

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

TWITCH INTERACTIVE, INC.,
Petitioner,

v.

RAZDOG HOLDINGS LLC,
Patent Owner.

IPR2025-00307
Patent 9,729,658 B2

Before KEVIN C. TROCK, AARON W. MOORE, and
JASON M. REPKO, *Administrative Patent Judges*.

Opinion for the Board by TROCK, *Administrative Patent Judge*.

Opinion Dissenting filed by MOORE, Administrative Patent Judge.

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

I. INTRODUCTION

We have authority to hear this *inter partes* review under 35 U.S.C. § 6. This Final Written Decision issues pursuant to 35 U.S.C. § 318(a) (2018) and 37 C.F.R. § 42.73 (2019). For the reasons discussed herein, we determine that Petitioner, Twitch Interactive, Inc., has shown by a preponderance of the evidence that claims 1–18 (the “challenged claims”) of U.S. Patent No. 9,729,658 B2 (Ex. 1001, “the ’658 patent”) are unpatentable. *See* 35 U.S.C. § 316(e) (2018); 37 C.F.R. § 42.1(d) (2019).

II. BACKGROUND

A. *Procedural History*

Twitch Interactive, Inc. (“Petitioner”) filed a Petition, Paper 1 (“Pet.” or “Petition”), to institute *inter partes* review of the challenged claims of the ’658 patent. On May 1, 2025, RazDog Holdings LLC (“Patent Owner”) filed a Preliminary Response, Paper 12 (“Prelim. Resp.”). Patent Owner also filed a request for discretionary denial. Paper 11. Petitioner filed an opposition to Patent Owner’s request for discretionary denial. Paper 13. The Acting Director at the time issued a decision denying Patent Owner’s request for discretionary denial, referring the petition to the Board. Paper 18. Thereafter, Petitioner filed a Preliminary Reply (Paper 19) and Patent Owner filed a Preliminary Sur-reply (Paper 20).

Based on the record we issued a Decision granting *inter partes* review. Paper 21 (“Dec.” or “Institution Decision”). After institution, Patent Owner filed a Response (Paper 26, “PO Resp.” or “Resp.”), Petitioner filed a Reply (Paper 32, “Pet. Reply” or “Reply”), and Patent Owner filed a Sur-reply (Paper 37, “PO Sur-reply” or “Sur-reply”).

On May 7, 2026, an oral hearing was held. A transcript of the hearing is made part of the record. Paper 45 (“Tr.” or “Transcript”).

B. Real Party in Interest

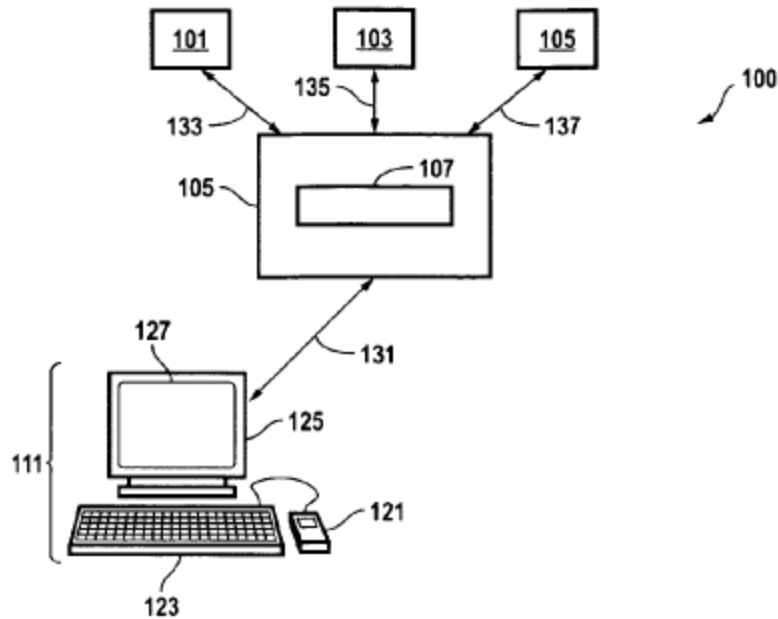
Petitioner identifies itself, Amazon.com, Inc., and Amazon.com Services LLC as the real party-in-interest. Pet. 84. Patent Owner identifies itself as the real party in interest. Paper 9, 1.

C. Related Proceedings

Patent Owner identifies the following action as related to the '658 patent: *Razdog Holdings LLC, v. Twitch Interactive, Inc.*, 5:24-cv-3638-JSC (N.D. Cal). Paper 4, 1. Petitioner identifies the following district court actions as involving the '658 patent: *RazDog Holdings LLC v. Twitch Interactive, Inc.*, Case No. 24-cv-03638-JSC (N.D. Cal. filed June 17, 2024); *RazDog LLC v. Cook Brothers Inc.*, Case No. 1:19-cv-5703 (N.D. Ill. filed Aug. 25, 2019); *RazDog LLC v. Cooling Equipment Service, Inc.*, Case No. 1:19-cv-05704 (N.D. Ill. filed Aug. 25, 2019); *RazDog LLC v. Continental Salvage Com.*, Case No. 1:19-cv-4610 (N.D. Ill. filed June 9, 2019). Pet. 84.

D. The '658 Patent (Ex. 1001)

The '658 patent “relates to computer systems for managing web-based content data in a cloud-based computing environment” and, more particularly, “relates to computer systems for managing and migrating through web-based content data in a cloud-based computing environment from multiple content data sources through a single point of access and/or user interface from a remote computing device.” Ex. 1001, 1:28–35. Figure 1 of the '658 patent is reproduced below.



“Figure 1, [above,] shows a schematic representation of a cloud-based computer system and architecture 100 for managing web-based content data.” *Id.* at 4:35–37. “The cloud-based computer system and architecture 100 includes a log-in server or master server 105 that acts a single point of access for a plurality of content data sources or service provider servers 101, 103, and 105.” *Id.* at 4:37–41. “The plurality of content data sources or service provider servers 101, 103, and 105 are in communication or linked to the log-in server or master server 105 via a communication network, such as the internet or intranet represented by the arrows 133, 135 and 137.” *Id.* at 4:41–46. The log-in server or master server 105 supports a program to run and execute a master content application software, referred to as master application 107. *Id.* at 4:47–49.

E. Challenged Claims

Petitioner challenges claims 1–18 of the ’658 patent. Pet. 1. Claims 1, 7, and 12 are independent. Claim 1 is directed to “[a] cloud-based computer system,” claim 7 is directed to “[a] computer system,” and claim 12 is directed to “[a] method of navigating content data or content

applications from multiple servers of multiple content sources or service providers through a master web-page hosted and created on a cloud-based master server from a remote computer.” Ex. 1001, 6:50, 7:32, 8:6–10.

Claim 1 is generally illustrative and reproduced below using Petitioner’s labelling designations. See Pet. ix.

