitioner relies on impermissible hindsight bias to “reconstruct the invention” from “cherry-picked” prior art teachings. *Id.* at 43–45.

For the reasons given below, we find that Petitioner’s arguments are supported by the evidence in the preliminary record before us and that Patent Owner’s arguments do not undermine Petitioner’s showing. For instance, Petitioner’s first argument, that its proposed combination would have been made to improve latency issues in Ellis’s system (Pet. 24–26), is supported by Spivey’s disclosure that its techniques “may reduce . . . delay [on the order of seconds (e.g., 30 to 45 seconds) or minutes] to an order of milliseconds (ms) (e.g., 100 ms) or less, providing a significant advantage over the conventional practices.” Ex. 1017 ¶ 28. Spivey also discloses pushing data “to the subscribed connected client devices substantially simultaneously with the message queue server receiving the topic entry from a live data source, e.g., with a time delay of 100 milliseconds or less,” which Spivey discloses is “at least two orders of magnitude shorter than conventional time periods of legacy devices.” *Id.* ¶ 96; *see also id.* at code (57) (disclosing pushing “the topic entry to a subscribed client device substantially simultaneously with the message queue server receiving the topic entry from a live data source”).⁸

⁸ Petitioner’s position is also supported by the testimony of Dr. Wicker that “[w]ebsockets protocol was an emerging technology that offered particular benefits for low-latency streaming when compared to the existing communication protocols” and that a person of ordinary skill in the art “would have appreciated the benefits associated with the websocket connection” described in Spivey. Ex. 1001 ¶ 110 (citing Ex. 1017 ¶¶ 43, 61, 74, 92; Ex. 1046, 46). The article cited by Dr. Wicker provides further

Petitioner's second and third arguments and its arguments relating to reasonable expectation of success (Pet. 27–28) also are supported by the evidence in the preliminary record showing the similarity between, and complementary nature of, the Ellis and Spivey disclosures of providing content delivery for real-time events quickly to multiple users. *See, e.g.*, Ex. 1016, code (57) (describing “[s]ystems and methods for enhanced sports-related media content access and display”), ¶ 39 (describing that in system 100 “[u]ser equipment device 102 receives content . . . from content source 120 and/or supplemental content source 120 over communications paths 150 and 152, respectively” and “[a]ny suitable number of users may have one or more user equipment devices, such as user equipment 102”), ¶ 40 (describing that “[c]ontent source 130 may be any suitable source of media content” such as the “Internet or network media/web server” and that “[m]edia content” includes “broadcast programming,” “news,” “newsgroups,” and “chat rooms”), ¶ 41 (describing that “[s]upplemental content source 130 may be any suitable content source configured to provide real-time sports scores and game summary information . . . [and] sports commentary” as well as other “sports-related information” via “a plurality of real-time data feeds”); Ex. 1017, code (57) (describing “[a]n apparatus to broadcast live event data in real-time” that receives “a topic entry from a message queue server” and pushes “the topic entry to a subscribed client device substantially simultaneously with the message queue server receiving

evidentiary support for Petitioner's position and Dr. Wicker's testimony. Ex. 1046, 46 (describing that the “WebSocket protocol enables full-duplex communication between a client and a remote host over a single TCP socket” and provides “three-to-one reduction in latency against half-duplex HTTP polling applications”).

the topic entry from a live data source”), ¶ 27 (describing techniques for broadcasting “media content in real-time” and that the “media content may comprise, for example, data from a live event (e.g., news event, a gaming event, sporting event, etc.)” and that “live event data (e.g., sports scores and breaking news)” also is broadcasted), ¶ 34 (describing “system 100 for broadcasting live data in real-time” that includes “client devices 110-1 through 110-*a*”).

Petitioner’s second and third arguments and its arguments relating to reasonable expectation of success (Pet. 27–28) also are supported by the evidence in the preliminary record showing that Ellis and Spivey both disclose that content is provided over the Internet. For instance, Ellis describes that “[c]ontent source 130 and supplemental content source 120 may be configured to transmit signals to user equipment 102 over any suitable communication paths 150 and 152” (Ex. 1016 ¶ 45) and that, in certain embodiments, content is delivered “on a particular network address (e.g., multicast address) on which an IP socket is currently joined.” Ex. 1016 ¶¶ 45, 74. Also, Spivey describes “[a]n apparatus to broadcast live event data in real-time” that receives “a topic entry from a message queue server” and pushes “the topic entry to a subscribed client device substantially simultaneously with the message queue server receiving the topic entry from a live data source” and that the subscribed client device receives data over “a websocket connection.” Ex. 1017, code (57), ¶¶ 43, 61, 74, 92; Ex. 1001 ¶ 110.

On the other hand, at this preliminary stage, we find that Patent Owner’s arguments (Prelim. Resp. 35–45) and Dr. Rubin’s cited testimony are inconsistent with certain evidence in the preliminary record that supports

Petitioner's position. For example, Patent Owner's first argument (Prelim. Resp. 35–38) and Dr. Rubin's related testimony (Ex. 2001 ¶¶ 164–165, 168, 185, 187–191, 194–195, 204, 213), that Petitioner's proposed combination is inoperable and departs from the express teachings of Ellis because Petitioner's proposed combination removes database 122 and replaces it with "Spivey's database-less system," is not consistent with evidence that Spivey discloses sources of data for transmission to client devices. For instance, Spivey discloses "data feeds" that are "generated by computing devices associated with a live event" and "data gathered by human observers of a live event and entered into an interface that communicates the gathered data." Ex. 1017 ¶ 37. Also, Spivey describes "broadcasting live data in real-time" (*id.* ¶ 34) and receiving "live data in the form of a topic entry," which may include "a score, a play, an error, an injury, a player-at-bat" when "the live event is a sporting event" (*id.* ¶¶ 47–48). Additionally, Ellis describes database 122 as optional stating that "sports-related information *may be* stored in database 122." Ex. 1016, Fig. 1, ¶ 42 (emphasis added).

