

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

HULU, LLC,
Petitioner,

v.

SITO MOBILE R&D IP, LLC and SITO MOBILE, LTD.,
Patent Owner.

IPR2021-00206
Patent 9,135,636 B2

Before JONI Y. CHANG, THOMAS L. GIANNETTI, and
KEVIN W. CHERRY, *Administrative Patent Judges*.

GIANNETTI, *Administrative Patent Judge*.

JUDGMENT
Final Written Decision
Determining All Challenged Claims Unpatentable
35 U.S.C. § 318(a)

I. INTRODUCTION

Hulu, LLC (“Petitioner”) filed a Petition requesting *inter partes* review of claims 1–3, 10, 11, 14, 34, 35, 37, 39, 43, and 47–50 (“the challenged claims”) of U.S. Patent No. 9,135,636 B2 (Ex. 1001, “the ’636 patent”). Paper 2 (“Pet.”), 1. SITO Mobile R&D IP, LLC and SITO Mobile Ltd. (collectively, “Patent Owner”) filed a Preliminary Response (Paper 6, “Prelim. Resp.”). On May 10, 2021, we instituted *inter partes* review as to all challenged claims for all grounds of unpatentability asserted in the Petition. Paper 11 (“Inst. Dec.”).

After institution, Patent Owner filed a Response (Paper 20, “PO Resp.”) and a Sur-reply (Paper 24, “Sur-reply”). Petitioner filed a Reply (Paper 23, “Reply”). An oral hearing was held on February 8, 2022, and a transcript has been entered into the record as Paper 29 (“Hearing Tr.”).

This Final Written Decision is entered pursuant to 35 U.S.C. § 318(a). For the reasons that follow, Petitioner has demonstrated by a preponderance of the evidence that claims 1–3, 10, 11, 14, 34, 35, 37, 39, 43, and 47–50 of the ’636 patent are unpatentable.

II. PRELIMINARY MATTERS

A. Related Matter

The parties indicate that the ’636 patent is involved in *SITO Mobile R&D IPI, LLC and SITO Mobile, Ltd. v. Hulu, LLC*, Case No. 6:20-cv-00472-ADA (W.D. Tex. 2020). Pet. 75; Paper 5, 1.

B. Real Parties-in-Interest

Petitioner identifies Hulu, LLC as the real party-in-interest. Pet. 75. Patent Owner identifies SITO Mobile R&D IP, LLC and SITO Mobile, Ltd. as the real parties-in-interest. Paper 5, 1.

C. The '636 Patent

The '636 patent is titled “System and Method for Routing Media.” Ex. 1001, (54). The patent “is related to the fields of management and administration of media streaming.” *Id.* at 1:36–37. According to the '636 patent, the demand for digital media streaming services was increasing because digital media streaming can be used to create enhanced consumer and business services. *Id.* at 1:48–52.

Figure 1 is reproduced below.

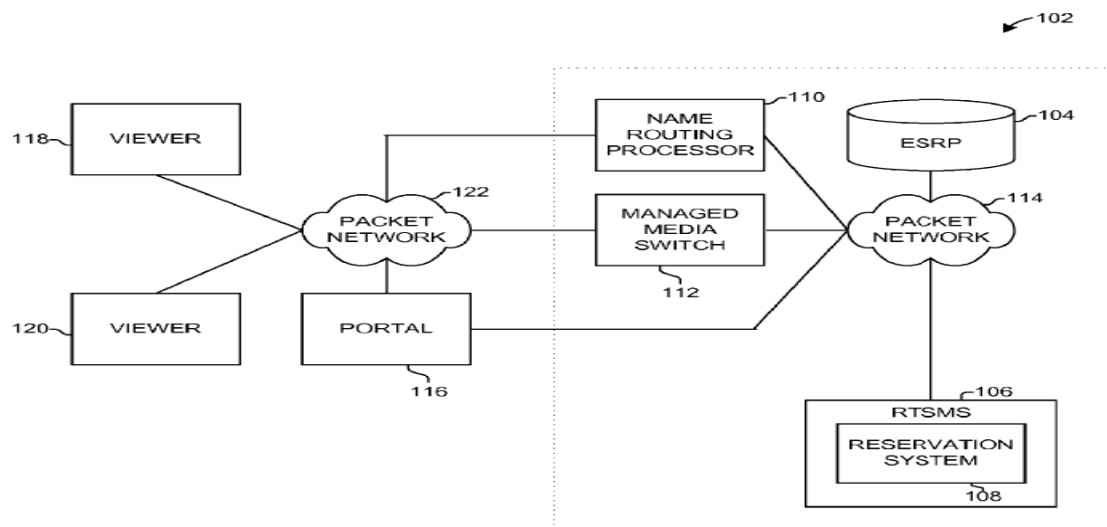


Figure 1 depicts an exemplary embodiment of a streaming system disclosed in the '636 patent. *Id.* at 4:55–56. Streaming system 102 comprises enhanced service routing processor (ESRP) 104, real time switch

management system (RTSMS) 106, reservation system 108, name routing processor (NRP) 110, and managed media switch (MMS) 112. *Id.* at 4:55–62. Each of these communicates through packet network 114. *Id.* at 4:62–63. Portal 116 communicates with reservation system 108 of RTSMS 106 via packet network 114, and one or more viewers 118 and 120 may communicate with NRP 110, MMS 112, or portal 116 via packet network 122. *Id.* at 4:63–67.

The streaming system process flow begins when a viewer sends a request for media to the RTSMS. *Id.* at 9:61–67. The RTSMS then builds a “play script” that is sent to the viewer, builds a reservation that is sent to the selected NRP, and generates a reservation for network resources (e.g., MMS) for streaming the media. *Id.* at 10:6–26. The viewer uses the play script to request media, e.g., by using information in the play script to send a media locator request to the NRP for each clip. *Id.* at 13:19–14:2.

D. Illustrative Claim

Of the challenged claims, claims 1 and 34 are independent. Claims 2, 3, 10, 11, and 14 depend from claim 1, and claims 35, 37, 39, 43, and 47–50 depend from claim 34. Claim 1 is illustrative:¹

1. A method comprising:

[1.a] receiving, by at least one computing device via a communication network, a request for media from a communication device capable of using instructions received from the at least one computing device to obtain at least one

¹ Reference numbers added by Petitioner appear in brackets.

portion of the requested media using at least one resource other than the at least one computing device;

[1.b] generating, by the at least one computing device, at least one play script comprising:

[1.b.1] (i) at least one identification of the at least one portion of the requested media;

[1.b.2] (ii) a reservation identification associated with the request for media,

[1.b.3] (iii) at least one universal resource locator (URL) associated with the at least one identification of the at least one portion of the requested media, the at least one URL including at least one identification of the at least one resource other than the at least one computing device available to facilitate streaming of at least one of the at least one portion of the requested media, and

[1.b.4] (iv) one or more instructions for use by the communication device together with the at least one URL and the reservation identification to enable the communication device to obtain the at least one portion of the requested media; and

[1.c] transmitting, by the at least one computing device to the communication device, the at least one play script to enable the communication device to obtain the at least one portion of the requested media via the communication network using the at least one resource other than the at least one computing device.

Ex. 1001, 50:52–51:17.

E. Prior Art and Other Evidence

Petitioner relies upon the references listed below (Pet. 2):

Name	Reference	Date	Exhibit No.
Eyal	U.S. Patent No. 6,389,467 B1	May 14, 2002	1005

Name	Reference	Date	Exhibit No.
Wiser	U.S. Patent No. 6,385,596 B1	May 7, 2002	1006
Madison	U.S. Patent Pub. No. 2004/0015703A1	Jan. 22, 2004	1007
Holtz	U.S. Patent No. 6,760,916 B2	Jul. 6, 2004	1008
Chang	U.S. Patent No. 6,715,126 B1	Mar. 30, 2004	1009

Petitioner also relies on a Declaration of Dr. Henry Houh. Ex. 1003 (“Houh Decl.”). Patent Owner relies on a Declaration of Michael Adams. Ex. 2012 (“Adams Decl.”). The parties have submitted deposition transcripts for these witnesses.²

F. Asserted Grounds of Unpatentability

Petitioner asserts the following grounds of unpatentability (Pet. 2):

Claim(s) Challenged	35 U.S.C. §	Reference(s)/Basis
1–3, 10, 11, 14, 34, 35, 37, 43, 47–50 ³	103(a) ⁴	Eyal, Wiser

² Ex. 1081 (“Adams Dep.”); Ex. 2019 (“Houh Dep.”).

³ Petitioner includes claim 39 in this ground (Pet. 2, 16), but does not provide an analysis for that claim. We assume this inclusion of claim 39 in this ground is an error, and therefore we do not consider claim 39 in this ground.

⁴ For purposes of this Decision, we assume the claims at issue have an effective filing date prior to March 16, 2013, the effective date of the relevant statutory amendments in the Leahy-Smith America Invents Act,

Claim(s) Challenged	35 U.S.C. §	Reference(s)/Basis
39	103(a)	Eyal, Wiser, Chang
1, 2, 11, 14, 34, 35, 37, 39, 43, 47, 49	103(a)	Madison, Holtz

III. CLAIM CONSTRUCTION

In an *inter partes* review, we construe a patent claim “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).” 37 C.F.R. § 42.100(b) (2020). Under this standard, the words of a claim generally are given their “ordinary and customary meaning,” which is the meaning the term would have to a person of ordinary skill at the time of the invention, in the context of the entire patent including the specification. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–13 (Fed. Cir. 2005) (en banc).

In light of the arguments and supporting evidence presented by the parties, we find that it is necessary to construe only the claim terms identified below. *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (noting that “we need only construe 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))).