1[pre] *A cloud-based computer system comprising:*

1[a] *master server with a processor and memory, wherein the master server accessible over the internet/Intranet from remote computer devices by a user;*

1[b1] *a master application stored in the memory of the master server and that executes on the processor of the master server and that includes software coded for organizing content data and content applications from multiple content sources or service providers pre-selected by the user*

1[b2] *and streamed to the master server simultaneously in real time from their respective servers on a master web-page and are viewable from the remote computer devices through the master server on the master web-page,*

1[b3] *wherein the master application programs a processor on the remote computer devices to operate and execute a slide tool program for scrolling or paging through the content data or the content applications from the multiple content sources or service providers simultaneously and through the master server in real time from the master web-page and from the remote computer by operating the slide tool program from the remote computer; and*

1[c1] *a remote tool box feature application that allows the user to write code, select code or delete code to enable and disable tool features that control how sub-sets of the content data or the content applications from the multiple content sources or service providers are received, displayed or organized,*

1[c2] *wherein the master server collects analytics based which tool features are enabled to target specific products, services or information to the user.*

Ex. 1001, 6:50–7:13 (formatting, alpha-numeric labels, and italics added).

F. Evidence

Petitioner relies upon the following evidence:

(1) U.S. Patent Application Publication No. US 2008/0086484 A1, filed October 9, 2007, published April 10, 2008 (“Darnell”) (Ex. 1004);

(2) U.S. Patent Application Publication No. US 2007/0016609 A1, filed July 12, 2005, published January 18, 2007 (“Kim”) (Ex. 1005);

(3) U.S. Patent No. US 8,640,052 B2, filed December 31, 2009, issued January 28, 2014 (“Dasgupta”) (Ex. 1006);

(4) Declaration of Paul Martin, Ph.D. (Ex. 1002).

Patent Owner relies upon the declaration of George Edwards, Ph.D. (Ex. 2010).

G. Asserted Grounds of Unpatentability

Petitioner asserts that claims 1–18 are unpatentable on the following grounds:

Claim(s) Challenged	35 U.S.C. §	Reference(s)/Basis
1–5, 7–10	103 ¹	Darnell, Kim
6, 12–18	103	Darnell, Kim, Dasgupta
1, 4–10	103	Dasgupta, Darnell
2, 3, 11	103	Dasgupta, Darnell, Kim

Pet. 2.

¹ According to Petitioner, the ’658 patent claims priority to provisional applications filed on February 22, 2011, and October 12, 2010, before the March 16, 2013, effective date of the § 103 provisions in the Leahy-Smith America Invents Act (“AIA”), Pub. L. No. 112-29. Pet. 6. Patent Owner does not contest this. PO Resp. 14. Accordingly, we cite to pre-AIA § 103.

III. ANALYSIS

A. *Legal Standards*

A claim is unpatentable under 35 U.S.C. § 103 if the differences between the claimed invention and the prior art are such that the claimed invention as a whole would have been obvious to a person having ordinary skill in the art at the time of the claimed invention. 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 skill in the art; and (4) objective evidence of nonobviousness, i.e., secondary considerations. *See Graham v. John Deere Co.*, 383 U.S. 1, at 17–18 (1966). Neither party has presented evidence on the fourth *Graham* factor.

The Supreme Court has made clear that we apply “an expansive and flexible approach” to the question of obviousness. *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 415 (2007). Whether a patent claiming the combination of prior art elements would have been obvious is determined by whether the improvement is more than the predictable use of prior art elements according to their established functions. *Id.* at 417. Reaching this conclusion, however, requires more than a mere showing that the prior art includes separate references covering each separate limitation in a claim under examination. *Unigene Labs., Inc. v. Apotex, Inc.*, 655 F.3d 1352, 1360 (Fed. Cir. 2011). Rather, obviousness requires the additional showing that a person of ordinary skill at the time of the invention would have selected and combined those prior art elements in the normal course of research and development to yield the claimed invention. *Id.*

B. Level of Ordinary Skill in the Art

In determining whether an invention would have been obvious at the time it was made, we consider the level of ordinary skill in the pertinent art at the time of the invention. *Graham*, 383 U.S. at 17. “The importance of resolving the level of ordinary skill in the art lies in the necessity of maintaining objectivity in the obviousness inquiry.” *Ryko Mfg. Co. v. Nu-Star, Inc.*, 950 F.2d 714, 718 (Fed. Cir. 1991).

In the Institution Decision, we adopted the description of a person of ordinary skill in the art provided by Petitioner, namely a person having a bachelor’s degree in computer science and two years’ experience working in cloud computing or a similar field, or a master’s degree in computer science or similar field. This description was supported by the testimony of Petitioner’s declarant, Dr. Martin. Paper 21, 8 (citing Ex. 1002 ¶ 121). In its Response, Patent Owner agreed to “apply the description adopted by the Board for purposes of this proceeding.” PO Resp. 15.

Accordingly, we continue to use the same description of a person of ordinary skill used for the Institution Decision.

C. Claim Interpretation

1. Legal Standards

For this *inter partes* review, the Board applies the same claim interpretation standard as that applied in federal courts. *See* 37 C.F.R. § 42.100(b) (2023). Under this standard, claim terms “are generally given their ordinary and customary meaning” as understood by a person of ordinary skill in the art in question at the time of the invention. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–13 (Fed. Cir. 2005) (en banc) (citations omitted).

“In determining the meaning of the disputed claim limitation, we look principally to the intrinsic evidence of record, examining the claim language itself, the written description, and the prosecution history, if in evidence.” *DePuy Spine, Inc. v. Medtronic Sofamor Danek, Inc.*, 469 F.3d 1005, 1014 (Fed. Cir. 2006) (citing *Phillips*, 415 F.3d at 1312–17). “[T]he claims themselves provide substantial guidance as to the meaning of particular claim terms.” *Phillips* at 1314. Moreover, “the context of the surrounding words of the claim also must be considered in determining the ordinary and customary meaning of those terms.” *ACTV, Inc. v. Walt Disney Co.*, 346 F.3d 1082, 1088 (Fed. Cir. 2003). “Importantly, the person of ordinary skill in the art is deemed to read the claim term not only in the context of the particular claim in which the disputed term appears, but in the context of the entire patent, including the specification.” *Phillips* at 1313.

Because the meaning of a claim term as understood by persons of skill in the art may not be immediately apparent, we may look to “those sources available to the public that show what a person of skill in the art would have understood disputed claim language to mean.” *Innova/Pure Water, Inc. v. Safari Water Filtration Systems, Inc.*, 381 F.3d 1111, 1116 (Fed. Cir. 2004). These sources may include extrinsic evidence concerning relevant scientific principles, the meaning of technical terms, and the state of the art. However, such extrinsic evidence is “less significant than the intrinsic record in determining ‘the legally operative meaning of claim language.’” *Phillips*, 415 F.3d at 1317.

Only those terms that are in controversy need be construed, and only to the extent necessary to resolve the controversy. *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017);

Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc., 200 F.3d 795, 803 (Fed. Cir. 1999).

2. “*Real Time*” – *The Parties’ Positions*

In the preliminary phase of this proceeding, the principal claim term in dispute between the parties was the term “real time,” which is recited in independent claims 1, 7, and 12. *See* Pet. 7–8; Prelim. Resp. 14–21; Prelim. Reply 1–5; Prelim. Sur-reply 1–5. In the Institution Decision, we determined based upon the preliminary record at the time, that for purposes of institution,

one of ordinary skill in the art considering the ’658 patent in its entirety, would understand that the use of the term “real time” in the ’658 patent claims means that content and applications are streamed to a master server from its respective sources as soon as it is available and without significant delay to a user.