Patent Owner also argues the proposed combination would be inoperable because Spivey's teachings "are not tied to video delivery" and Petitioner does not address "how immediately pushed data could somehow be throttled or gated in a manner to synchronize with any associated television programming." Prelim. Resp. 36–37. Patent Owner's argument (*id.*) and Dr. Rubin's related testimony (Ex. 2001 ¶¶ 164–165, 185, 187, 194–198, 205) are not consistent with evidence that Spivey describes its teachings as associated with broadcasting a live event. For example, Spivey's system 100 broadcasts "live event data in real-time" and includes "a subscription component . . . to receive a topic entry from a message queue

server, and to push the topic entry to a subscribed client device.” Ex. 1017, code (57), ¶ 31. Spivey also describes that its live data sources are “associated with a live event.” *Id.* ¶ 37; *see also id.* ¶ 48 (describing that the topic entry “may include any media information about at least one of a live event (e.g., news, game, sport, activity, and so forth)”). Additionally, claim 12 requires only “first event information germane to a first live sporting event” and, on the present record and preliminarily, we determine that claim 12 not recite that the first event information must be gated or synchronized with the first live sporting event; thus, this argument is not commensurate with the scope of claim 12.

On the present record, Patent Owner’s arguments relating to differences in the references’ teachings and its arguments that Petitioner does not show a person of ordinary skill in the art would have had a reasonable expectation of success (Prelim. Resp. 38–43), and Dr. Rubin’s testimony related to these arguments (Ex. 2001 ¶¶ 194–203, 206–215), appear to be based on incorrect characterizations of the evidence of record. For instance, Patent Owner argues that “Ellis and Spivey do not relate to the same subject matter Spivey delivers data —i.e., information; Ellis helps a viewer change a TV channel. Ellis therefore resides within a field that necessarily includes video delivery, unlike Spivey.” Prelim. Resp. 40. But these arguments, and arguments that Ellis pertains to “viewing and tuning” and that Spivey is not relevant to “how sports viewers commonly *watch* and interact with displayed sporting events” (Prelim. Resp. 41), as well as Dr. Rubin’s related testimony (Ex. 2001 ¶¶ 206–215), are based on only a subset of the teachings of both references, rather than the teachings of the references in their entirety. For example, Ellis describes providing real-

time data such as sports scores (*see, e.g.*, Ex. 1016 ¶ 41) and Spivey describes, for example, that its live data feeds are generated by computing devices associated with a live event (Ex. 1017 ¶ 37), as discussed above. We must consider the teachings of the references as a whole, from the perspective of an ordinarily skilled artisan. *See Sundance, Inc. v. DeMonte Fabricating Ltd.*, 550 F.3d 1356, 1361 n.3 (Fed. Cir. 2008) (“What a prior art reference discloses or teaches is determined from the perspective of one of ordinary skill in the art.”); *In re Hedges*, 783 F.2d 1038, 1041 (Fed. Cir. 1986) (noting that when evaluating claims for obviousness, “the prior art as a whole must be considered”).

Patent Owner’s remaining arguments that Petitioner relies on impermissible hindsight bias to “reconstruct the invention” from “cherry-picked” prior art teachings (Prelim. Resp. 43–45) and Dr. Rubin’s related testimony (Ex. 2001 ¶¶ 165–168, 207–210) are premised on many of the same arguments we find unpersuasive at this stage. As discussed above, Petitioner’s argument that its proposed combination would have been made to improve latency issues in Ellis’s system (Pet. 24–26) is supported by Spivey’s disclosures. Spivey describes, for example, that “the data payload of the topic entry may be pushed to the subscribed connected client devices substantially simultaneously with the message queue server receiving the topic entry from a live data source, e.g., with a time delay of 100 milliseconds or less.” Ex. 1017 ¶ 96. As shown in Figure 1 of Spivey, live data source(s) 140 is connected to client devices 110-1 through 110-a via message queue server 120 and live data access server 130. *Id.* at Fig. 1. Spivey describes that Figure 4 illustrates an embodiment of message queue server 120. *Id.* ¶ 53. Thus, based on the preliminary record before us at this

juncture, we find that Petitioner’s proposed substitution of message queue server device 410 and live data server device 450 into Ellis is consistent with Petitioner’s rationale to combine the teachings of Ellis and Spivey, which is to reduce latency.

We find based on the preliminary record before us that Petitioner provides sufficient rationale to combine the teachings of Ellis and Spivey for purposes of institution. We also find that Petitioner has shown sufficiently for purposes of institution that a person of ordinary skill in the art would have had a reasonable expectation of success.

b) Objective Indicia of Non-Obviousness

Patent Owner asserts that objective indicia of non-obviousness support its position that Petitioner has not shown a reasonable likelihood of unpatentability of the challenged claims. *See* Prelim. Resp. 70–77. Specifically, Patent Owner asserts long-felt need, industry praise, Petitioner’s praise and copying of the claimed invention, and commercial success support Patent Owner’s position.

To accord substantial weight to objective evidence of nonobviousness, the evidence must have a nexus to the claims. *Fox Factory, Inc. v. SRAM, LLC*, 944 F.3d 1366, 1373 (Fed. Cir. 2019). “A showing of nexus can be made in two ways: (1) via a presumption of nexus, or (2) via a showing that the evidence is a direct result of the unique characteristics of the claimed invention.” *Volvo Penta of the Americas, LLC v. Brunswick Corp.*, 81 F.4th 1202, 1210 (Fed. Cir. 2023). A patentee is entitled to a presumption of nexus “when the patentee shows that the asserted objective evidence is tied to a specific product and that product ‘embodies the claimed features, and is coextensive with them.’” *Fox Factory*, 944 F.3d at 1373 (quoting *Polaris*

Indus., Inc. v. Arctic Cat, Inc., 882 F.3d 1056, 1072 (Fed. Cir. 2018)). As discussed below, Patent Owner has not shown nexus between the challenged claims and its asserted objective indicia of non-obviousness.