Pub. L. No. 112-29, 125 Stat. 284 (2011) (“AIA”), and we apply the pre-AIA versions of 35 U.S.C. §103.

A. “at least one portion of the requested media”

Claim element 1.a recites the step of:

receiving, by at least one computing device via a communication network, *a request for media* from at least one communication device capable of using instructions received from the at least one computing device to obtain *at least one portion of the requested media* using at least one resource other than the at least one computing device;

Ex. 1001, 50:53–58 (emphases added). Claim 34 contains similar language. *Id.* at 54:10–12.

Patent Owner asserts that the challenged claims require “streaming requested media in portions.” *See, e.g.*, PO Resp. 10–12, 35–38. Patent Owner’s argument implicitly construes the claim term “at least one portion of the requested media” to exclude the entirety of the “requested media” or to require that the “requested media” be broken up into portions. *Id.*; Sur-reply 2–5, 11–13.

Patent Owner made similar arguments in CBM2020-00028, involving U.S. Patent No. 8,825,887 (“the ’887 patent”). The claims of that patent include the same term referring to “at least one portion,” and the ’887 patent shares its written description with the ’636 patent. In our Final Written Decision in CBM2020-00028 (Paper 33, 9–13), we found that the plain and ordinary meaning of this term encompasses one or more portions of the “requested media,” as well as the entirety of the “requested media.” CBM2020-00028, Paper 33 at 10–11. We declined to adopt Patent Owner’s implicit claim construction because it improperly imports extraneous limitations into the claims and excludes a preferred embodiment. *Id.* at 11–

13. We rely further on the fact that the same embodiment of the '887 patent excluded by Patent Owner's implicit construction in CBM202-00028 is disclosed in the '636 patent. Ex. 1001, 13:49–14:2. In that embodiment, the viewer sends a request for each media clip (the “requested media”) to a “computing device,” and each media clip is received in its entirety, not broken up or received one portion at a time, as Patent Owner alleges. *Id.*

Therefore, for the reasons stated above and in the Final Written Decision for CBM2020-00028 (Paper 33, 9–13), which we incorporate in this decision, we decline to adopt Patent Owner's implicit claim construction for this term in this proceeding.

B. “instructions”

Claim element 1.b.4 recites a “play script” comprising, among other things: “one or more *instructions* for use by the communication device . . . to enable the communication device *to obtain the at least one portion* of the requested media.” Ex. 1001, 51:6–10 (emphasis added). Claim 34 contains similar language. *Id.* at 54:20–24.

Neither party has proposed explicitly a construction for “instructions.” However, Patent Owner's arguments attempt implicitly to exclude instructions relating to media format, media sequencing, or advertisement insertion from the plain meaning of the term. PO Resp. 40–43; Sur-reply 17–18. As an example of Patent Owner's attempt to limit this term, Patent Owner would exclude instructions (metadata) relating to how the media is displayed and the order in which the media is obtained and displayed. *See*

PO Resp. 42–43.

We do not agree with the limitations Patent Owner places on this term. Apart from being unsupported by the claim language, Patent Owner’s restrictions are inconsistent with the ’636 patent specification, which nowhere limits the term as Patent Owner proposes. The specification refers to “special instructions, such as special *media sequencing instructions*, late binding media instructions, and/or special routing instructions.” Ex. 1001, 8:29–32 (emphasis added). The specification thus characterizes sequencing of media as “instructions.”

Nor do the claims support Patent Owner. Consistent with the specification, and contrary to Patent Owner’s argument, the claims characterize sequencing as “instructions.” Claim 43 depends from claim 34, which includes the same “instructions” limitation as claim 1, quoted *supra*. *See id.* at 54:20–24. Claim 43 describes the “instructions” referred to in claim 34 (which are the same as those described in claim 1) as including: “at least one of a media format, a media language, a *media sequence*, and an advertisement insertion.” *Id.* at 55:16–20 (emphasis added).

The Federal Circuit consistently has held that “dependent claims can supply additional context for construing the scope of the independent claims associated with those dependent claims,” and that “[a]n independent claim impliedly embraces more subject matter than its narrower dependent claim.” *Intamin, Ltd. v. Magnetar Techs. Corp.*, 483 F.3d 1328, 1335 (Fed. Cir. 2007) (citing *Phillips*, 415 F.3d at 1314); *see also Innova/Pure Water, Inc. v. Safari Water Filtration Sys. Inc.*, 381 F.3d 111, 1123 (Fed. Cir. 2004)

(“dependent claims are typically narrower”). Most recently, the Court reminded us that “[b]y definition, an independent claim is broader than a claim that depends from it, so if a dependent claim reads on a particular embodiment of the claimed invention, the corresponding independent claim must cover that embodiment as well.” *Littelfuse, Inc. v. Mersen USA EP Corp.*, No. 2021-2013, slip op. at 7 (Fed. Cir. April 4, 2022) (citing *Baxalta Inc. v. Genentech, Inc.*, 972 F.3d 1341, 1346 (Fed. Cir. 2020) (“The district court’s construction [of the independent claim] which excludes these explicitly claimed embodiments [in the dependent claims] is inconsistent with the plain language of the claims.”)).

Patent Owner does not dispute that claim 43’s recitation of “the one or more instructions” refers back to claim 34’s “one or more instructions” in a play script for use by the communication device to obtain the requested media and other media. Sur-reply 17–18. Patent Owner admits also that the metadata in Eyal “are of similar types to the instructions recited in claim 43.” *Id.* at 17. Instead, Patent Owner focuses its argument on the alleged failure of Petitioner to show “using instructions, a URL and a reservation identification, together, to obtain media is obvious.” *Id.* at 18. We do not agree with this argument that for the reasons discussed in Section IV.C.5.b.iv, *infra*.

Patent Owner also focuses its argument on the alleged failure of Eyal to show URLs and instructions that are separate. Sur-reply 17. Patent Owner asserts “the claims require instructions separate from the URL.” *Id.* Petitioner disputes this, citing claim 1. Reply 17. We do not agree with

Patent Owner’s argument that the claims require separate instructions from the URL. The Federal Circuit has explained that a claim element should not be construed narrowly to require a separate and distinct component, when the claim or specification indicates that the claim element need not be a separate component, or the specification suggests that a single component can function as both elements. *Linear Tech. Corp. v. ITC*, 566 F.3d 1049, 1054–56 (Fed. Cir. 2009). Neither the claims or the specification require the instructing information to be separate from the URLs. Reply 17. This term is discussed further in Section IV.C.5.b.iv, *infra*.

Therefore, for the reasons given, we do not adopt Patent Owner’s implicit claim construction for “instructions” that excludes the types of instructions recited in claim 43, including media sequencing information. Rather, we determine that claims 1 and 34 embrace the types of instructions recited in claim 43, namely, instructions related to “at least one of a media format, a media language, a media sequence, and an advertisement insertion.”

C. “play script”

Petitioner asserts that the claim term “play script” should be construed as “a list customized for the communication device containing one or more media references and instructions executable by the communication device.” Pet. 13–14. In instituting trial, we adopted Petitioner’s construction, finding it to be consistent with the claim language and specification. Inst. Dec. 19–20.

Patent Owner argues that the term “play script” should be construed as “a file containing one or more media references and other information used by a communication device to obtain media.” PO Resp. 14–17. Patent Owner contends that “a play script is *not* itself limited to being a list.” *Id.* at 15. Patent Owner argues that a script “is a file, which can be processed by a computer to obtain media” because the claims recite that the play script contains “instructions.” *Id.* Patent Owner also cites the district court’s adoption of this construction. *Id.* at 13–14.

Whether or not a playlist is a file is not a meaningful distinction for the purposes of this Final Written Decision. As Petitioner notes, all of the “play scripts” identified by Petitioner in the prior art are files. Reply 6. We agree with Petitioner that we need not determine which party’s construction applies for purposes of our analysis. *Nidec*, 868 F.3d at 1017.

D. “reservation”

Petitioner asserts that the claim term “reservation” in claims 1 and 34 should be construed as “a set of instructions uniquely identifying the communication device and the play script, and reserving system resources for streaming the requested media.” Pet. 14–15. For the purposes of our Institution Decision, we adopted Petitioner’s construction. Inst. Dec. 21.

Pre-institution, Patent Owner did not propose a construction for reservation. Patent Owner now proposes the following construction: “arrangement regarding reserved resources of a streaming system.” PO Resp. 17. Patent Owner cites the specification and Mr. Adam’s testimony

for support. *Id.* (citing Ex. 1001, 10:33–37; Adams Decl. ¶ 110). Mr. Adam relies on the ’636 patent specification, which states that “[a] reservation is a feature that enables the streaming system 102 to reserve system resources, such as switches, processors, or media, either now or in the future, to ensure a quality media experience.” Ex. 1001, 10:33–37. Further, “[t]he reservation uniquely identifies the viewer 118 or 120 and the customized play script.” *Id.* at 10:27–28, 10:34–37. The Federal Circuit has recognized that “the specification may reveal a special definition given to a claim term by the patentee that differs from the meaning it would otherwise possess,” and “[i]n such cases, the inventor’s lexicography governs.” *Phillips*, 415 F.3d at 1316 (citing *CCS Fitness, Inc. v. Brunswick Corp.*, 288 F.3d 1359, 1366 (Fed. Cir. 2002)). Based on the description in the specification, we construe “reservation” as “a feature that enables the streaming system 102 to reserve system resources, such as switches, processors, or media, either now or in the future, to ensure a quality media experience.” Ex. 1001, 10:33–37.

E. “reservation identification”

Petitioner asserts that the claim term “reservation identification” in claims 1 and 34 should be construed as “a designator uniquely identifying a reservation.” Pet. 15. Pre-institution, Patent Owner did not provide a construction for this term. For our Institution Decision, we adopted Petitioner’s construction. Inst. Dec. 21–22.