Dec. 18. We noted in the Decision that this was “a preliminary determination based on the current record before us and is subject to change upon development and consideration of a complete evidentiary record at trial.” *Id.*

Subsequent to the Institution Decision, Patent Owner in its Response argues that our preliminary determination of the meaning of the term “real time,” “is inconsistent with both the claim language and the entire intrinsic record, which repeatedly identify a master web-page that displays streamed content in real time as a hallmark of the invention.” PO Resp. 15–16 (citing Ex.1001, 2:42–46, 2:56–59, 2:66–3:4, 5:21–26, 6:35–41). Patent Owner contends that the term “real time,” “does not require special construction [because] it simply describes the timing of streaming that results in the dynamic display of content on the master web-page.” PO Resp. 16 (citing Ex. 2010 ¶¶ 67–68, 90).

Patent Owner argues that “claim 1 requires content streamed not only to the master server from respective sources in real time . . . but content streamed to the master server from respective sources *in real time on a master web-page*.” PO Resp. 18 (citing Ex. 2010 ¶ 72). Patent Owner contends that this is the proper claim interpretation because it “describe[s] what happens in the patented system—streamed content is received by the master server and displayed on the master web-page in real time, allowing users to scroll, page through, and navigate content in real time with a slide tool.” PO Resp. 20–21 (citing *id.* at § II.A.2, II.B; Ex. 1001, 2:47–3:4, 5:21–26, 6:35–41).

Patent Owner also argues that “[t]he specification unquestionably supports PO’s view,” because “[e]very time the term ‘real time’ is used in the specification to describe the invention, ‘real time’ is either tied to the master webpage/user interface itself or is used in reference to actions (*e.g.*, managing, migrating through, navigating, scrolling/paging through) that must be done on the master web-page.” PO Resp. 21 (citing Ex. 1001, 1:57–62, 2:27–34, 2:56–59, 2:62–3:4, 4:21–26, 5:21–26, 6:38–41; Ex. 2010 ¶ 81). Patent Owner argues that “[t]he prosecution history further reinforces PO’s reading,” because “[t]he file history repeatedly emphasizes that content is streamed in real time simultaneously to a user interface (*i.e.*, a master webpage) so that a user does not need to open additional websites to view the content.” PO Resp. 21–22 (citing Ex. 1003, 134–35; Ex. 2010 ¶ 82).

Patent Owner nonetheless suggests that “[t]he Board need not craft a new definition—it need only clarify that the streaming/scrolling or paging through/navigating limitations operate as unified phrases of which both ‘real time’ and ‘on a master web-page’ are a part.” PO Resp. 25 (citing Ex. 2010, ¶ 90).

In its Reply, Petitioner contends that Patent Owner misunderstands claim 1. Petitioner argues, for example, that it is “the *content data and content applications*” that are “*organiz[ed] on a master web-page by the master application.*” Pet. Reply 3. Petitioner asserts that this reading of claim 1 is supported by the prosecution history, where “original claim 1 did not include ‘on a master web-page’ but still recited *a master application that . . . includes software for organizing content data and content applications . . . viewable from the remote computer devices.*” *Id.* (citing Ex. 1003, 14–15).

Petitioner also disputes Patent Owner’s contention that “[e]ach use of ‘real time’ in the claims links ‘real time’ to a user-facing operation involving the master webpage.” Pet. Reply 4 (citing PO Resp. 19). Petitioner points out that Patent Owner ignores key claim language that links “*real time*” to a specific claim element, such as “*organizing content data and content applications*” from limitation 1[b2] or “*a slide tool program*” from limitations 1[b3]. *Id.* Petitioner argues that Patent Owner “thus conflates *scrolling or paging through the content data . . . in real time* (from 1[b3]) with ‘displayed on the master web-page in real time,’ a phrase that does not appear in the claims.” *Id.*

Petitioner argues that the Specification does not support Patent Owner’s reading of claim 1 with respect to the term “*real time*,” because it is “a conclusory assertion based on a string cite” where three of the citations “do not mention a ‘web-page’ or the ‘display’ of content (Ex. 1001, 1:57–62, 2:27–29, 2:30–34); [and] five refer to ‘scroll[ing] or pag[ing]’ or ‘migrat[ing] through’ ‘content data and content applications’ in ‘real time’ (*id.*, 2:62–65, 2:66–3:4, 4:21–26, 5:21–26, 6:38–41) using the claimed *slide tool program.*” Pet. Reply 5.

Petitioner also contends that Patent Owner mischaracterizes the prosecution history because “[d]uring prosecution, Applicant added the *remote tool box feature application* in 1[c1] to overcome a final rejection while never mentioning the display of streamed content on the master webpage.” Pet. Reply 5–6 (citing Ex. 1003, 418–22). Petitioner further points out that “[i]n the subsequent Notice of Allowance, the Examiner identified the *remote tool box feature application* as the ‘main reason for allowance.’” Pet. Reply 6 (citing Ex. 1003, 430). Petitioner argues that “[t]he patent’s alleged novelty thus derives from a limitation [Patent Owner] does not even address” in the Patent Owner Response. Pet. Reply 6.

Petitioner also challenges Patent Owner’s assertion that “[t]he file history repeatedly emphasizes that content is streamed in real time simultaneously to a user interface (i.e., a master webpage) so that a user does not need to open additional websites to view the content.” See PO Resp., 21–22 (citing Ex. 1003, 134–35). Here, Petitioner points out that in the file history, “Applicant expressly identified the patent’s alleged “two-part solution” (i.e., a navigation tool and streaming to a master server) without mentioning “real-time display” on a “master webpage.” Pet. Reply 6.

Petitioner points out that

the patent makes clear that *content data* can be “any data or information that is stored remotely on servers that are generally accessible over the internet/intranet via a service provider server[]” (EX1001, 4:1-3)—encompassing much more than live video/audio. *Id.*, 4:1-6, 5:34-36 (networking and email data), 5:42-47, 6:18-27, cls. 2-3, 11; EX1082, 200:25-201:14 (*content application* requires the presence of *content data*).

Id. at 10. According to Petitioner, however, Patent Owner “never explains how its proposed requirements could apply to those other types of content (e.g., emails, social media posts) or to *content applications*.” *Id.*

In its Sur-reply, Patent Owner contends that Petitioner “attempts to rewrite the claims by urging a construction that divorces ‘on a master web-page’ from ‘real time’ and the rest of the ‘streamed’ limitation.” PO Sur-reply 4. Patent Owner reiterates that “the claims require content streamed not only to the master server in real time, but content streamed to the master server *in real time on a master web-page.*” *Id.* at 4–5. Patent Owner asserts that Petitioner’s reading of claim 1 “is nonsensical” because it “leads to internal inconsistency and ambiguity in the claim.” *Id.* at 5 (citing Paper 26 at 16–17).