Starting with Patent Owner’s arguments regarding praise and copying, we find that Patent Owner’s arguments are conclusory based on the record at this stage of the proceeding. Patent Owner does not discuss a specific product or show that it embodies and is coextensive with the claimed features, nor does Patent Owner show that the evidence is a direct result of unique characteristics of the claimed invention. Although Patent Owner alleges copying, Patent Owner does not name a particular product of Petitioner’s that allegedly copied Patent Owner’s products. *See* Prelim. Resp. 74–75. Rather, Patent Owner merely cites to a 38-page infringement claim chart from the related parallel proceeding. *Id.* at 74 (citing Ex. 2017). Patent Owner is reminded that “[a]rguments must not be incorporated by reference from one document into another document.” 37 C.F.R. § 42.6(a)(3). At this stage, we decline to “play archeologist with the record” in order to understand Patent Owner’s arguments, which “is precisely what the rule against incorporation by reference was intended to prevent.” *Gen. Access Sols., Ltd. v. Sprint Spectrum L.P.*, 811 F. App’x 654, 657–58 (Fed. Cir. 2020). Patent Owner also relies on short e-mails including one regarding Patent Owner’s work “around sports broadcast with social commentators, graphics and real time chat.” Prelim. Resp. 74 (quoting Ex. 2016). Based on the current record, we find that these emails alone do not support sufficiently that Petitioner had access to a patented product. For these reasons, and based on the present record, we accord Patent Owner’s evidence of copying little to no weight.

Patent Owner's arguments regarding nexus are limited to conclusory assertions and incorrect, over-simplified characterizations of the claimed technology. Prelim. Resp. 70–77. These arguments fail to establish an adequate nexus to the claims of the '218 patent.

Patent Owner's evidence does not establish *long felt* and *unsolved* need, describing “[b]roadcast latency [being] recognized by stream platforms around [the] mid-2010s” (Ex. 2001 ¶ 73) and citing an article from 2015 (Ex. 2034), while the '218 patent claims priority to provisional applications filed in 2016 and 2017. Prelim. Resp. 71; Ex. 1009, code (60). Certain of Patent Owner's industry praise evidence does not appear to be disinterested. For example, Patent Owner quotes former NBA commissioner David Stern, but the articles cited describe Mr. Stern as “one of SportsCastr.Live's high-profile partners” and “a founding investor.” Ex. 2007, 2; Ex. 2008, 1; Prelim. Resp. 73. Commercial success would “usually [be] shown by significant sales in a relevant market.” *Ormco Corp. v. Align Technology, Inc.*, 463 F.3d 1299, 1311–12 (Fed. Cir. 2006). However, while Patent Owner asserts commercial success, it cites no relevant evidence of sales, but relies mainly on evidence that Patent Owner advertised a product to show commercial success. Prelim. Resp. 76 (citing Ex. 2010; Ex. 2011).

Accordingly, on the present record, we are not persuaded that Patent Owner has demonstrated a nexus between the challenged claims and the asserted objective evidence of non-obviousness, and we additionally find certain of Patent Owner's evidence of objective indicia of non-obviousness to be flawed or incompletely developed.

For the above reasons, we do not accord substantial weight to Patent Owner's objective evidence at this stage.

c) 16.0 - "A method for controlling a first viewer client device to display a video relating to a first sporting event together with first online gaming information germane to the first sporting event, the method comprising"

Petitioner argues that, to the extent the preamble is limiting, Ellis discloses the preamble. Pet. 28–29 (citing Ex. 1016 ¶ 41, Fig. 1; Ex. 1001 ¶ 167).⁹ Petitioner relies on Ellis's supplemental content source (SCS), which provides "'plurality of real-time data feeds," which can include "sports score and game status information" and "sports commentary." *Id.* at 28 (quoting Ex. 1016 ¶ 41).

Patent Owner disputes two aspects of Petitioner's showing with respect to the preamble of claim 16 in this ground. Prelim. Resp. 55–57. First, Patent Owner contends that Ellis's "sports score and game status information" does not teach or suggest "online gaming information" because it is not relevant to placing bets. Prelim. Resp. 56. Using Patent Owner's definition of "online gaming information" as requiring such information to be "relevant to placing bets" (Prelim. Resp. 56), on the present record, "sports score and game status information" would be such "information relevant to placing bets." *See* Ex. 1016 ¶ 116 ("Wager types may include final score, half-time score, . . . or any other sports-specific wager type."); Ex. 1001 ¶¶ 88, 93 (Ellis "discloses an interactive system for watching

⁹ As we determine, preliminarily and for the purposes of institution, that Petitioner sufficiently shows that the preamble would have been obvious in view of Ellis, we need not decide at this stage whether the preamble is limiting.

sports content, including ‘wagering and fantasy league support’” and Ellis’s content provided includes “spread and wagering data” among other “sports-related information.”) (citing/quoting Ex. 1016, code (57), ¶ 41); *see* Pet. 42–43, 47.

Patent Owner additionally argues that the cited “sports score and game status information” provided by Ellis’s supplemental content source from its database is not present in the combination proposed by Petitioner, because the supplemental content source is replaced by Spivey’s live data server device and message queue server device” and because “Petitioner does not even allege that the functionality of Ellis’s supplemental content source would be maintained in the modified combination.” Prelim. Resp. 56–57. However, the Petition proposes “*implementing* Ellis’s [supplemental content source] using Spivey’s [live data server device] and adding Spivey’s [message queue server device]” resulting in a combined system that would “*upgrade* the supplemental content data delivery system.” Pet. 25–26 (emphases added). Thus, Patent Owner’s argument that the supplemental content server is merely replaced by these elements of Spivey is not commensurate with the Petitioner’s proposed combination in which Ellis’s supplemental content server is implemented by the Spivey elements. Additionally, as discussed above, Spivey’s “data feeds” and “live data” (Ex. 1017 ¶¶ 34, 37, 48) and the fact that Ellis’s database is optional (Ex. 1016 ¶ 42) teach or suggest, on the present record and preliminarily, that the information would still be available in the asserted combination.

Petitioner’s contentions are supported by the cited portions of Ellis. After consideration of the contentions and the evidence of record at this

preliminary stage, we find that Petitioner has shown sufficiently that Ellis teaches the preamble of claim 16 for purposes of institution.

d) 16.1 - “A) transmitting at least one first instruction to the first viewer client device to cause the first viewer client device to receive a first copy of a first stream of digital content relating to the first sporting event via a first video communication channel”

Petitioner asserts that this claim limitation is taught or suggested by Spivey’s disclosures relating to the subscription of a client device to a topic queue using a MSQD’s address, and by Ellis’s disclosure of an interactive sports watcher application. Pet. 29–30 (citing Ex. 1016 ¶¶ 44, 51–52; Ex. 1017 ¶¶ 82, 96, 104, Fig. 8; Ex. 1001 ¶¶ 184–186).