Post-institution, Patent Owner proposes the term be given its “plain and ordinary meaning,” which is “identification of a reservation.” PO Resp.

19. Patent Owner also contends that “[t]he term ‘identification’ has no special meaning” in the ’636 patent. *Id.*

We find that our construction in the Institution Decision is not consistent with the plain and ordinary meaning in requiring the identification to be “unique.” Therefore, as proposed by Patent Owner, we construe “reservation identification” as “identification of a reservation.” *Id.*

IV. ANALYSIS

A. Principles of Law

A patent claim is unpatentable under 35 U.S.C. § 103(a) if the differences between the claimed subject matter and the prior art are such that the subject matter, as a whole, “would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.” *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) objective evidence of non-obviousness.⁵ *See Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

⁵ Neither party presents evidence or arguments regarding objective evidence of non-obviousness.

B. Level of Ordinary Skill in the Art

In determining the level of ordinary skill in the art, various factors may be considered, including the “type of problems encountered in the art; prior art solutions to those problems; rapidity with which innovations are made; sophistication of the technology; and educational level of active workers in the field.” *In re GPAC, Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995) (quotation marks omitted).

Petitioner asserts that a person of ordinary skill in the art of the ’636 patent would have had “at least a bachelor’s degree in computer science, electrical or computer engineering, or equivalent, and at least two years of experience in distributed systems, multimedia streaming, and various HTTP-related technologies, or an equivalent amount of relevant work or research experience.” Pet. 10 (citing Houh Decl. ¶¶ 58–61).

Patent Owner contends that a person of ordinary skill “would have: (a) a Bachelor of Science degree in computer science, electrical engineering, or computer engineering (or a related academic field), and at least two additional years of work experience in the design and development of distributed network systems and/or media streaming, or (b) at least five years of work experience and training in the design and development of distributed network systems and/or media streaming.” PO Resp. 2–3.

Neither party points out any meaningful difference between the parties’ assessments. We therefore apply Patent Owner’s more detailed assessment on the level of ordinary skill in the art. This proposal is consistent with the ’636 patent, the prior art of record, and is supported by

the testimony of Mr. Adams. Adams Decl. ¶¶ 27–29. However, our analysis would be the same under either party’s description.

C. Obviousness over Eyal and Wiser and Eyal, Wiser, and Chang

Petitioner asserts that claims 1–3, 10, 11, 14, 34, 35, 37, 43, and 47–50 are unpatentable under § 103(a) as obvious over Eyal and Wiser. Pet. 16–41.⁶ Petitioner provides supporting testimony from Dr. Houh. Houh Decl. ¶¶ 149–243.

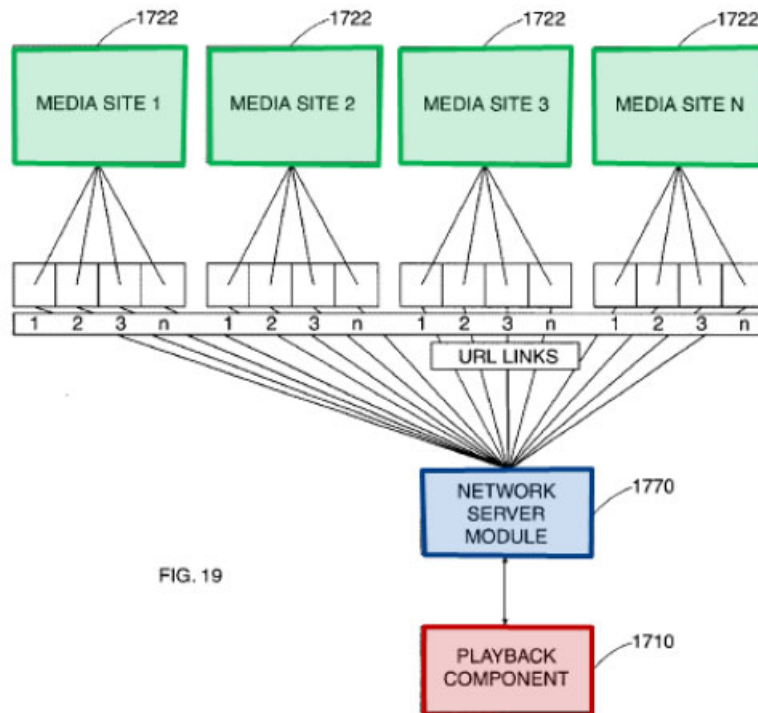
Patent Owner argues that Eyal and Wiser fail to disclose certain claim limitations, and that Petitioner fails to articulate a reason to combine the prior art teachings. PO Resp. 32–46; Sur-reply 11–20. Patent Owner relies on the declaration of Mr. Adams. Adams Decl. ¶¶ 189–212, 240–276.

For the reasons stated below, we find that Petitioner has demonstrated by a preponderance of the evidence that claims 1–3, 10, 11, 14, 34, 35, 37, 43, and 47–50 would have been obvious over Eyal and Wiser. We do not find that Patent Owner’s arguments or Mr. Adams’s testimony refute Petitioner’s showing. Our analysis follows.

⁶ The heading for this section of the Petition (Pet. 16) refers to anticipation by Eyal, as well as obviousness. This is contrary to the Precise Relief Requested, at page 2 of the Petition, to the element-by-element analysis for this challenge, which relies on Eyal in combination with Wiser, and to the other filings by the parties. *See, e.g.*, Pet. 26 (“The combination of Eyal and Wiser discloses and renders obvious a reservation identification associated with the request for media.”); *id.* at 30 (“Eyal combined with Wiser thus discloses or renders obvious all elements of claim 1.”) We, therefore, do not address anticipation.

1. *Eyal (Exhibit 1005)*

Eyal discloses “a computer system that enables a continuous streaming media playback from a distribution of sites available over a network such as the Internet.” Ex. 1005, 1:17–19. Figure 19 of Eyal is reproduced below (with color annotations added by Petitioner):



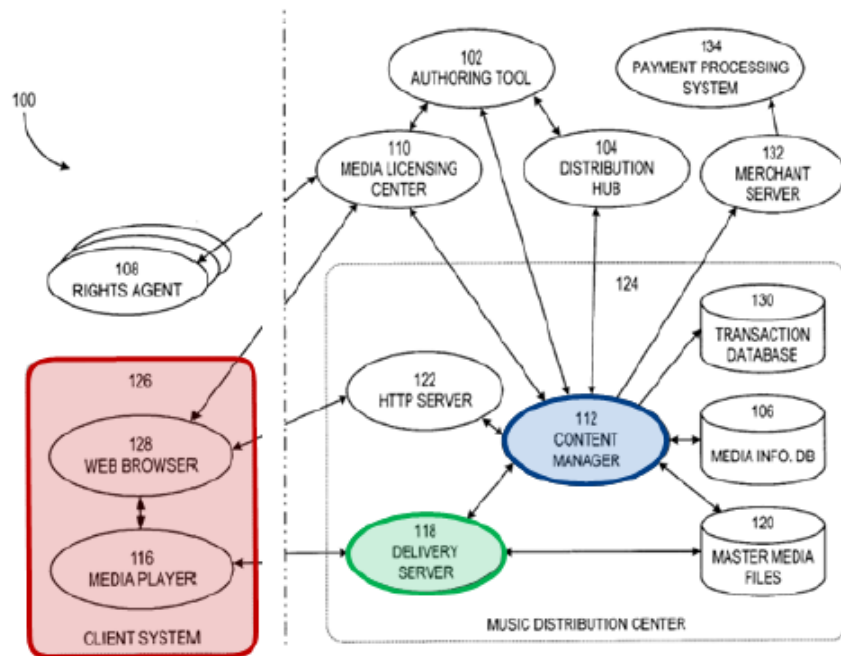
Pet. 17. Annotated Figure 19 of Eyal above illustrates a system that allows media streaming “from multiple sites on the Internet based on personalized criteria set forth by users.” Ex. 1005, 10:1–3, 32:43–44. User terminal 1710 (red), via network server module 1770 (blue), has access to network media sites 1722 (green) that provide access to media. *Id.* at 32:43–46. Each of media sites 1722 has one or more links to media web resources, which are represented by URLs 1–N. *Id.* at 32:47–48. Media sites 1772 correspond to different locations on the Internet. *Id.* at 32:54–55.

After receiving a request for media, a play-list generator creates a play-list that includes a plurality of media links and sends it to the requesting device. *Id.* at 4:47–55, 9:13–21, 27:33–35. Each media link in the play-list locates a media file on the network. *Id.* The play-list may provide instructions to the playback device and include a variety of metadata, such as duration, media URL, source website, media type, clip broadcast quality, and image size for video. *Id.* at 12:37–63, 27:35–37. Other media, including targeted commercials, “may be inserted into the play-lists in various locations between media clips.” *Id.* at 13:1–8.

To playback the requested media, “[t]he user terminal then accesses the URL and loads the web resource[s] associated with that media link into a streaming media playback component on the user terminal.” *Id.* at 27:37–40. A play-list that has a plurality of media links allows the media playback component to play media continuously from numerous sites on a network. *Id.* at 27:47–60.

2. Wiser (Exhibit 1006)

Wiser discloses a system and methods for online distribution of digital media data that allows users to select, preview, and download digital media over the Internet. Ex. 1006, 1:7–9, 3:5–10. Figures 1A and 1B of Wiser (annotated and combined by Petitioner) are reproduced below.