Patent Owner criticizes Petitioner’s arguments with respect to claim 12, because “Petitioner does not explain how the mere mention of a ‘master server’ in the preamble is somehow relevant to the claim’s ‘real time’ limitation.” PO Sur-reply 7.

Patent Owner also criticizes Petitioner’s argument with respect to specification support, pointing out that the Specification explicitly mentions a “user interface,” which Patent Owner equates to the “master web-page.” *Id.* at 8 (citing Ex. 1001, 2:40–42.). According to Patent Owner, “to ensure users experience minimal delay when viewing updated data, the patent describes streaming content *on the master web-page in real time.*” PO Sur-reply 10 (citing Paper 26, 23; Ex. 2010 ¶¶ 87–88).

As for the prosecution history, Patent Owner points out that the Examiner’s stated reasons for allowance “included the remote tool box feature ‘*in conjunction with all the other limitation [sic].*’” PO Sur-reply 8 (citing Ex. 1003, 430–431). Patent Owner also contends that “Petitioner evidently ignores the other portions of the file history cited by PO and Dr. Edwards, which likewise discuss streaming in real time to a user

interface/master web-page.” PO Sur-reply 9 (citing Paper 26, 21–22; Ex. 2010 ¶ 82).

As for the type of “*content data*” and “*content applications*” encompassed by the claims or described in the patent, Patent Owner argues that “there is nothing about PO’s interpretation (*i.e.*, streaming content in real time on a master web-page) that would preclude emails, social media posts, or content applications, and Petitioner offers no explanation why those types of content data or applications ***do not*** fit within PO’s interpretation.” PO Sur-reply 12.

Finally, Patent Owner argues that “any interpretation of ‘real time’ should take into account the specification’s description of the invention, including the definition of “master web-page.” *Id.* at 13–14 (citing Ex. 1001, 4:21–26; Paper 1, 8; Ex. 1002 ¶ 154; Ex. 2012, 127:4–128:7).

3. *Analysis*

The dispute between the parties with respect to the term “real time” can be illustrated with claim 1. In particular, the disputed limitations are 1[b1], 1[b2], and 1[b3]. These limitations taken together read as follows:

1[b1] a master application stored in the memory of the master server and that executes on the processor of the master server and that includes software coded for organizing content data and content applications from multiple content sources or service providers pre-selected by the user

1[b2] and streamed to the master server simultaneously in **real time** from their respective servers on a master web-page and are viewable from the remote computer devices through the master server on the master web-page,

1[b3] wherein the master application programs a processor on the remote computer devices to operate and execute a slide tool program for scrolling or paging

through the content data or the content applications from the multiple content sources or service providers simultaneously and through the master server in **real time** from the master web-page and from the remote computer by operating the slide tool program from the remote computer; and

Ex. 1001, 6:50–7:4 (emphasis added). The term “real time” appears twice in these limitations, once in limitation 1[b2] and a second time in limitation 1[b3].

The disagreement between the parties with respect to the term “real time” appears to lie more in how the term is applied in the claims rather than what the term itself means. Patent Owner states that “[p]roperly understood, the term’s plain meaning is temporal, as both parties appear to agree.” PO Resp. 25. At the oral hearing in this matter, Petitioner’s counsel appeared to agree.

JUDGE TROCK: So, I believe what you're saying is that the definition of real time or the construction of it is not in dispute, it's the application of it with respect to the claims. Is that your point?

MS. KAISER: Yes, Your Honor. And particularly, the context of that particular term, within the various limitations of the independent claims.

Paper 45, 6:25–7:3

Petitioner states that a person of ordinary skill in the art “would have understood [the term “real time”] in the context of the intrinsic record to include content from more than one source that is sent to the server as it becomes available.” Pet. 27, n.9 (citing Ex. 1002 ¶ 178). Dr. Martin, Petitioner’s declarant, testifies that “[i]n other words, these terms signify that the content from multiple sources is transmitted to the server when it

becomes available, without significant delay between content sources.” Ex. 1002 ¶ 178.

Dr. Edwards, Patent Owner’s declarant, testifies that “[r]eal time’ therefore characterizes the observable behavior on the page—the content appears and updates without perceptible delay to the user.” Ex. 2010 ¶ 72. Dr. Edwards concurs that “Dr. Martin is correct that ‘real time’ refers to a system where content is *both updated and displayed* as soon as it becomes available, *i.e.*, streamed to the master server *on a master webpage*.” Ex. 2010 ¶ 89. Dr. Edwards, however, testifies that in his view, “[t]ransmitting content to the server is necessary but not sufficient because the claims require that the content appear on the master webpage in real time.” *Id.*

The ’658 patent does not define the term “real time.” Both parties, however, appear to agree that a person of ordinary skill in the art reading the ’658 patent would understand that the ordinary and customary meaning of the term “real time” is a temporal one, where transmission of content is updated and displayed as soon as it becomes available, without significant delay.

The disagreement between the parties with respect to the term “real time,” appears to lie with the destination of the streamed “real time” content. Petitioner asserts that claim 1 requires content to be streamed to the master server in “real time.” *See* Pet. 27 n.9 (“POSITAs would have understood it in the context of the intrinsic record to include content from more than one source that is sent to the server as it becomes available.”) Patent Owner asserts that claim 1 requires content to be streamed to the master server and on a master web-page in “real time.” *See, e.g.*, PO Resp. 18 (“claim 1 requires content streamed not only to the master server from respective

sources in real time . . . but content streamed to the master server from respective sources *in real time on a master web-page.*”).

We must look to the broader use of the term “real time” in the context of the claims and the Specification in order to properly assess how a person of ordinary skill in the art would understand the use of the term “real time” in the context of the ’658 patent and claims, because “the person of ordinary skill in the art is deemed to read the claim term not only in the context of the particular claim in which the disputed term appears, but in the context of the entire patent, including the specification.” *Phillips* at 1313.

Petitioner asserts that Patent Owner “ignores key claim language that links *real time* to a specific claim element,” for example, “omitting *a slide tool program*—which allows *scrolling/paging through content data and navigating through content data/applications*—from 1[b3].” Pet. Reply 4 (citing PO Resp. 19). Petitioner argues that Patent Owner “conflates *scrolling or paging through the content data...in real time* (from 1[b3]) with ‘displayed on the master web-page in real time,’ a phrase that does not appear in the claims.” Pet. Reply 4.

Patent Owner asserts that “the term ‘real time’ is used in the specification to describe the invention,” pointing out that “real time” “is used in reference to certain actions (*e.g.* managing, migrating through, navigating, scrolling/paging through) that must be done on the master web-page.” PO Resp. 21 (citing Ex. 1001, 1:57–62, 2:27–29, 2:30–34, 2:56–59, 2:62–65, 2:66–3:4, 4:21–26, 5:21–26, 6:38–41). Patent Owner also asserts that when properly interpreted, the claims describe what happens in the patented system, “allowing users to scroll, page through, and navigate content in real time with a slide tool.” PO Resp. 20.

The focus of the parties on the use of “real time” in the context of limitation 1[b3] and the operation of the recited “slide tool program” in that limitation, is key to understanding how the system described in claim 1 operates and how a person of ordinary skill in the art would understand the use of the term “real time” in the context of the claims and the ’658 patent.