Petitioner’s contentions are supported by the cited portions of Ellis and Spivey. Spivey discloses the use of an address to allow access to a particular live data access server containing digital content. Ex. 1017 ¶¶ 81–82, Fig. 8. Ellis discloses its sports watcher application may be transmitted to user equipment, and that the instructions of sports watcher applications are used in control circuitry 110, which controls tuners, encoders and decoders, and input/output circuitry. Ex. 1006 ¶ 44.

Other than arguments addressed above, Patent Owner presents no additional arguments with respect to these limitations. On this preliminary record, we find that Petitioner has shown sufficiently for purposes of institution that Ellis and Spivey teaches or suggests limitation 16.1 of claim 16.

e) 16.2 - “B) transmitting at least one second instruction to the first viewer client device to cause the first viewer client device to receive the first online gaming information via a first event information communication channel between a first event socket of at least one socket server and the first viewer client device”

For Limitation 16.2, Petitioner relies again on the topic label text strings of Spivey, used to connect and subscribe to topic queues, in a similar manner as described above with respect to Limitation 16.1. *See* Pet. 33–34. Petitioner additionally contends that, in Spivey, the client devices may request and participate in a websocket connection, and one of ordinary skill would have understood this to be a connection between a client and a socket server. *Id.* at 32, 33–34 (citing Ex. 1017, code (57), ¶¶ 43, 48, 49, 51–52, 61, 66, 81–84, 96; Ex. 1001 ¶¶ 187–191).

Patent Owner responds, with respect to the recited “event socket” and “socket server,” with three arguments. Prelim. Resp. 45–55. First, Patent Owner argues “Spivey does not disclose a ‘websocket connection’ or channel between its message queue server and client devices”; “[r]ather, Spivey discloses a websocket connection between a live data access server and client devices,” which Petitioner omitted without sufficient explanation. *Id.* at 46–49 (citing, *inter alia*, Ex. 1017 ¶¶ 36, 43, 51, 53, 57, 61, 74, Figs. 1, 4; Ex. 2001 ¶¶ 221–229). Second, Patent Owner argues “Petitioner fails to show that Spivey’s topic queues are ‘event sockets’ under Petitioner’s (and its [declarant’s]) implied definition, which requires them to be ‘uniquely addressable communication endpoint[s].’” *Id.* at 49–55 (citing Ex. 1017 ¶¶ 38–39, 46–54, 71–82, 128, 131, Figs. 7, 9; Ex. 2001 ¶¶ 129–131, 173–177, 231–236, 238–239). Third, Patent Owner argues “Petitioner fails to

articulate sufficient motivation to combine and modify the prior art.” *Id.* at 55 (emphasis omitted).

We start with Patent Owner’s first argument that “Spivey does not disclose a ‘websocket connection’ or channel between its message queue server and client devices”; “[r]ather, Spivey discloses a websocket connection between a live data access server and client devices,” which Petitioner omitted without sufficient explanation. *Id.* at 46–49 (citing, *inter alia*, Ex. 1017 ¶¶ 36, 43, 51, 53, 57, 61, 74, Figs. 1, 4; Ex. 2001 ¶¶ 221–229). Dr. Wicker testifies that a person of ordinary skill in the art “would have understood Spivey to disclose a direct connection between the client devices and MQSD” and that a person of ordinary skill in the art “would have used this implementation because reducing the amount of server transfers would reduce latency, which is Spivey’s main purpose.” Ex. 1001 ¶ 175 n.3.

In contrast, Dr. Rubin testifies

Spivey does not, as Petitioner alleges, disclose a ‘websocket connection’ or channel between the message queue server (comprising the message queue server device and live data server device) and a viewer client device, nor would a POSITA have been motivated to modify the prior art teachings to achieve such a channel.

Ex. 2001 ¶ 219.

After weighing the testimony of Dr. Wicker and Dr. Rubin, based on the preliminary record, we find Dr. Wicker’s testimony to be supported by the evidence of record and we, therefore, give Dr. Wicker’s testimony more weight. Although we agree with Patent Owner and the testimony of Dr. Rubin to the extent that we find Spivey discloses live data access server 130 connected to client devices 110-1 through 110-a in certain embodiments

(*see, e.g.*, Ex. 1017, Fig. 1), at this stage of the proceeding, we also find that Spivey teaches or at least suggests a direct connection between message queue server device 410 and client devices 110-1 through 110-a.

For example, based on the preliminary record, we find that Petitioner’s arguments and Dr. Wicker’s testimony are supported by Spivey’s disclosure that message queue server device 410 “may be substantially similar” to message queue server device 310 (Ex. 1017 ¶ 54 (quoted at Pet. 59)) and “MQS communication component 308 [included in message queue server device 310] may . . . receive requests to subscribe to topics in a topic set 330, and may push data from topic queues 332-1, 332-*n* to the subscribers of the topics corresponding to those topic queues.” *Id.* ¶ 46 (emphasis added) (cited at Pet. 30–31 n.7). Spivey also discloses that message queue server device 410 “may be implemented as a RABBITMQ[] server,” which is an “open source message broker software.” *Id.* ¶ 58.¹⁰ Spivey describes in that embodiment, topic queues in message queue server device 410 “push the messages *to clients that have subscribed to the topic queues.*” *Id.* (emphasis added).

Spivey discloses that its message queue server “may comprise one or more electronic devices capable of receiving, processing, and sending information *for the system 100.*” *Id.* ¶ 35 (emphasis added) (cited in Pet. 20, 34). Spivey further describes that message queue server 120 processes “live data to provide live data quickly *to the client devices 110-1 through 110-a.*” *Id.* ¶ 36 (cited in Pet. 29 n.7). Spivey also discloses clients and servers communicating information with each other over, “a packet-switched

¹⁰ Paragraph 58 describes message queue server device 410 shown in Figure 4, which is relied on in the Petition. *See, e.g.*, Pet. 25–26.

network (e.g., public networks such as the Internet).” *Id.* ¶ 178 (cited in Pet. 41).

Based on the preliminary record, we also find that Petitioner’s arguments and Dr. Wicker’s testimony that live data access server 130 is optional are supported by Spivey. For example, Spivey discloses that “system 100 *may* include a live data access server 130.” *Id.* ¶ 38 (emphasis added) (cited in Pet. 29 n.7). Live data access server is described as “a public interface.” *Id.* Furthermore, based on the preliminary record, we find that Spivey’s disclosure that “[i]n some embodiments,” message queue server is not accessible to clients “directly” because it is, for example, “behind a firewall” sufficiently supports that Spivey teaches or at least suggests that the firewall is optional. *Id.* ¶ 36 (cited in Pet. 30–31 n.7).