Pet. 19. Annotated and combined Figures 1A and 1B illustrate a system that “separates the management and administration of the purchase of the media content from the delivery of that media content to purchasers.” Ex. 1006, 6:29–31. The system includes content manager 112 (blue), delivery server 118 (green), and at least one client system 126 (red). Content manager 112 handles “the administration and management of all purchases and other transactions” and delivery server 118 provides “the delivery of the purchased media content.” *Id.* at 6:32–36. Client system 126 includes media player 116 and Web browser 128. *Id.* at 5:59–60.

Content manager 112 creates and provides a media voucher to the user in response to a request. *Id.* at 8:19–23. The media voucher includes a unique voucher ID, a media ID, a receipt, and the delivery server address. *Id.* at 8:27–41, Fig. 3. The media voucher is used for tracking a reservation

because delivery servers may have a “limited number of active streams of data being delivered at any one time.” *Id.* at 14:65–15:1, 15:10–15, 15:63–16:3, 17:22–28.

3. *Claim 1*

Petitioner asserts that the combination of Eyal and Wiser discloses or suggests each of the limitations recited in claim 1. Pet. 22–30. Petitioner provides supporting testimony from Dr. Houh. Houh Decl. ¶¶ 155–190. Upon review of Petitioner’s arguments and supporting evidence and Patent Owner’s arguments and evidence in response, we agree with Petitioner’s analysis and find that for the reasons given, Eyal and Wiser meet each element of claim 1.

For example, for element 1.a (“receiving . . . a request for media from a communication device . . .”), Petitioner asserts that Eyal discloses a “user terminal” (i.e., the “communication device”), sending a request for media to server modules, which collectively constitute the claimed “computing device.” Pet. 22–23 (citing Ex. 1005, 10:17–18). The “web server module” of the server in Eyal receives the request via a communication network. *Id.* at 23 (citing Ex. 1005, 10:33–38, 19:30–40, Fig. 4 (annotated)).

For claim element 1.b (“generating . . . at least one play script”), Petitioner shows that “[r]esponding to the communication device’s request, Eyal’s play-list generator generates a play-list, which is the claimed ‘play script.’” *Id.* at 25 (citing Ex. 1005, 9:14–16, 15:37–45).

For element 1.b.1. (“at least one identification of the at least one portion of the requested media”), Petitioner states: “Eyal includes an identification of the requested media in the play-list as metadata in the media links.” *Id.*

Petitioner relies on Eyal and Wiser to meet claim element 1.b.2 (“a reservation identification associated with the request for media”). Petitioner contends that “[a person of ordinary skill] would have been motivated to combine Eyal’s system with Wiser’s media voucher and voucher ID.” *Id.* at 26. According to Petitioner, “[s]ervers’ limited streaming capacity was a common media delivery problem, and well-known solutions existed before the ’636 Patent, including generating a reservation to ensure streaming resource availability.” *Id.* (citing Houh Decl. ¶¶ 149–154). Petitioner further states that Wiser’s “media voucher” is a reservation, and the voucher ID is a reservation identification because “[t]he content manager and delivery server use it to allocate the delivery server’s limited resources and track reservations.” *Id.* (citing Ex. 1006, 15:19–23, 14:61–64, 17:21–22).

For element 1.b.3 (“at least one universal resource locator (URL) associated with the at least one identification of the at least one portion of the requested media, . . .”), Petitioner asserts “Eyal discloses that the response to the media play-back component ‘includes one or more URLs.’” *Id.* at 27 (citing Ex. 1005, 20:30–38).

For element 1.b.4 (“one or more instructions for use by the communication device . . . to enable the communication device to obtain the at least one portion of the requested media”), Petitioner shows: “Eyal

teaches a playlist including a variety of metadata that instructs the communication device regarding how to obtain, present, and adjust the media.” *Id.* at 28 (citing Ex. 1005, 12:46–63).

Finally, for element 1.c (“transmitting . . . the at least one play script to enable the communication device to obtain the at least one portion of the requested media . . .”), Petitioner asserts “Eyal’s web server module transmits the play-list to the user terminal.” *Id.* at 29 (citing Ex. 1005, 7:22–23).

We find that Petitioner provides persuasive reasoning to combine the teachings of Eyal and Wiser. *Id.* at 20–22. In addition to the above, Petitioner contends that a person of ordinary skill “would have found it obvious to use Wiser’s voucher ID in Eyal’s play-list.” *Id.* at 20 (citing Houh Decl. ¶¶ 149–154). Petitioner argues that “both references concern similar distributed systems for responding to user requests and an intermediary server for generating a response identifying media from one or more delivery servers.” *Id.*

Petitioner acknowledges that Eyal does not explicitly disclose reservations. *Id.* Nevertheless, Petitioner points out that Wiser discloses generating a media voucher,” that also includes a voucher identification (“reservation identification”) “corresponding to a reservation of a preview stream or download from a delivery server.” *Id.* at 20–21 (citing Ex. 1006, 8:27–42, 17:22–28).

In support of Petitioner’s assertion of a motivation to combine the references, Dr. Houh testifies that resource reservation methods were well-

known by the late 1990s. Houh Decl. ¶ 152. Furthermore, he testifies that using a unique reservation number in the response to an end user to identify a resource reservation, like Wiser’s voucher ID, was one of a finite number of ways to utilize reservations in streaming media delivery. *Id.* In addition, he testifies that person of ordinary skill would have recognized that Wiser’s voucher ID and reservation would work with Eyal’s system. *Id.* Dr. Houh testifies that a person of ordinary skill “would have had a reasonable expectation of success combining Eyal and Wiser.” *Id.*

Petitioner further shows that a person of ordinary skill would have been motivated to combine Eyal and Wiser because the play-list generated and sent by Eyal already includes additional information, such as metadata, and thus it would be “a simple matter to include a voucher ID” as well. Pet. 21; Houh Decl. ¶ 154. Accordingly, a person of ordinary skill would have had a reasonable expectation of success in combining Eyal and Wiser. Pet. 21; Houh Decl. ¶ 152.

In summary, we find that Petitioner shows that because utilizing reservations for streaming media was already well-known and desirable to address finite memory and bandwidth for the delivery server, a person of ordinary skill would have been motivated to use such techniques with proven utility. Pet. 21–22 (citing Houh Decl. ¶¶ 152–154).

4. Claim 34

Petitioner states “Claim 34 contains substantively identical portions to claim 1, which are disclosed for the same reason.” Pet. 34. Thus, Petitioner’s analysis of claim 34 incorporates its analysis of claim 1, and

addresses specifically only those limitations in claim 34 that differ from claim 1, *supra*. *Id.* (citing Houh Decl. ¶ 208). Upon review of Petitioner’s argument and supporting evidence and Patent Owner’s arguments and evidence in response, we agree with Petitioner’s analysis and find for the reasons given that Eyal and Wiser meet each element of claim 34.

Claim element 34.a recites a “management system comprising at least one computing device comprising a combination of hardware and software.” Petitioner contends that this additional limitation is met by Eyal. *Id.* at 34 (citing Ex. 1005, 1:15–19).

Petitioner contends that claim element 34.b (“in response to the request for media . . . generating and transmitting . . . a play script”) also is met by Eyal: “In response to the request from the communication device, Eyal’s server uses its modules (particularly its play-list generator module) to generate a play-list, which is the claimed ‘play script.’” *Id.* at 35 (citing Ex. 1005, 9:14–16, 15:37–45). Petitioner also asserts that Eyal meets the other limitations in the claim, including the requirement for “one or more rules”: “Eyal also discloses generating a play-list based on a rule associated with the requested media.” *Id.* at 36.

Petitioner contends that the remaining elements of claim 34 (34.b.1–34.b.4) are “substantively identical” to elements of claim 1, and therefore relies on its prior analysis of claim elements 1.b.1–1.b.4 based on Eyal and Wiser. *Id.* Petitioner summarizes that “Eyal combined with Wiser thus discloses or renders obvious all elements of claim 34.” *Id.* (citing Houh Decl. ¶¶ 201–220).

5. Patent Owner's Response to Claims 1 and 34

a. Alleged Lack of Motivation to Combine

Patent Owner responds that “there is no motivation to combine Eyal and Wiser,” and that the combination “is purely based on hindsight.” PO Resp. 32. We discuss the motivation to combine references in our analysis of claim 1 in Section IV.C.3, *supra*, and find that for the reasons given by Petitioner, including those summarized *supra*, Petitioner demonstrates by a preponderance of the evidence that a person of ordinary skill would have combined the teachings of Eyal and Wiser as proposed by Petitioner with a reasonable expectation of success. In addition to the reasons given above, we credit Dr. Houh’s testimony that “a [person of ordinary skill] would have found it obvious to apply Wiser’s teachings of utilizing a reservation identification in the response to an end user and further tracking statistics associated with the requested media to Eyal.” Houh Decl. ¶ 149. Dr. Houh explains that “[b]oth references relate to distribution of media over a network, such as the Internet.” *Id.* (citing Ex. 1005, Abstract, 1:15–19; Ex. 1006, Abstract, 1:6–9). He further testifies that “both references also disclose similar distributed systems for responding to user requests for media and an intermediary server for generating a response identifying media from one or more delivery servers.” *Id.* (comparing Ex. 1005, Fig. 19 to Ex. 1006, Fig. 1). In addition, he testifies that “[b]oth Eyal and Wiser also disclose the intermediary server providing a response that identifies the requested media, the delivery server address, and other information for

obtaining the requested media.” *Id.* ¶ 150 (citing Ex. 1005, 32:43–33:15; Ex. 1006, 14:37–15:9).

In contrast, Mr. Adams testifies that Eyal and Wiser are “fundamentally different.” Adams Decl. ¶ 189 (emphasis omitted). Mr. Adams concludes that “a [person of ordinary skill would] not motivation [sic] to look to the secure online music *streaming system* of Wiser and apply those concepts to the *search engine* system of Eyal.” *Id.* ¶ 196.