Limitation 1[b3] reads as follows:

wherein the master application programs a processor on the remote computer devices to operate and execute a slide tool program for scrolling or paging through the content data or the content applications from the multiple content sources or service providers simultaneously and through the master server in real time from the master web-page and from the remote computer by operating the slide tool program from the remote computer;

Ex. 1001, 6:63–7:4 (emphasis added).

Limitation 1[b3] makes clear that the “scrolling or paging through the content data” occurs “through the master server in real time from the master web-page . . . **by operating the slide tool program from the remote computer.**” It is the user “operating the slide tool program from the remote computer” that results in the “scrolling or paging through the content data.” Limitation 1[b3] describes the active involvement of the user operating a slide tool program from the remote computer to scroll or page through content data through the master server in real time from the master web page. Claim 1 does not describe a system where a user inactively sits and watches programming streamed automatically from multiple content sources or service providers through a master server onto a master web page in “real time” for passive consumption by the user on a remote device. Rather, claim 1 requires the user to actively scroll or page through the content data by “operating the slide tool program from the remote computer.”

Independent claims 7 and 12 recite similar language. *See, e.g.* Ex. 1001, 7:35–43 (“a slide tool program for scrolling or paging through content data or content applications . . . simultaneously streamed to the master server from servers of multiple content data sources or service providers over the internet in real time”); *id.* at 8:21–25 (“wherein a user navigates through the content data or content applications from the multiple content sources or service providers through master web-page in real time from the remote computer using a slide tool program executed from the remote computer”).

The Specification provides further support for this understanding of the term “real time” and the use of the slide tool program on remote computers for actively scrolling or paging through content data or applications from multiple data sources. For example, the ’658 patent’s Abstract describes “a slide tool that allows a user to scroll or page through the content data and/or content applications from the multiple content data sources or service providers in real time from a logged in remote computer device.” Ex. 1001, Abstr.

The Specification also describes a “slide tool [that] allows a user to scroll or page through the content data and/or content applications in real time from [a] master server on a master web-page from the remote computer device.” *Id.* at 2:62–65; *see also id.* at 4:21–26 (“A dynamic user web-page or master web-page is a web-page viewable remotely from a remote computing device via log-in server or master server and *which displays a slide tool that scrolls or pages through content data and/or content application from multiple content data sources and/or service providers in real time.*”) (emphasis added).

It is important to appreciate that claim 1 describes a “master application” that is stored in the memory of the “master server,” and it is the

“master application” that “executes on the processor of the master server software . . . coded for organizing content data and content applications from multiple content sources or service providers pre-selected by the user.” *Ex. 1001*, 6:54–59. The ’658 patent explains that “[t]he log-in or master server is programmed to run and execute a master content application software that is coded for organizing content data and content applications from the multiple content sources or service providers on a single master web-page.” *Id.* at 2:52–56.

In his deposition, Dr. Edwards testified about the location of the master web-page:

Q Where is the master web page? It is on the master server; isn't it?

A The master web page would be a web page that is generated by and implemented within the software that is coded on the master server. And when a client's web browser is directed to that server, the master web page will be transferred to the client computer for rendering within the client's web browser.

Ex. 1082, 92:10–17.

The ’658 patent further explains that “[t]he master content application software, hereafter master program, is further configured to program the remote computing device with code to operate a slide tool.” *Ex. 1001*, 2:60–62. According to the ’658 patent, “[t]he slide tool allows a user to scroll or page through the content data and/or content applications in real time from [the] master server on a master web-page from the remote computer device.” *Id.* at 2:62–65.

The Parties’ declarants appear to concur. For example, Dr. Martin testifies that the ’658 patent describes “a ‘cloud-based computer system and architecture’ designed to allow users to manage and migrate through content

data from multiple sources using a ‘single user interface’ accessible from a remote device.” Ex. 1002 ¶ 63 (citing Ex. 1001, Abstract, 2:30–37). Dr. Martin explains that “[t]his architecture includes a ‘master web-page’ that users can view from a remote computing device, enabling them to ‘scroll or page through the content data and/or content applications from the multiple content data sources or service providers in real time.’” *Id.* Dr. Martin also explains that “a ‘slide tool’ incorporated into this interface ‘allows a user to Scroll or page through the content data and/or content applications in real time from master server on a master web-page from the remote computer device.’” Ex. 1002 ¶ 64 (citing Ex. 1001, 2:60–65).

Dr. Edwards also testifies that the ’658 patent is “directed to a cloud-based computer system and architecture for managing and migrating through web-based content data and content applications from multiple content data sources or service providers in real time.” Ex. 2010 ¶ 60 (citing Ex. 1001, 1:57–62). Dr. Edwards testifies that the ’658 patent describes “master content application software [that] is further configured to program the remote computing device with code to operate a slide tool,” and that “the slide tool allows a user to scroll or page through the content data and/or content applications in real time from [the] master server on a master web-page from the remote computer device.” Ex. 2010 ¶ 61 (citing Ex. 1001, 2:60–65).

During oral argument, Patent Owner’s counsel explained that with respect to the independent claims, “Patent Owner’s reading is that the content is streamed to a master server, and that that same content is navigated or scrolled in real time on the master webpage.” Tr. 38:4–6. Patent Owner also takes the position that “real time” streaming does not

preclude some storage or delay. For example, Dr. Edwards testified at deposition as follows:

[Petitioner's Counsel] Q: In your opinion, does the storage of content before transmission necessarily mean that the system is not real time?

[Dr. Edwards] A: No.

Ex. 1082, 125:19–22.

[Petitioner's Counsel] Q: So, for example, if you have a system that includes some sort of buffering for an incoming stream of data, the fact that that incoming stream is first buffered before it is ultimately output somewhere does not take it necessarily outside the realm of being a real-time system. Is that fair?

[Dr. Edwards] A: I think that it is possible that a real-time system could include buffering.

Id. 126:3–10.

Patent Owner's position was also confirmed by its counsel at the oral hearing in this matter.

MR. WYSS: Okay. So there, there's two parts there. So, the first part, can there be a delay? Under Patent Owner's construction, yes, there could be a delay. It could be a slight -- because the patent's construction is matching the human perception of time or proceeding at approximately the same rate as a physical or external process. Petitioner mentioned, if there's a buffer, there's a two second delay or something like that because of a buffer, I wouldn't say that that's precluded here.

Tr. 41:26–42:6.

JUDGE TROCK: So how much of a delay is acceptable in your view?

MR. WYSS: Yes, so I don't have a position on that. I don't think that the amount of the delay is at dispute here, but I would want to check with an expert on what amount of delay is acceptable for a real time stream. But I'm sorry, I can't take a position on that today. But I would say that our position is certainly not that

there's absolutely no delay because there's necessarily some delays as information's transmitted through the internet.

Id. at 42:7–14.

JUDGE TROCK: Counsel, not to interrupt you, but I wanted to clarify because we asked Petitioner's Counsel this question, I'll ask you. Is storage precluded by Claim 1?