Regarding Patent Owner’s argument that “it is unclear how Spivey’s message queue server device 410 could include the claimed event socket” (Prelim. Resp. 49–50), we find, based on the preliminary record, that Petitioner’s argument and Dr. Wicker’s testimony are supported by Spivey’s disclosure of user interface 900 presented by live data app 210 residing on client device 200 that “allow[s] an operator 108 of a client device 110 to view and select topics of live data to subscribe to,” which may comprise, for example, “the topics available from a message queue server.” Ex. 1017 ¶ 84, Figs. 2, 9.

We also disagree with Patent Owner’s argument that Spivey’s live data access server was “omitted” without sufficient explanation. Prelim. Resp. 46. Dr. Wicker testifies in his opinion a person of ordinary skill in the art “would have used this implementation [the implementation of system 100 with a direct connection between client devices and MQSD] because

reducing the amount of server transfers would reduce latency, which is Spivey’s main purpose.” Ex. 1001 ¶ 175 n.3. We find this explanation sufficient for purposes of institution.

We next turn to Patent Owner’s second argument that “Petitioner fails to show that Spivey’s topic queues are ‘*event sockets*’ under Petitioner’s (and its [declarant’s]) implied definition, which requires them to be ‘uniquely addressable communication endpoints.’” Prelim. Resp. 49–55 (citing Ex. 1017 ¶¶ 38–39, 46–54, 71–82, 128, 131, Figs. 7, 9; Ex. 2001 ¶¶ 129–131, 173–177, 231–236, 238–239). As discussed above with respect to claim construction (§ IV.C.1), Petitioner argues that “a POSA would have understood a ‘socket’ to be a uniquely addressable communication endpoint on a server where first event information is provided to a VCD.” Pet. 32 (citing Ex. 1001 ¶ 189). Patent Owner states with respect to the term “event socket” that it “applies Petitioner’s implied construction.” Prelim. Resp. 8. At this stage of the proceeding, therefore, Petitioner’s proposed construction of “event socket” (Pet. 32–33) is not disputed by Patent Owner (Prelim. Resp. 8) and we use that construction in our analysis.

Patent Owner argues that a person of ordinary skill in the art “would have understood that Spivey’s ‘topic queue’ is merely an organization of data, such as a database table, that includes information about a particular topic” and that “Spivey nowhere discloses or suggests that the topic queues are ‘uniquely addressable’ or ‘communication endpoints.’” Prelim. Resp. 50 (citing Ex. 2001 ¶¶ 231–236). Dr. Rubin testifies that a person of ordinary skill in the art “would not consider such a database, message queue, or any other internal data structure by themselves to be a ‘uniquely addressable communication endpoint[]’ because, as disclosed in Spivey, the queues

themselves lack an address through which they can communicate at all.”

Ex. 2001 ¶ 232. Dr. Rubin also testifies that “[t]he only potential ‘communication endpoint’ Spivey discloses as being ‘uniquely addressable’ is the live data access server.” *Id.* ¶ 233.

Dr. Wicker testifies as follows:

Topic queues have a corresponding “topic label” which is used to identify a topic queue. *Id.* ¶49. “A topic label may be, for example” a “text string such as gamecenter.nfl.ravenssteelers.” *Id.* ¶66.

Client devices use these topic label text strings to connect and subscribe to MQSD’s topic queues. First, client devices “request a live data connection” with the MQSD by “select[ing] or enter[ing] the address or connection information to a particular” MQSD. *See id.* ¶¶81-82. This “address may resemble a uniform resource locator (URL).” *Id.* ¶82. Second, as shown in Figure 9, client devices can use the topic labels to select “the topics available from [the MQSD] in a topic selection list” and “subscribe to” those topic queues *Id.* ¶¶83-84, Fig. 9.

Ex. 1001 ¶¶ 171–172.

Based on the preliminary record, we find that Petitioner’s arguments and Dr. Wicker’s testimony are supported by Spivey’s disclosures that an “address may resemble a uniform resource locator (URL)” and that user interface 900 “allow[s] an operator 108 of a client device 110 to view and select . . . topics available from a message queue server.” Ex. 1017 ¶¶ 82, 84, Fig. 9. Based on the preliminary record, we find that Dr. Rubin’s testimony is limited to addressing live data access server 130 and does not address sufficiently Spivey’s teachings as a whole understood from the perspective of an ordinarily skilled artisan. *See Sundance*, 550 F.3d at 1361 n.3 (“What a prior art reference discloses or teaches is determined from the perspective of one of ordinary skill in the art.”); *Hedges*, 783 F.2d at 1041

(noting that when evaluating claims for obviousness, “the prior art as a whole must be considered”). We, therefore, give Dr. Rubin’s testimony less weight than Dr. Wicker’s testimony at this preliminary stage.

We now turn to Patent Owner’s third argument that “Petitioner fails to articulate sufficient motivation to combine and modify the prior art.” *Id.* at 55 (emphasis omitted). Patent Owner repeats or refers to its arguments that we address above with respect to Petitioner’s reasoning to combine. *Compare* Prelim. Resp. 55, *with id.* at 35–45. For the reasons discussed above, we find based on the preliminary record before us that Patent Owner’s arguments do not undermine Petitioner’s showing. *See* § IV.E.1.a.

In summary, with respect to limitation 16.2, after consideration of the arguments and evidence of both parties, we find that Petitioner’s contentions are supported by the cited portions of Ellis and Spivey and that Patent Owner’s arguments do not undermine Petitioner’s showing. Based on the record at this preliminary stage, therefore, we find that Petitioner has shown sufficiently that the combination of Ellis and Spivey teaches limitation 16.2 for purposes of institution. Also, we find that Petitioner provides sufficient rationale to combine the teachings of Ellis and Spivey for purposes of institution. *See* § IV.E.1.a.

f) 16.3 - “wherein the first event information communication channel is different than the first video communication channel”

Petitioner argues that limitation 16.3 is taught in the Spivey/Ellis combination, in Ellis’s teaching of providing broadcast programming over one communication path, and the game summary and other information from the SCS over a separate communication path. Pet. 34–35 (citing Ex. 1016 ¶¶ 39–41, Fig. 4; Ex. 1001 ¶ 192).