We do not find this testimony persuasive. As the Supreme Court cautioned in *KSR*, “[a] person of ordinary skill is also a person of ordinary creativity, not an automaton,” so the fact that it would take some creativity to carry out the combination does not defeat a finding of obviousness. *KSR Int’l Co.*, 550 U.S. at 421; *see also ClassCo, Inc. v. Apple, Inc.*, 838 F.3d 1214, 1219 (Fed. Cir. 2016) (“The rationale of *KSR* does not support [the] theory that a person of ordinary skill can only perform combinations of a puzzle element A with a perfectly fitting puzzle element B.”).

A person of ordinary skill in this art would have had a degree in computer science, electrical engineering, or computer engineering, and at least two additional years of work experience in the design and development of distributed network systems and/or media streaming, or at least five years of work experience and training in the design and development of distributed network systems and/or media streaming. *See supra*, Section IV.B; *see also* PO Resp. 2–3 (citing Adams Decl. ¶¶ 27–29). We agree with Dr. Houh and find that such a highly skilled individual “would have found it obvious to apply Wiser’s teachings of utilizing a reservation identification in the

response to an end user and further tracking statistics associated with the requested media to Eyal” (Houh Decl. ¶ 149), and would not have been deterred from doing so by the alleged differences in the systems pointed to by Mr. Adams.

We do not agree with Mr. Adams that Eyal “teaches away” from use of an identification system found in Wiser, just because “the Eyal system itself does not operate/manage streaming servers and relies on best-effort delivery of media by third-party media servers.” Adams Decl. ¶ 208. “A reference may be said to teach away when a person of ordinary skill, upon reading the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path that was taken by the applicant.” *In re Gurley*, 27 F.3d 551, 553 (Fed. Cir. 1994). Patent Owner does not show that Eyal would discourage use of Wiser’s identification system. At best, Patent Owner shows Eyal’s alternative use of third-party servers. This use of an alternative is not a teaching away. *See In re Fulton*, 391 F.3d 1195, 1201 (Fed. Cir. 2004) (The “mere disclosure of alternative designs does not teach away.”).

Nor are we persuaded by Mr. Adams’s argument based on alleged “obstacles involved with adding a reservation system” to Eyal. Adams Decl. ¶¶ 203–212. The Federal Circuit consistently has held that “the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references

would have suggested to those of ordinary skill in the art.” *MCM Portfolio LLC v. Hewlett-Packard Co.*, 812 F.3d 1284, 1294 (Fed. Cir. 2015) (quoting *In re Keller*, 642 F.2d 413, 425 (CCPA 1981)) (alterations and internal quotation marks omitted).

b. Alleged Missing Elements

Patent Owner contends also that Eyal and Wiser fail to “disclose or suggest” several claim limitations. PO Resp. 33–43.

i. “at least one portion of the requested media.”

Claim 1 requires a “computing device” to receive a request for media from a “communication device” capable of obtaining “at least one portion of the requested media” from a “resource.” *See* Ex. 1001, 50:53–58. Claim 34 has a similar limitation. *Id.* at 54:5–12. As discussed *supra*, in Section IV.C.3, we find that Eyal and Wiser meet this claim limitation. Pet. 25, 35–36; Reply 14–15.

Patent Owner contends that Eyal and Wiser do not meet this limitation because “[t]he claims of the ’636 patent are directed to a method of streaming requested media in portions (i.e., portion-by-portion or more portions at a time), not the entire media all together.” PO Resp. 36. For the reasons discussed in Section III.A, *supra*, we do not adopt Patent Owner’s implicit claim construction that would require “streaming requested media in portions” and excluding the entirety of the “requested media,” i.e., to require that the “requested media” be broken up into portions. We, therefore, do not

agree with Patent Owner’s “one portion” argument because it is based on a rejected theory of the claims. *See id.* at 35–38; Sur-reply 11–13.

Even under Patent Owner’s construction, however, we find that Eyal would meet this limitation. Eyal’s play-list includes links to multiple portions of the requested media. *See* Ex. 1005, 20:50–64, 32:62–67. Eyal discloses delivering portions of the requested media, such as movie clips, movie trailers, highlights from sporting events, music videos, and individual songs of a program. *See, e.g., id.* at 11:21–37.

We find, for the reasons given, that Eyal and Wiser meet this limitation in claims 1 and 34.

ii. “reservation identification”

Petitioner relies on Wiser’s description of a media voucher to disclose a “reservation,” and Wiser’s voucher ID to teach the claimed “reservation identification.” *See* Pet. 13–14; Reply 13–14; Houh Decl. ¶¶ 173–176, and discussion *supra*, Sections III.D, III.E.

Patent Owner’s principal argument in rebuttal is that Wiser’s voucher ID is not a “reservation identification” because “a voucher ID does not reserve system resources.” PO Resp. 33. Patent Owner contends that “the reservation of Wiser is only used to indicate that the media exists and [is] available for purchase.” *Id.*

We disagree with this argument. Patent Owner’s argument ignores Wiser’s teachings regarding reserving system resources—e.g., “a limited number of active streams of data being delivered at any one time.” *See, e.g.,* Ex. 1006, 14:66–15:23, Fig. 3. Wiser also teaches that each delivery server

can only handle a limited number of streams; thus, a content manager server determines which delivery server is available to service the request and “generates and returns . . . to the HTTP server 122 a media voucher [which] includes the network address 308 of the delivery server 118 and port number, voucher ID 302, and media ID 304.” *Id.* at 15:19–23, Fig. 3.

Patent Owner argues that “neither Eyal or Wiser discloses . . . a play script that includes a ‘reservation identification’ along with *all three* additional elements.” PO Resp. 34 (citing Adams Decl. ¶ 32). This argument refers to the four sub-elements of claim limitation 1.b (e.g., 1.b.1, 1.b.2, 1.b.3, 1.b.4) discussed in our analysis of claim 1 in Section IV.C.3, *supra*. We disagree with Patent Owner’s argument. We find that Eyal’s play-list, as modified in view of Wiser, is a play script that includes a reservation identification and all three additional elements for the reasons given by Petitioner. *See* Pet. 25–28; Houh Decl. ¶¶ 171–182.

We have considered Patent Owner’s other arguments (PO Resp. 34–35) and do not find them persuasive. We disagree that “Eyal is not the type of system that would even use reservations.” This argument is addressed in our discussion of motivation to combine the references. *See* Sections IV.C.3 and IV.C.5.a. Moreover, we agree with Petitioner that Eyal’s reservation identification may be included in the play-list. *See* Reply 14 (citing Pet. 25–26; Ex. 1005, 20:35–36).

We find, for the reasons given, that Eyal and Wiser meet this limitation in claims 1 and 34.

iii. Generating a play script “based on one or more attributes of the communication device.”

Claim 34 recites that the “play script” is based on the “attributes” of the communication device. Ex. 1001, 54:5–10. Patent Owner contends that “Eyal does not disclose this element.” PO Resp. 39 (citing Adams Decl. ¶¶ 248–253). Patent Owner further asserts that Petitioner does not prove that Wiser discloses this feature. *Id.* at 40 (“[Petitioner] just references this data but does not provide any explanation tying this data to the capabilities of the communication (user) device.”).

Petitioner responds that “[i]n Eyal, the play-list is generated based on a capability of a user device because the URLs within the play-list are modified based on the type of player employed by the user.” Reply 16 (citing Pet. 35; Ex. 1005, 21:35–46, 13:52–54). Petitioner continues, citing testimony from Mr. Adams, that “Eyal is trying to make sure that the user experience is good . . . that means passing a playlist with assets that will actually be played to the appropriate media player.” *Id.* (citing Adams Dep. 77:25–78:3).

We agree with Petitioner for the reasons given that the play-list in Eyal, which Petitioner equates to the claimed play script, meets this limitation of claim 34. *See also* Houh Decl. ¶¶ 213–217. We are not persuaded by Patent Owner’s rebuttal arguments, including the argument that Petitioner “mischaracterizes” Mr. Adams’s testimony. Sur-reply 16. These arguments that Eyal does not “teach or suggest the system modifies/changes the format of a URL” are not supported by Eyal’s disclosure or by the expert testimony of record. *See* Houh Decl. ¶¶ 213–217.

We find, for the reasons given, that Eyal and Wiser meet this limitation in claim 34.

iv. “instructions”

Claims 1 and 34 require “instructions for use . . . together with the at least one URL and the reservation identification to enable the at least one communication device to obtain the at least one portion of the requested media.” Ex. 1001, 51:6–10; 54:20–24. Petitioner demonstrates that Eyal meets this limitation. Pet. 28 (“Eyal teaches a playlist including a variety of metadata that instructs the communication device regarding how to obtain, present, and adjust the media.”); *see also* discussion in Section IV.C.1, *supra*.

Patent Owner responds that “there is no disclosure, teaching or suggestion that any metadata from the database in Eyal’s system is sent to the user in Eyal’s play-list (the purported ‘play script’) and used to obtain media.” PO Resp. 41 (emphasis omitted). We do not agree with this argument. As Petitioner points out, correctly, “[t]he claims do not require the instructions to be separate from the URLs for obtaining media.” Reply 17.

Patent Owner further argues that the metadata in Eyal “relates to how the user’s device displays the media,” and not to how the media is obtained. PO Resp. 41 (emphasis omitted), 42 (“[Petitioner] identifies the mere *order* of URLs on a play-list as instructions.”). We do not agree with this argument that “[t]he mere order of URLs (without more) . . . is not separate instructions from the URL used to ‘obtain’ the requested media.” In

discussing construction of the term “instructions,” we rejected Patent Owner’s attempt to limit the term to exclude instructions (metadata) relating to how the media is displayed and the order in which the media is obtained and displayed. *See* Section III.B, *supra*; PO Resp. 42–43.