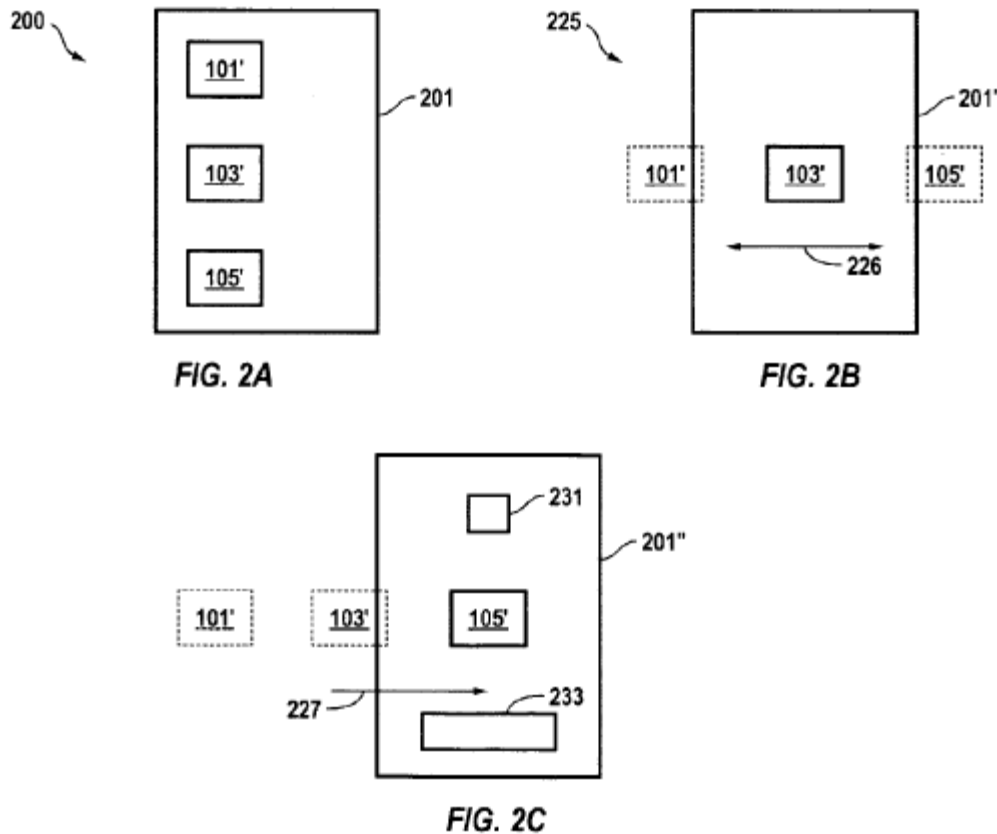
MR. WYSS: No, it's not. So, Claim 1 doesn't preclude storing. Storing could occur in the context of buffering. Storing could also occur just contemporaneously with real time streaming.

Id. at 53:20–25.

It is also important not to ignore the recited “organizing” operation required by independent claim 1. *See* Ex. 1001, 6:56–59 (“organizing content data and content applications from multiple content sources or service providers pre-selected by the user”). “Organizing content data and content applications,” in whatever form it takes, is going to require a certain amount of time.

For example, the Specification explains that “[t]he master application 107 is coded for organizing content data and content applications from the multiple content sources or service provider servers 101, 103 and 105 on a master web-page 201, 201' and 201" (FIGS. 2A-C).” *Id.* at 4:50–53.

Figures 2A-C are shown below.



Figures 2A-C show representation dynamic user web-pages or master web-pages for simultaneously displaying content data and/or content applications from multiple content sources, and shows a representation dynamic user web-page for displaying and scrolling or paging through content data and/or content applications from multiple content sources in real-time with a slide tool. *Id.* at 3:44–55. The Specification explains that

With the remote computing device 111 enabled with the slide tool or scrolling tool 126, a user can view his or her master web-page 201' and scroll through or page through content data and content applications 101', 103' and 105' from corresponding set of content data sources or service provider servers 101, 103, and 105 in real time.

Id. at 5:21–26.

The Specification also explains that

a master web-page 201" includes a slide tool or scrolling tool indicated by the arrow 227 operable from any suitable user interface on the remote computing device 111, Such as describe above. In addition, the master application 107 is equipped with a tool box that allows an authorized user or administrator to build the master web-page 201" and include features for displaying and migrating through personal content data, such as those provided by a networking web-site or an e-mail web-site 233. In operation, portions of content data and/or portions of content applications 101', 103' and 105' from the corresponding set of content sources or service provider servers 101, 103 and 105 are capable of being selected and copied using the computing device 111 and saved to the user's master web-page 201" or one or more of the user's personal accounts.

Id. at 5:28–42.

The parties' declarants discuss the required "organizing" operation of the '658 patent. Dr. Martin, for example, explains that "[c]ontent is aggregated and organized by master application 107 and accessed by a user using a remote computing device, such as desktop computer with a monitor or display." Ex. 1002 ¶ 66 (citing Ex. 1001, 4:50–67). Dr. Martin also explains that

the '658 patent discusses "content applications" as software that "accesses[,] display[s,] and organize[s] content data, generally from a web-site." This description shows that as content updates on a source server, the master application, which organizes and displays content on the master web page, retrieves this content promptly to ensure users experience minimal delay when viewing updated data.

Ex. 1002 ¶ 181 (citing Ex. 1001, 4:4–6).

Similarly, Dr. Edwards explains that "[a] user 'logs into the master server over the internet/intranet from a remote computing device,' and the 'master content application software' that runs on the server 'is coded for organizing content data and content applications from the multiple content

sources or service providers on a single master web-page.” Ex. 2010 ¶ 60 (citing Ex. 1001, 2:47–54).

At the oral hearing in this proceeding, Patent Owner’s counsel explained its position on “organizing”:

MR. WYSS: To build master webpage 201 and include features for displaying and migrating through personal content. Yes, I don't dispute that the user can organize the webpage. I don't know if the claim is limited to user organization. But I don't dispute that a user certainly could be the one organizing it. Someone's got to organize it. I think that there implies there's a human process going on, potentially it could be organized by the person who's providing the application. But I think it's organized in some manner by somebody. I don't think that just the streams appearing on the webpage are organization, if that's your question.

Tr. 66:10–19.

We believe that the evidence of record, when considered as a whole, weighs in favor of Petitioner’s view. With respect to claim 1, the term “real time” is recited twice. It is first recited with respect to limitations 1[b1] and 1[b2], where “a master application stored in the memory of the master server . . . executes . . . software coded for **organizing content data and content applications from multiple content sources or service providers pre-selected by the user and streamed to the master server simultaneously in real time** from their respective servers on a master web-page and are viewable from the remote computer devices through the master server on the master web-page.” Ex. 1001, 6:34–63 (emphasis added).

The term “real time” is recited a second time in claim 1 with respect to limitation 1[b3], “wherein the master application programs a processor on the remote computer devices **to operate and execute a slide tool program for scrolling or paging through the content data or the content**

applications from the multiple content sources or service providers simultaneously and through the master server in real time from the master web-page and from the remote computer by operating the slide tool program from the remote computer.” *Id.* at 6:63–7:4 (emphasis added).