Other than arguments addressed above, Patent Owner presents no additional arguments with respect to these limitations. On this preliminary record, we find that Petitioner has shown sufficiently for purposes of institution that Ellis and Spivey teaches or suggests limitation 16.3 of claim 16. *See* Ex. 1016, Fig. 4; Ex. 1001 ¶ 192.

g) Conclusion – Claim 16

After consideration of the arguments and the evidence of record, we determine that Petitioner has shown sufficiently, for purposes of institution, that the combination of Ellis and Spivey teaches or suggests all recitations in claim 16. Also, we find that Petitioner provides sufficient rationale to combine the teachings of Ellis and Spivey for purposes of institution. *See* § IV.E.1.a.

Based on the record at this preliminary stage, we conclude that Petitioner has demonstrated a reasonable likelihood that it would prevail in showing that claim 16 is unpatentable under 35 U.S.C. § 103 as obvious over Ellis and Spivey.

2. Independent Claim 21– Obviousness over Ellis and Spivey

Petitioner asserts that claim 21 is unpatentable as obvious over Ellis and Spivey. Pet. 42–45. For many of the limitations of claim 21, Petitioner asserts substantial similarity with recitations of claim 16, and relies on the same or similar arguments as those addressed above. With respect to limitation 21.0, Petitioner additionally argues that Ellis discloses transmitting instructions to a video client device that cause the display to render a sports programming video screen. *Id.* at 42–43 (citing, *inter alia*, Ex. 1016 ¶ 93, Fig. 6). Petitioner additionally asserts that related game-

specific information may be displayed on the same display screen. *Id.* at 43 (citing Ex. 1016 ¶¶ 93, 98). Petitioner asserts limitation 21.0 is taught by these teachings, and relies on them for similar recitations in limitations 21.1, 21.2, and 21.4. *Id.* at 44–45. Petitioner additionally argues that the additional requirements of limitation 21.2 and 2.3, regarding the first and second communication channels and receipt of content on these channels with reference to or similarly to the arguments discussed with respect to claim limitation 16.3 of claim 16, *supra* Section IV.E.1.f. *Id.* at 44.

We have reviewed Petitioner’s assertions and the evidence in support thereof for claim 21. Patent Owner does not separately challenge Petitioner’s analysis for this claim.

For the reasons discussed above and with respect to claim 16, based on the record at this preliminary stage, we conclude that Petitioner has demonstrated a reasonable likelihood that it would prevail in showing that claim 21 is unpatentable under 35 U.S.C. § 103 as obvious over Ellis and Spivey.

3. *Dependent Claims 17–20 and 22–30 – Obviousness over Ellis and Spivey*

Claims 17–20 depend, directly or indirectly, from claim 16, and claims 22–30 from claim 21. Petitioner provides a detailed analysis in support of its position that the combination of Ellis and Spivey teaches or suggests the limitations in dependent claims 17–20 and 22–30. Pet. 35–42, 45–55.

We have reviewed Petitioner’s assertions and the evidence in support thereof. Patent Owner does not separately challenge Petitioner’s analysis for the dependent claims. Based on the record at this preliminary stage, we conclude that Petitioner has demonstrated a reasonable likelihood that it

would prevail in showing that claims 17–20 and 22–30 are unpatentable under 35 U.S.C. § 103 as obvious over Ellis and Spivey.

F. Asserted Anticipation by Herzog (Ground 2A)

Petitioner asserts that claims 21–30 are unpatentable as anticipated by Herzog. Pet. 56–64. Patent Owner disputes Petitioner’s showing. Prelim. Resp. 57–60.

1. Independent Claim 21 – Anticipation by Herzog

Petitioner asserts that Herzog discloses each limitation of claim 21, in its video player display including videos and meta-data, with a user requesting this data, and with the video and meta-data information provided over separate communication paths. Pet. 56–61 (citing Ex. 1015 ¶¶ 3, 12, 27, 45, 47–51, 80–81, 83, Figs. 1, 4, 6, 7; Ex. 1001 ¶¶ 250–253). Patent Owner argues that Herzog does not disclose “online gaming information.”

As Petitioner argues, Herzog’s device renders on a video player (“display of the first client device”) live event video (“first video”) and metadata related to the video (“first digital content corresponding to the first video”). Ex. 1015 ¶ 12, Fig. 7 (cited at Pet. 56). Herzog’s client device receives this content after making a user video request. *Id.* at Fig. 6; *see id.* ¶ 70 (describing cited Fig. 6). Petitioner additionally provides evidence, uncontroverted at this time, that one of ordinary skill would have understood that transmitting instructions would be inherent in the connection made by a client device prior to a live stream. Pet. 58 (citing Ex. 1001 ¶ 253). Herzog discloses that video content is received via an HTTP Live Streaming (HLS) channel, while meta-data is received via HTTPS formatted signals, in two separate paths; additionally the source for each of these types of data is different. Ex. 1015, Fig. 5; *see id.* ¶¶ 61–63 (describing cited Fig. 5).

Patent Owner argues that Herzog’s meta-data does not disclose “online gaming information.” *Id.* at 57–60. However, on the present record and for the purposes of institution, telemetry data relating to the performance of cars and drivers in a race is encompassed in “online gaming information” under Patent Owner’s definition (*see* Pet. 58; Ex. 1001 ¶ 252; Ex. 1015 ¶ 45 (“parameters regarding the status of each car and driver in the race”).

Based on the record at this preliminary stage, we conclude that Petitioner has demonstrated a reasonable likelihood that it would prevail in showing that claim 21 is unpatentable under 35 U.S.C. § 102 as anticipated by Herzog.

2. *Dependent Claims 22, 27, and 28 – Anticipation by Spivey*

Petitioner provides a detailed analysis in support of its position that Spivey discloses claims 22, 27, and 28. Pet. 61–64.

We have reviewed Petitioner’s assertions and the evidence in support thereof. Patent Owner does not separately challenge Petitioner’s analysis for these dependent claims. Based on the record at this preliminary stage, we conclude that Petitioner has demonstrated a reasonable likelihood that it would prevail in showing that claims 22, 27, and 28 are unpatentable under 35 U.S.C. § 102 as anticipated by Herzog.