Finally, we do not agree with Patent Owner’s argument that “Eyal does not disclose using *all three* pieces of information to obtain media,” because Eyal does not disclose a “reservation identification.” PO Resp. 43. As Petitioner points out, this argument fails because it does not address the combination of Eyal and Wiser, on which Petitioner relies to meet the “reservation identification” claim limitation. Pet. 26; Reply 18.

6. Summary on Claims 1 and 34

In light of the foregoing, we find that Petitioner has shown by a preponderance of the evidence that the combination of Eyal and Wiser teaches or suggests all of the limitations recited in claims 1 and 34, and that Petitioner has articulated a persuasive reason to combine the prior art teachings with a reasonable expectation of success. Therefore, we find that Petitioner has established by a preponderance of the evidence that claims 1 and 34 would have been obvious over Eyal and Wiser.

7. Dependent claims 2, 3, 10, 11, 14, 35, 37, 43, and 47–50

Petitioner provides a claim-by-claim analysis of these dependent claims in light of Eyal and Wiser. *See* Pet. 31–41; Houh Decl. ¶¶ 191–207, 221–243. We find that Petitioner’s analysis demonstrates that each limitation of these claims is met by Eyal and Wiser.

In response, Patent Owner, for the most part, relies on its response to claims 1 and 34. PO Resp. 43–46. For claim 14, Patent Owner reprises its argument that “Eyal does not disclose portions of requested media and thus cannot render claim 14 obvious.” *Id.* at 44. Patent Owner makes similar arguments for claims 48 and 49. *Id.* at 45–46. For the reasons given in Section III.A, *supra*, we have rejected Patent Owner’s attempt to limit the claims to streaming the requested media in portions. We therefore do not agree with this argument.

For claim 14, Patent Owner argues further that “[Petitioner]’s theory is flawed because it ignores the language of claim 14 which requires identification of a first portion and a second portion to be of the same requested media, e.g. two portions of the same movie.” PO Resp. 44. Further, “Eyal identifies complete media files and does not identify a portion of a media file.” *Id.* As Petitioner points out, this argument is a “slight twist” on the “at least a portion” argument discussed *supra*. Reply 18. The argument fails for the reasons previously discussed, and for the additional reason that Eyal discloses identifying multiple portions of the requested media in its play-list. *Id.* at 18–19 (citing Pet. 33).

Patent Owner’s contention that claim 37 requires “specific attributes” for generating a play script, and that claim 43 requires separate instructions, are variations on arguments addressed *supra* in connection with claim 1.

Having reviewed Petitioner’s arguments and supporting evidence in this present record, including the arguments summarized above for claims 1 and 34, from which these claims depend, we determine that Petitioner has

established by a preponderance of the evidence that the combination of Eyal and Wiser teaches or suggests the limitations of claims 2, 3, 10, 11, 14, 35, 37, 43, and 47–50. *See* Pet. 31–41; Houh Decl. ¶¶ 191–207, 221–243. In addition, we find that Petitioner has demonstrated a motivation to combine the references as proposed by Petitioner with a reasonable expectation of success. Accordingly, we determine that Petitioner has demonstrated that these dependent claims also would have been obvious over the combination of Eyal and Wiser.

8. Claim 39

Petitioner contends claim 39 would have been obvious over Eyal and Wiser, further in view of Chang. Pet. 41–45; Houh Decl. ¶¶ 244–257. Claim 39 depends from claim 34, and recites “generating and transmitting the play script” based on rules “that specify at least one of a frame rate, a bit rate, a sequence associated with the at least one portion of the requested media, and a format associated with the at least one portion of the requested media.” Ex. 1001, 54:54–60. Petitioner asserts that Eyal, Wiser, and Chang meet these limitations. Pet. 42–43; Houh Decl. ¶¶ 251–257.

Chang describes the delivery of data from one or more sources, typically Web servers, to end users over a communications network. Ex. 1009, 3:22–25. Chang discusses providing a new data type, called a HotAudio file, that contains “metadata information regarding time-driven actions associated with a media source such as video or audio.” *Id.* at 5:25–29.

Petitioner states: “Eyal teaches that URLs in the play-list are generated according to rules specifying the format associated with the requested media, such as HTTP or PNM protocol for files with an RM extension or RTSP for files having RAM extensions.” Pet. 42 (citing Ex. 1005, 21:35–46). Further, Petitioner states: “If Claim 39 requires a play script additionally based on rules that specify frame rate, bit rate, and sequence, Chang’s ‘HotAudio File’ teaches the remaining rules.” *Id.* (citing Ex. 1009, 5:25–40, 8:[35]–53).

Petitioner contends that a person of ordinary skill would have been motivated to modify Eyal and Wiser to incorporate Chang’s rules and list with a reasonable expectation of success. Pet. 43–45; Houh Decl. ¶¶ 244–250. Dr. Houh testifies: “A [person of ordinary skill] would have recognized the benefits of using rules from Chang’s playlist in the Eyal and Wiser system. For example, Chang’s HotAudio file would give additional control to the system to ensure that playlists were compatible with playback equipment and optimizing the performance of that equipment.” Houh Decl. ¶ 248.

Patent Owner responds that Chang does not meet the added limitations in claim 39. PO Resp. 46–47. Specifically, Patent Owner contends “Chang does not disclose a play script is being generated based on rules specifying frame rate, bit rate or sequence. Chang merely discloses that frame rate, bit rate and sequence are included in a hotaudio file.” *Id.* at 46 (emphasis omitted). We disagree. As Petitioner points out, Patent Owner’s principal argument fails to address the combination of references

asserted by Petitioner: “Eyal teaches that URLs in the play-list are generated according to rules specifying the format associated with the requested media, and, with that context in mind, Chang’s disclosures of frame rate, bit rate, and sequence teach the remaining rules.” Reply 20; *see* Adams Decl. ¶¶ 213–220.

Patent Owner’s other arguments are similarly unavailing. For example, we are not persuaded by the testimony of Patent Owner’s expert, Mr. Adams, that a person of ordinary skill would not combine the teachings of the references. *See* PO Resp. 47; Adams Decl. ¶¶ 213–220. Mr. Adams’s testimony is largely a critique of Dr. Houh’s analysis, discussed *supra*. *See, e.g.,* Adams Decl. ¶ 213 (“It would be a remarkable coincidence for [a person of ordinary skill] to select these particular patents from all those being filed in this timeframe.”). We do not find Mr. Adams’s testimony helpful. To the extent that he provides any analysis of his own, Mr. Adams focuses on the references individually, and not their combination. For example, he states: “Only Eyal specifically refers to creating a play list, which is passed to the media player.” *Id.* ¶ 215. Moreover, he relies on “bodily incorporation” arguments that have been rejected by the Federal Circuit. *See id.* ¶ 218 (“[A person of ordinary skill] would not be able to add a mechanism such as that disclosed by Chang because there is no information in the Eyal system to allow it.”). At times he speculates: “Eyal has no knowledge or interest in the network or server resources required to stream the media to the user since these are completely out of Eyal’s control.” *Id.* ¶ 217. And throughout his testimony, he fails to credit the

creativity of the highly skilled person of ordinary skill in this art (possessing “a Bachelor of Science degree in computer science, electrical engineering, or computer engineering . . . , and at least two additional years of work experience in the design and development of distributed network systems and/or media streaming,)).” *See supra*, Section IV.C.5.a, citing *KSR Int’l Co.*, 550 U.S. at 421. We find, for the reasons given, including those summarized above, that Petitioner persuasively demonstrates a reason to successfully combine Eyal, Wiser, and Chang. Pet. 43–45; Houh Decl. ¶¶ 244–250.

In light of the foregoing, we determine that Petitioner has shown that the combination of Eyal, Wiser, and Chang teaches or suggests all of the limitations recited in claim 39, and that Petitioner has articulated a persuasive reason to combine the prior art teachings with a reasonable expectation of success. Therefore, Petitioner has established by a preponderance of the evidence that claim 39 would have been obvious over Eyal, Wiser, and Chang.

9. Conclusion on Obviousness over Eyal and Wiser, and Eyal, Wiser, and Chang

Based on the evidence presented, we are persuaded that Petitioner has demonstrated by a preponderance of the evidence that claims 1–3, 10, 11, 14, 34, 35, 37, 43, and 47–50 would have been obvious over the combination of Eyal and Wiser, and that claim 39 would have been obvious over Eyal, Wiser, and Chang.

D. Obviousness over Madison and Holtz

Petitioner asserts that claims 1, 2, 11, 14, 34, 35, 37, 39, 43, 47, and 49 are unpatentable under § 103(a) as obvious over Madison and Holtz. Pet. 45–71; Houh Decl. ¶¶ 258–339. Upon consideration of Petitioner’s explanations and supporting evidence and Patent Owner’s arguments and evidence in response, we are persuaded that Petitioner has demonstrated by a preponderance of the evidence that these claims are unpatentable under § 103(a) as obvious over Madison and Holtz.

1. Madison (Ex. 1007)

Madison discloses a system and method for controlling access to streaming media. Ex. 1007, Abstract.

Figure 8 of Madison is reproduced below.