When read together, claim 1 describes a system where a user operating a slide tool program on a remote computer device scrolls or pages through content data or applications from multiple sources or providers simultaneously and through a master server in real time on a master web page. Claim 1 also describes that the system comprises a master application stored on a master server with software for organizing content data and applications from multiple sources or providers pre-selected by the user and streamed to the master server simultaneously in real time that are made viewable from the remote computer devices through the master server on the master web-page.

A person of ordinary skill in the art reading claim 1 as a whole in the context of the entire '658 patent would therefore understand that the “real time” experience of the user occurs through the use of the slide tool program operating on the remote computer device by scrolling or paging through the content data or content applications on the master web page organized by the master application residing on the master server. A person of ordinary skill in the art would also understand that the master application receives the content data and content applications in “real time” from the multiple content sources or service providers that it organizes on the master web page that is viewable by the user from the remote computer device using the slide tool program.

The fundamental problem with Patent Owner’s position is that it tends to misinterpret the full context of claim 1 and the other independent claims

when read in connection with the '658 Specification. This is made evident by Patent Owner's repeated emphasis of the phrase "***in real time on a master web page***," or similar iterations, in its arguments even though that particular phrase does not appear in any of the claims verbatim. *See, e.g.*, PO Resp. 16, 18, 35, 36, 38, 40, 43, 44, 60, 62, 64, PO Sur-reply 3, 4, 5, 10, 11, 12, 16, 17, 23, 24, 25.

Our understanding of claim 1 is supported by the use of the phrase "real time" in the other claims, for example, independent claim 7 is directed to a system, which recites in pertinent part, "wherein the content data or content applications are simultaneously streamed to the master server from servers of multiple content data sources or service providers over the internet in real time." *Id.* at 7:40–43. Claim 7 also recites "a remote tool box feature that programs a processor on a remote computer with a slide tool program for scrolling or paging through content data or content applications from multiple content data sources or service providers enabled by a user simultaneously on a web-page created by the master application and hosted on the master server using hardware on remote computer." *Id.* at 7:34–40.

Similarly, independent claim 12 is directed to a method, which recites in pertinent part a "master server which streams the content data or content applications from the multiple servers of the multiple content sources or service providers simultaneously to the cloud-based master server;" and "wherein a user navigates through the content data or content applications from the multiple content sources or service providers through [a] master web-page in real time from the remote computer using a slide tool program executed from the remote computer." *Id.* at 8:11–15, 21–25.

The Specification also supports our understanding of "real time" as it is used in the claims. *See, e.g.*, Ex. 1001, Abstr. (describing "a slide tool that

allows a user to scroll or page through the content data and/or content applications from the multiple content data sources or service providers in real time from a logged in remote computer device.”), *id.* at 2:62–65 (describing a “slide tool [that] allows a user to scroll or page through the content data and/or content applications in real time from [a] master server on a master web-page from the remote computer device”).

Patent Owner’s counsel also appears to agree that the source content is first streamed to the master server from the content sources, and then navigated or scrolled by the user in real time on the master web page, ostensibly using the recited slide tool program on the remote computer device. *See* Tr. 38:4–6 (“Patent Owner’s reading is that the content is streamed to a master server, and that that same content is navigated or scrolled in real time on the master webpage.”).

In our Decision on Institution, we stated at the time that

Based on the current record, we preliminarily agree with Petitioner that a person of ordinary skill in the art considering the claims and the intrinsic record of the ‘658 patent in its entirety, would understand that the use of the term “real time” in the ‘658 patent claims means: 1) streaming content data and content applications to the master server simultaneously in real time from their respective servers (claim 1[b2]); 2) scrolling or paging through the content data or the content applications . . . simultaneously and through the master server in real time (claim 1[b3]; 3) content data or content applications are simultaneously streamed to the master server . . . over the internet in real time (claim 7[c]); and 4) navigating through the content data or content applications . . . in real time from the remote computer (claim 12[b2]).

Dec. 15–16.

We determined at the time that

Based on the evidentiary record currently before us, we determine that Petitioner has made a sufficient showing, for purposes of institution, that one of ordinary skill in the art considering the '658 patent in its entirety, would understand that the use of the term “real time” in the '658 patent claims means that content and applications are streamed to a master server from its respective sources as soon as it is available and without significant delay to a user. This is a preliminary determination based on the current record before us and is subject to change upon development and consideration of a complete evidentiary record at trial.

Id. at 18.

We bear in mind that Patent Owner has taken the position in this proceeding that the term “‘real time’ does not require special construction—it simply describes the timing of streaming that results in the dynamic display of content on the master web-page” (PO Resp. 16) and that “[t]he Board need not craft a new definition—it need only clarify that the streaming/scrolling or paging through/navigating limitations operate as unified phrases of which both ‘real time’ and ‘on a master web-page’ are a part” (PO Resp. 25).

Based on the complete record before us now, we determine that one of ordinary skill in the art at the time of the claimed invention considering the '658 patent in its entirety, would understand that the use of the term “real time” in claim 1 of the '658 patent² means that content data and content applications from multiple content sources or service providers pre-selected

² We note that independent claims 7 and 12 also use the term “real time” but in slightly different contexts than claim 1. Accordingly, the understanding of the use of the term “real time” in claims 7 and 12 may be slightly different than its application in claim 1.

by a user are streamed to a master server from their respective sources or providers as soon as it becomes available, without significant or perceptible delay, wherein the master server organizes the content on a master web page making it viewable to a user on a remote computer device using a slide tool program for scrolling or paging through the content as soon as it becomes available, without significant or perceptible delay to the user.

D. Patentability Challenges

Petitioner presents four grounds challenging the patentability of particular claims of the '658 patent under 35 U.S.C. § 103. Petitioner challenges claims 1–5 and 7–10 based on the combined teachings of Darnell and Kim (Ground 1A); claims 6 and 12–18 based on the combined teachings of Darnell, Kim, and Dasgupta (Ground 1B); claims 1 and 4–10 based on the combined teachings of Dasgupta and Darnell (Ground 2A); and claims 2, 3, and 11 based on the combined teachings of Dasgupta, Darnell, and Kim (Ground 2B). Pet. 2.

1. Relevant Prior Art

a) Darnell (Ex. 1004)

Darnell is a U.S. Patent Application Publication that published on April 10, 2008, which is before the earliest priority date of the '658 patent. Ex. 1001, code (60); Ex. 1004, codes (43), (22). Petitioner asserts that Darnell is “prior art under at least 35 U.S.C. § 102(b).” Pet. 1.

Darnell relates “generally to content syndication, and more particularly, to a content feed user interface with multiple modes for viewing content feed items.” Ex. 1004 ¶ 7.