G. *Asserted Obviousness of Claims 25, 26, and 30 over Herzog and Ellis (Ground 2B)*

Petitioner asserts that claims 25, 26, and 30 are unpatentable as obvious over Herzog and Ellis. Pet. 64–73. Patent Owner relies on arguments addressed above to dispute Petitioner’s showing. Prelim. Resp. 60.

We have reviewed Petitioner's assertions and the evidence in support thereof. Patent Owner does not separately challenge Petitioner's analysis for these dependent claims. Based on the record at this preliminary stage, we conclude that Petitioner has demonstrated a reasonable likelihood that it would prevail in showing that claims 25, 26, and 30 are unpatentable under 35 U.S.C. § 103 as obvious over Herzog and Ellis.

H. Asserted Obviousness of Claims 16–20, 23, 24, and 29 over Herzog and Spivey (Ground 2C)

Petitioner asserts that claims 16–20, 23, 24, and 29 are unpatentable over Herzog and Spivey. Pet. 73–85. Patent Owner disputes Petitioner's showing. Prelim. Resp. 60–70.

1. Independent Claim 16 – Obviousness over Herzog and Spivey (Ground 2C)

a) Motivation to Combine

Petitioner proposes a modification of Herzog in which Spivey's MSQD is incorporated into Herzog's origin server. Pet. 73–74.

Petitioner makes arguments in support of its position that a person of ordinary skill in the art would have combined Herzog and Spivey, which are very similar to Petitioner's arguments made in support of its proposed combination of Ellis and Spivey. *Compare* Pet. 73–76, *with id.* at 26–28; *id.* at 74 (“A POSA would have been motivated to combine Herzog with Spivey for many of the same reasons that a POSA would have been motivated to combine Ellis with Spivey.”). For example, Petitioner argues that its proposed combination would have improved latency issues in Herzog's system. *Id.* at 73. Petitioner also argues that Herzog and Spivey relate to the same subject matter, the references solve the same or similar problems, and Spivey provides a complementary solution to Herzog. *Id.* at 74–75.

Petitioner argues that a person of ordinary skill in the art would have had a reasonable expectation of success for the same reasons. *Id.* at 75.

Patent Owner makes three arguments in support of its position that Petitioner has not shown that a person of ordinary skill in the art would have made Petitioner's proposed combination. Prelim. Resp. 61–69. First, Patent Owner argues that Petitioner's proposed combination is inoperable and departs from the express teachings of Herzog. *Id.* at 61–64. Second, Patent Owner argues Petitioner's reasons do not “withstand scrutiny” in part because of differences in the reference teachings and because Petitioner does not show a person of ordinary skill in the art would have had a reasonable expectation of success. *Id.* at 64–67. Third, Patent Owner argues Petitioner relies on impermissible hindsight bias to “reconstruct the invention.” *Id.* at 67–69.

We start with Petitioner's argument that its proposed combination would have been made to improve latency issues in Herzog's system. Pet. 73. Petitioner's argument is supported by the same disclosures in Spivey that were discussed with respect to Ground 1. Patent Owner argues that Petitioner's proposed combination is inoperable and departs from the express teachings of Herzog because Herzog “needs the projected latency period to perform synchronization between audio/video data and meta-data.” Prelim. Resp. 63–64 (citing Ex. 1015 ¶¶ 74, 82; Ex. 2001 ¶¶ 282–286). Herzog describes that “live MPEG encoders may reach a latency that is greater than 32 seconds,” “total latency in the video/audio data stream may be greater than 63 seconds,” and “[t]he metadata, on the other hand, includes a latency that is less than a total of 2 seconds.” Ex. 1015 ¶ 82.

Regarding Patent Owner’s argument that Petitioner’s proposed combination is inoperable, based on the record before us, we find that Petitioner has shown sufficiently that its proposed combination is operable. Petitioner’s proposed combination incorporates Spivey’s technology that improves latency. *See, e.g.*, Ex. 1017 ¶¶ 27–28 (cited at Pet. 73). Patent Owner’s argument and Dr. Rubin’s supporting testimony are based on improved latency causing inoperability, but Herzog teaches compensating for different types of data having different latencies. Ex. 1015 ¶ 82. Even to the extent that the resulting combination would have required processing a faster meta-data stream, it is well-settled that a preferred combination or device is not required. *See, e.g., Novartis Pharm. Corp. v. West-Ward Pharm. Int’l Ltd.*, 923 F.3d 1051, 1059 (Fed. Cir. 2019) (“[O]ur case law does not require that a particular combination must be the preferred, or the most desirable, combination described in the prior art in order to provide motivation for the current invention.”); *PAR Pharm., Inc. v. TWI Pharms., Inc.*, 773 F.3d 1186, 1197–98 (Fed. Cir. 2014) (holding that it is not necessary to show that a combination is “the best option, only that it be a *suitable* option”). Additionally, claim 16 requires only “first online gaming information germane to the first sporting event” and, preliminarily and on the present record, does not require that the first event information must be synchronized with the first live sporting event.

Relying on the testimony of Dr. Rubin, Patent Owner also argues that Petitioner’s argument does not withstand scrutiny because “faster Herzog data . . . would not solve any video latency problem in Herzog because Herzog does not have a latency problem.” Prelim. Resp. 65 (citing, e.g., Ex. 2001 ¶¶ 288–290). Petitioner’s argument and Dr. Wicker’s testimony

rely on Spivey’s disclosures to support Petitioner’s argument that Herzog has latency issues. Pet. 73–74; Ex. 1001 ¶ 127 (citing Ex. 1017 ¶¶ 27–28). Spivey describes that “[a]s technology allows users to receive such data away from desktop computers, the demand for live event data *in real time* on mobile devices has increased.” Ex. 1017 ¶ 2 (emphasis added). Spivey describes that its technology reduces delay, “providing *a significant advantage over the conventional practices*.” *Id.* ¶ 28 (emphasis added). On the present record, and for the purposes of institution, we find that Petitioner’s argument of motivation to achieve reduced latency is supported sufficiently for purposes of institution based on Spivey’s disclosure of user “demand” for “live event data in real time” and that Spivey’s technology would have been understood to provide “*a significant advantage over the conventional practices*.” *Id.* ¶¶ 2, 28 (emphasis added).