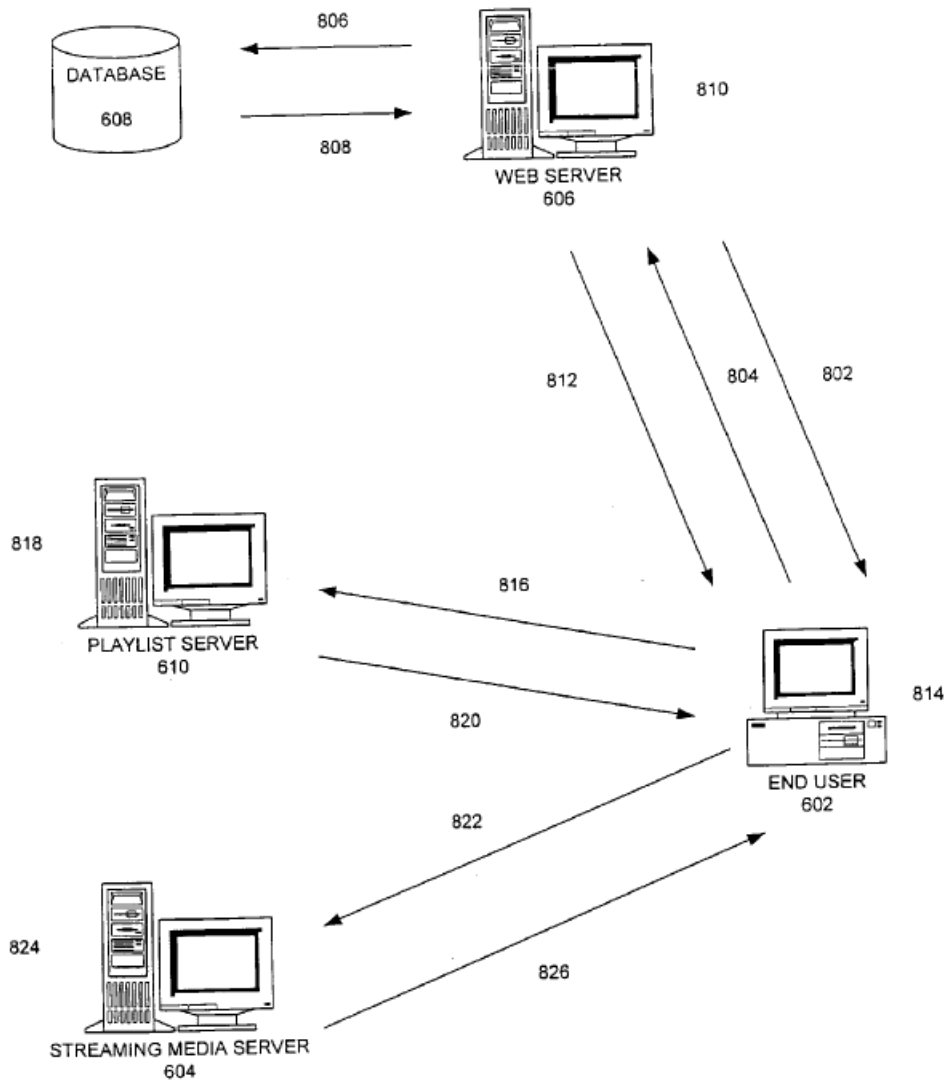


Figure 8 of Madison above illustrates a system comprising web server 606, database 608, playlist server 610, streaming media server 604, and end user device 602. *Id.* ¶¶ 72–80. Web server 606 initially provides a web page requesting the end user to log in to an authorization application and presenting the user with the option of viewing certain streaming media (step 802). *Id.* ¶ 72. In response, the end user provides a user ID and activates the

stream request link, thereby requesting access to a streaming media content file by sending the stream request link and the user ID to web server 606 (step 804). *Id.* ¶¶ 72–74.

Once web server 606 receives the stream request, it requests and obtains the private key from database 608 (steps 806, 808), and uses the private key to generate the authorization ticket. *Id.* ¶¶ 75–76. In step 812, web server 606 sends the ticket and the user ID to end user processor 602. *Id.* ¶ 76. In step 816, end user processor 602 makes a call to playlist server 810 and, in step 818, playlist server 810 is provided with the link, playlist ID, ticket, and user ID, and then generates a redirector file—namely, an Advanced Stream Redirector (“ASX”) file. *Id.* ¶ 79.

To generate the redirector file, the playlist accesses a database to retrieve the stream ID of a content file comprising the playlist and the information necessary to link the content file, including the Hostname, URL Prefix and Filename, associated with the stream ID. *Id.* The redirector file contains a link to the requested content, along with the ticket and public key (i.e., stream ID of content file and user ID), as well as “other information, such as metadata for the content file, or other, non-secure files, such as advertisements.” *Id.* ¶¶ 79, 82.

In an alternate embodiment, when the user provides its user ID and activates the stream request link (in step 84), the authentication application running on web server 606 generates the ticket, appends the ticket and end user ID to the stream request link, and directly makes the call to playlist server 610 to create the redirector file. *Id.* ¶ 80. Because web server 606

also passes to playlist server 610 information identifying the media player on end user processor 62, playlist server 610 forwards the redirector file to the media player (in step 820, thereby obviating steps 812, 814, and 816). *Id.* In step 822, the media player makes a call to streaming media server 604, as identified in the ASX file, and provides media server 604 with the copy of the requested content's stream ID, the ticket generated by web server 606, and the user ID. *Id.* ¶ 83. In response, streaming media server 604 determines whether to grant the user access to the requested content (step 824). *Id.* ¶ 84.

2. Holtz (Ex. 1008)

Holtz discloses how a “multimedia production and distribution system collects or assembles a media production (such as, a news program, television programming, or radio broadcast) from a variety of sources, including television stations and other media hosting facilities.” Ex. 1008, Abstract.

Figure 1 of Holtz is reproduced below.

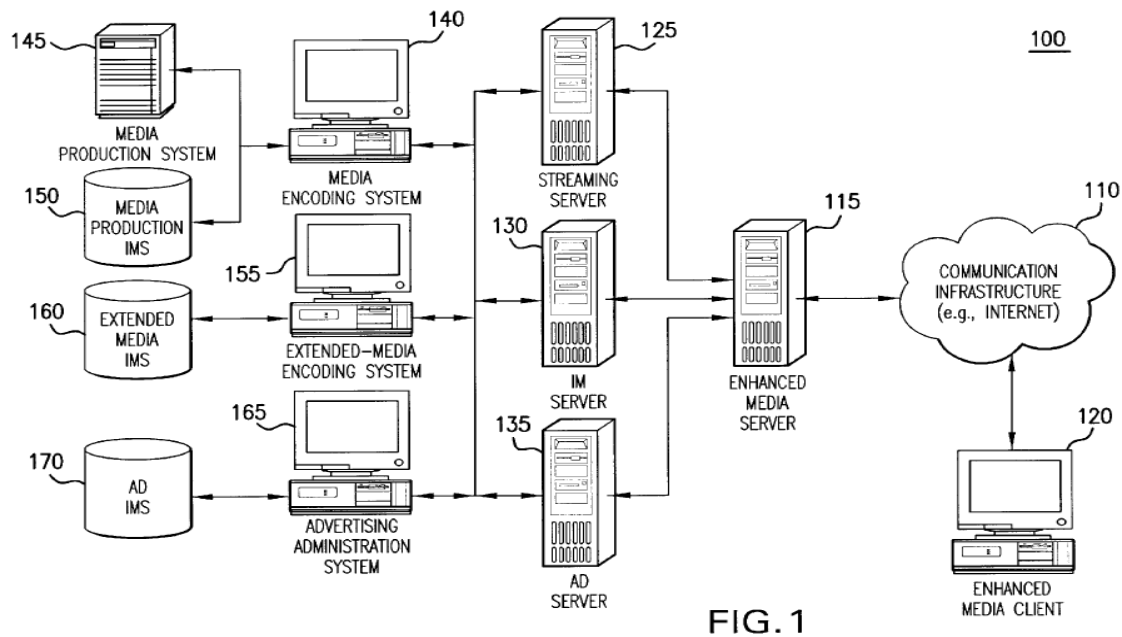


Figure 1 of Holtz illustrates enhanced media production and distribution system 100, which includes enhanced media server 115 and one or more enhanced media clients 120. *Id.* at 7:36–56. Media server 115 is connected to streaming server 125, information management (IM) server 130, and advertisement server 135. *Id.* at 8:23–25.

Holtz discloses that “[a]dvertising is linked to each segment of each customized program so that the user when viewing the customized programming also views the associated advertising.” *Id.* at 11:63–66. “The segments, which make up the customized program, are automatically sequenced together with the linked advertisements in such a fashion that the program appears to have been created for the user according to a subject matter specification indicated by the user.” *Id.* at 12:65–13:2.

3. Claims 1 and 34

Petitioner asserts that the combination of Madison and Holtz teaches or suggests the limitations recited in claim 1. Pet. 61–76; Houh Decl. ¶¶ 263–291. Upon review of Petitioner’s argument and supporting evidence, as well as Patent Owner’s arguments and evidence in response, we agree with Petitioner’s analysis and find that for the reasons given, Madison and Holtz meet the elements of claim 1.

For example, with respect to claim element 1.a, Petitioner states: “Madison’s web server receives a request for media from an end user, and its playlist server generates a response, providing instructions that the end user’s device use[d] to obtain the requested media.” Pet. 52. Petitioner explains that in Madison, the user requests access to a playlist by activating “the stream request link, thereby requesting access to a particular streaming media content file.” *Id.* (citing Ex. 1007 ¶¶ 72, 80, Fig. 8). And Madison’s web server and playlist server (collectively, the claimed “computing device”) “act in concert to receive and respond to the user’s request.” *Id.* at 53 (citing Ex. 1007 ¶ 80).

Petitioner asserts that the combination of Madison and Holtz meets element 1.b (“generating . . . at least one play script”) including the further limitations 1.b.1–1.b.4, and element 1.c. (“transmitting . . . the at least one play script to enable the communication device to obtain the at least one portion of the requested media . . .”). *Id.* at 54–60; Houh Decl. ¶¶ 273–291. For example, Petitioner identifies Madison’s redirector file as the claimed “play script.” Pet. 54 (“The redirector file is the claimed “play script” . . . It

can be an ASX file, which is passed to the user's media player.”) (citing Ex. 1007 ¶ 81).

As to the reason to combine the prior art teachings of Holtz and Madison, Dr. Houh testifies that “[a person of ordinary skill] would have found it obvious to apply Holtz’s teachings of a media selector to Madison.” Houh Decl. ¶ 258. He testifies that “[b]oth references relate to distribution of media over a network, such as the Internet.” *Id.* Further, “[b]oth Madison and Holtz also disclose the intermediary server providing a response to a request that identifies the requested media, the delivery server address, and other information for obtaining the requested media.” *Id.* ¶ 259. Also, “both references disclose using ASX files to identify the names, locations, and instructions for obtaining the identified media.” *Id.* ¶ 260. He notes that “Madison discloses that advertisements may be delivered as playlist items” and “Holtz teaches that enhancing the playlist with advertisements may generate revenue for the producers and distributors of the enhanced video, and also provides details about how such revenue may be apportioned based on tracking the distribution of advertisements.” *Id.* ¶ 261. He concludes a person of ordinary skill “would have been motivated to combine the teachings of Madison and Holtz to make an improved system that generates revenue and tracks results, and would have expected the combination to be successful.” *Id.* ¶ 262.

Petitioner’s analysis of claim 34 incorporates its analysis of claim 1. Pet. 34–36; Houh Decl. ¶¶ 304–318. Patent Owner’s response does not

distinguish between claim 1 and claim 34. PO Resp. 48. We find that for the reasons given, Madison and Holtz meet the elements of claim 34.

Patent Owner begins by asserting that Madison and Holtz do not qualify as prior art. *Id.* at 27–32. Patent Owner contends the ’636 patent is entitled to the benefit of the filing date of the ’519 application (application no. 09/766519), that predates Madison and Holtz. *Id.* at 28.

Petitioner contends that Patent Owner is not entitled to that earlier filing date because the ’519 application does not disclose the claimed “playlist” or the claimed “instructions.” Pet. 6–7; Reply 7–9. We agree that the ’636 patent claims are not entitled to that earlier date for the reasons given by Petitioner. As Petitioner points out, the ’519 application does not refer to a play script. Reply 8. The description of the play script was added in 2002. *Id.* Moreover, there is no written description of “instructions . . . to enable the communication device to obtain the at least one portion of the requested media.” *Id.* at 8–9. Absent such disclosures in the ’519 application, Patent Owner’s attempt to claim for the ’636 patent the benefit of that application fails. “It is elementary patent law that a patent application is entitled to the benefit of the filing date of an earlier filed application only if the disclosure of the earlier application provides support for the claims of the later application, as required by 35 U.S.C. § 112.” *PowerOasis, Inc. v. T-Mobile USA, Inc.*, 522 F.3d 1299, 1306 (Fed. Cir. 2008).

On the merits of the references, Patent Owner’s contentions are similar to those presented in its opposition to the Eyal-Wiser challenge. *See*

PO Resp. 47–53. For example, Patent Owner challenges the motivation to combine Madison and Holtz. *Id.* at 61–66. Patent Owner’s principal argument is that Madison and Holtz are “fundamentally different systems.” *Id.* at 62 (emphasis omitted). For the reasons given by Petitioner, including those summarized *supra*, we disagree. *See* Dr. Houh’s testimony regarding their similarities at Houh Decl. ¶¶ 258–262, and the discussion *supra*. For the reasons given by Petitioner and summarized *supra*, we find that Petitioner has demonstrated a motivation to combine the references.

Moreover, Patent Owner’s arguments that Madison and Holtz do not disclose all limitations of challenged claims 1 and 34 are unavailing. *See* PO Resp. 48–52. For example, Patent Owner’s contention that Madison and Holtz fail to meet the “at least one portion” limitation of claims 1 and 34 (*Id.* at 48) is a repeat of its argument directed to Eyal and Wiser, discussed *supra*. This argument is unavailing because it is based on a rejected claim construction. *See supra*, Section IV.C.5.b.i.

However, Madison would meet this limitation even under Patent Owner’s construction. Madison discloses a playlist comprising multiple stream files that are portions of the “requested media.” Ex. 1007 ¶ 88. The URLs in the ASX redirector file in Madison identify multiple portions of the “requested media.” *Id.* ¶ 89.

Similarly, Patent Owner’s argument based on alleged non-disclosure in Madison and Holtz of the “reservation identification” and “instructions” (PO Resp. 49–52) is not persuasive. Petitioner demonstrates that the ASX files used in Madison contain instructions for obtaining media imbedded in

URLs. Reply 24 (citing Adams Dep. 107:20–22). And Petitioner demonstrates that in Madison, a “reservation identification” is present because “the media resource is identified and stored for subsequent use based on the ticket, such that the media server searches the table where the filename for the content stream is stored by ticket and, if found, provides that content to the end user.” *Id.* at 23 (citing Pet. 56); *see also* Houh Decl. ¶¶ 277–279.

In light of the foregoing, we find that, for the reasons given, Petitioner has shown by a preponderance of the evidence that the combination of Madison and Holtz teaches or suggests all of the limitations recited in claims 1 and 34, and that Petitioner has articulated a persuasive reason to combine the prior art teachings with a reasonable expectation of success. Therefore, we find that Petitioner has established by a preponderance of the evidence that claims 1 and 34 would have been obvious over Madison and Holtz.

4. Dependent Claims 2, 11, 14, 35, 37, 39, 43, 47, and 49

Likewise, we are persuaded by Petitioner’s element-by-element analysis of these challenged dependent claims and find that each element is taught by Madison and Holtz. Pet. 60–63, 67–71; Houh Decl. ¶¶ 292–303, 319–339.

Patent Owner’s approach is similar to its response to the challenge based on Eyal and Wiser. PO Resp. 52–53. Patent Owner principally relies on its arguments for claims 1 and 34. *Id.* at 52. Patent Owner bases additional arguments for claims 14 and 49 on its rejected construction for “at

least one portion.” *Id.* at 52–53.⁷ Patent Owner’s argument directed to claim 37, that Petitioner “merely points to Madison’s disclosure of different media players and formats,” does not take into account Madison’s teaching of generating a redirector file based on the media player or required format of the user device.” *See id.* at 53; Reply 25; Houh Decl. ¶¶ 324–326; Ex. 1007 ¶¶ 79–83. Similarly, Patent Owner’s argument directed to claim 43 reprises the “instructions” claim construction argument previously addressed. *See* Section III.B, *supra*. We find that Patent Owner’s additional arguments are unavailing because they are variations of arguments already discussed. We further find that Madison and Holtz meet the elements of these claims.

5. Conclusion on Obviousness over Madison and Holtz

For the foregoing reasons, we determine that Petitioner has established by preponderance of the evidence that claims 1, 2, 11, 14, 34, 35, 37, 39, 43, 47, and 49 of the ’636 patent are unpatentable under §103(a) as obvious over Madison and Holtz.

V. CONCLUSION

For the foregoing reasons, we determine Petitioner has demonstrated by a preponderance of the evidence that all challenged claims of the ’636

⁷ Patent Owner also addresses claim 48. PO Resp. 53. Because claim 48 is not challenged by Petitioner in this ground, we do not discuss it further in connection with this ground.

patent would have been obvious and therefore are unpatentable. Our conclusions are summarized in the following table.

Claims	35 U.S.C. §	Reference(s)/ Basis	Claim(s) Shown Unpatentable	Claim(s) Not Shown Unpatentable
1–3, 10, 11, 14, 34, 35, 37, 43, 47–50	103(a)	Eyal, Wiser	1–3, 10, 11, 14, 34, 35, 37, 43, 47–50	
39	103(a)	Eyall, Wiser, Chang	39	
1, 2, 11, 14, 34, 35, 37, 39, 43, 47, 49	103(a)	Madison, Holtz	1, 2, 11, 14, 34, 35, 37, 39, 43, 47, 49	
Overall Outcome			1–3, 10, 11, 14, 34, 35, 37, 39, 43, 47–50	

VI. ORDER

For the foregoing reasons, it is
ORDERED that claims 1–3, 10, 11, 14, 34, 35, 37, 39, 43, and 47–50
of the '636 patent are unpatentable; and

FURTHER ORDERED that, because this is a Final Written Decision, parties to the proceeding seeking judicial review of the decision must comply with the notice and service requirements of 37 C.F.R. § 90.2.⁸

⁸ Should Patent Owner wish to pursue amendment of the challenged claims in a reissue or reexamination proceeding subsequent to the issuance of this decision, we draw Patent Owner's attention to the April 2019 *Notice Regarding Options for Amendments by Patent Owner Through Reissue or Reexamination During a Pending AIA Trial Proceeding*. See 84 Fed. Reg. 16,654 (Apr. 22, 2019). If Patent Owner chooses to file a reissue application or a request for reexamination of the challenged patent, we remind Patent Owner of its continuing obligation to notify the Board of any such related matters in updated mandatory notices. See 37 C.F.R. § 42.8(a)(3), (b)(2).

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For PETITIONER:

Cameron Westin
Amy Liang
O'MELVENY & MYERS LLP
cwestin@omm.com
aliang@omm.com

For PATENT OWNER:

James Carmichael
Stephen Schreiner
Minghui Yang
CARMICHAEL IP, PLLC
jim@carmichaelip.com
schreiner@carmichaelip.com
mitch@carmichaelip.com

Jason Charkow
Chandran Iyer
Stephanie Mandir
Kevin Sprenger
DAIGNAULT IYER LLP
jcharkow@daignaultiyer.com
cbiyer@daignaultiyer.com
smandir@daignaultiyer.com
ksprenger@daignaultiyer.com