Additionally, on the present record, upon consideration of Petitioner’s argument and Dr. Wicker’s testimony, as well as Patent Owner’s argument and Dr. Rubin’s testimony, we find Petitioner has the better argument based on the preliminary record. We do not agree with Patent Owner’s argument and Dr. Rubin’s testimony that an alleged need to synchronize meta-data would undermine Petitioner’s proposed combination. Herzog teaches synchronizing a faster meta-data stream. Ex. 1015 ¶ 82. Also, claim 16 does not recite expressly that the first event information must be synchronized with the first live sporting event.

Patent Owner’s arguments and Dr. Rubin’s testimony that Petitioner’s reasons to combine Herzog and Spivey do not “withstand scrutiny” in part because of differences in the reference teachings (Prelim. Resp. 64–67) rely on characterizations of the references that appear to be contradicted by the

reference teachings at this stage of the proceeding. Like Ellis and Spivey, Herzog provides content delivery for real-time events quickly to multiple users over the Internet. *See, e.g.*, Ex. 1015 ¶ 49 (describing publishing “video imagery, related audio and meta-data that are received from the content provider 42 onto the content delivery network 47 for presentation to users/consumers of the content via mobile devices such as device 45”), ¶ 51 (describing that an “Internet server provider (ISP)” may transfer data to local content delivery network 47), Figs. 1, 4, 7. Patent Owner’s arguments and Dr. Rubin’s testimony do not take into account the teachings of the references as a whole, from the perspective of an ordinarily skilled artisan. *See Sundance*, 550 F.3d at 1361 n.3; *Hedges*, 783 F.2d at 1041.

Patent Owner’s arguments that Petitioner relies on impermissible hindsight bias to “reconstruct the invention” (Prelim. Resp. 67–69) and Dr. Rubin’s related testimony rely on an incorrect characterization of the Petition and the evidence in the preliminary record. As discussed above, Petitioner’s arguments that a person of ordinary skill in the art would have made its proposed combination are sufficient for purposes of institution.

We find based on the preliminary record before us that Petitioner provides sufficient rationale to combine the teachings of Herzog and Spivey for purposes of institution. We also find that Petitioner has shown sufficiently for purposes of institution that a person of ordinary skill in the art would have had a reasonable expectation of success.

b) Objective Indicia of Non-Obviousness

Additionally, we do not accord substantial weight to Patent Owner’s arguments relating to objective indicia of non-obviousness for the same reasons given with respect to Ground 1. *See* § IV.E.1.b.

c) Teachings of Herzog and Spivey

For each limitation of claim 16 other than limitation 16.2, Petitioner relies on the disclosures of Herzog, as discussed above with reference to Ground 2A. For limitation 16.2 of claim 16, Petitioner asserts that in the Herzog/Spivey combination, the websocket of Spivey would teach client devices requesting a websocket connection. Pet. 77 (citing Ex. 1017 ¶¶ 35, 43, 61, 179); *see id.* at 78–79 (discussing the establishing of an internet connection using a URL and text string identifying a “uniquely addressable communication endpoint” on the MQSD; citing Ex. 1017 ¶¶ 81, 82, 179 and Ex. 1001 ¶ 304). Petitioner argues that the separate communication channels would be taught by Spivey’s disclosure that the video and meta-data do not follow the same path of transmission *Id.* at 77–78 (citing Ex. 1017 ¶¶ 47–51; Ex. 1001 ¶ 303).

In addition to Patent Owner’s motivation to combine arguments, addressed above, Patent Owner asserts the same arguments regarding Spivey’s “event socket” addressed with respect to Ground 1 and regarding Herzog’s teachings relating to “online gaming information” addressed with respect to ground 2A. *Id.* at 70.

On the present record and for the purposes of institution, Spivey’s teachings regarding a two-way connection requested by a user and the use of a topic label for a topic queue teach or suggest the subject matter of limitation 16.2 in a Herzog/Spivey combination.

We find, on the present record, that Petitioner’s contentions as summarized above sufficiently show that each element of claim 16 is taught or suggested by Petitioner’s proposed combination of Herzog and Spivey, in which Spivey’s MSQD is incorporated into Herzog’s origin server.

d) Conclusion—Claim 16 (Ground 2C)

After consideration of the arguments and the evidence of record, we determine that Petitioner has shown sufficiently, for purposes of institution, that the combination of Herzog and Spivey teaches or suggests all recitations in claim 16, and that Petitioner provides sufficient rationale to combine the teachings of Herzog and Spivey.

Based on the record at this preliminary stage, we conclude that Petitioner has demonstrated a reasonable likelihood that it would prevail in showing that claim 1 is unpatentable under 35 U.S.C. § 103 as obvious over Herzog and Spivey.

2. Dependent Claims 17–20, 23, 24, and 29 – Obviousness over Herzog and Spivey (Ground 2C)

Petitioner asserts that claims 17–20, 23, 24, and 29 are unpatentable as obvious over Herzog and Spivey, and provides a detailed analysis in support of its position that the combination of Herzog and Spivey teaches or suggests the limitations in these dependent claims. Pet. 79–75.

We have reviewed Petitioner’s assertions and the evidence in support thereof. Patent Owner raises no new arguments regarding these assertions. Prelim. Resp. 70. Based on the record at this preliminary stage, we conclude that Petitioner has demonstrated a reasonable likelihood that it would prevail in showing that claims 17–20, 23, 24, and 29 are unpatentable under 35 U.S.C. § 103 as obvious over Herzog and Spivey.

V. CONCLUSION

For the foregoing reasons, we determine that Petitioner has demonstrated that there is a reasonable likelihood that it would prevail in proving the unpatentability of at least one of the challenged claims of the ’218 patent. We thus institute an *inter partes* review of all of the challenged

claims of the '218 patent on all grounds asserted in the Petition. *See* 37 C.F.R. § 42.108(a).

Any findings or conclusions in this Decision are made only for the purposes of institution and are not dispositive of any issue. We have not made a final determination with respect to the patentability of any challenged claim. Our final determination will be based on the record as fully developed during trial, including any evidence or argument timely presented by the parties under our Rules.

VI. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that *inter partes* review of claims 16–30 of the '218 patent is hereby instituted on all grounds stated in the Petition; and

FURTHER ORDERED that pursuant to 35 U.S.C. § 314(c) and 37 C.F.R. § 42.4, notice is hereby given of the institution of a trial; the trial will commence on the entry date of this decision.

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