Darnell’s Figure 1 is reproduced below:

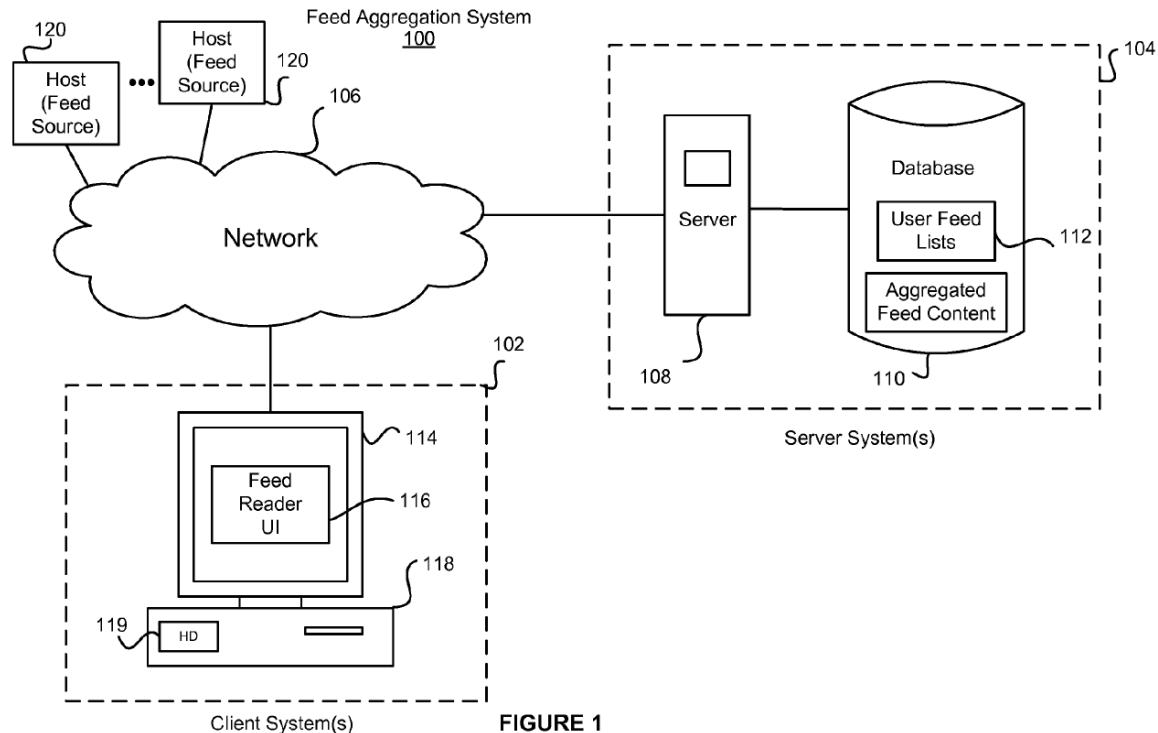


FIGURE 1

Darnell's Figure 1, above, is a block diagram illustrating a content feed aggregation system. *Id.* ¶ 32. The content feed aggregation system 100 includes a server system 104 that is coupled to one or more client systems 102 and to one or more hosts 120 (or "feed sources") by a network 106. *Id.* The server system 104 includes a server 108 and a database 110 and accesses content feeds from the feed sources 120. *Id.* ¶ 33. Server 108 (sometimes called a front end server) serves as a front-end for the server system 104 and retrieves the content feeds from the feed sources 120, and also provides an interface between the server system 104 and the client systems 102. *Id.* Darnell discloses that, in some embodiments, the functions of server 108 may be divided or allocated among two or more servers. *Id.*

b) Kim (Ex. 1005)

Kim is a U.S. Patent Application Publication that published on January 18, 2007, which is before the earliest priority date of the '658

patent. Ex. 1001, code (60); Ex. 1005, codes (43), (22). Petitioner asserts that Kim is “prior art under at least 35 U.S.C. § 102(b).” Pet. 2.

Kim describes tools that present content in a user interface tailored to traits of the content. Ex. 1005 ¶ 18. Kim describes that in one embodiment, the tools organize content items into groups based on the content items having a common trait and enable a user to select content items by their group. *Id.* Responsive to the user’s selection of a group, the tools can present content, render enclosures, and alter traits of content items in the selected group. *Id.*

Kim’s Figure 1 is reproduced below:

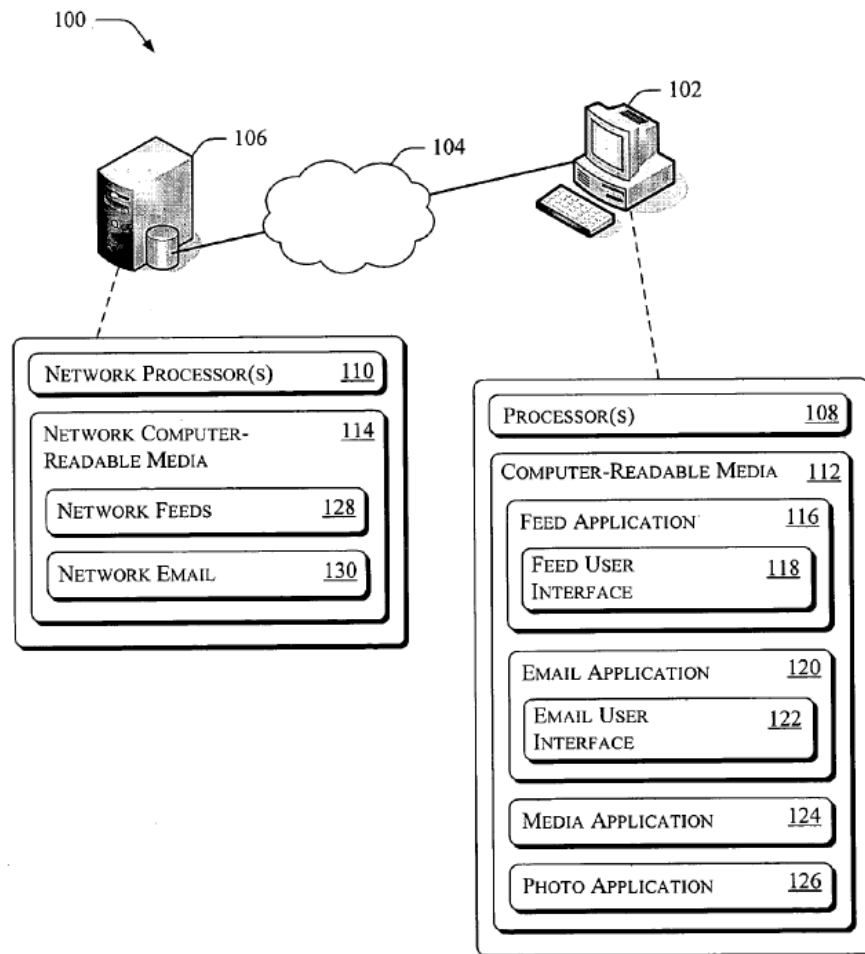


FIG. 1

Kim's Figure 1, above, illustrates an operating environment 100 comprising a computer 102, a communication network 104, and a network computer 106. *Id.* ¶ 20. Computer-readable media 112 comprises instructions that implement a feed application 116 having a feed user interface 118, an email application 120 having an email user interface 122, a media application 124, and a photo application 126. *Id.* ¶ 21. Network computer-readable media 114 comprises the network feeds and network email, both of which are capable of sending content across network 104 to computer 102. *Id.* ¶ 22.

c) Dasgupta (Ex. 1006)

Dasgupta is a U.S. Patent that issued on January 28, 2014, from an application filed on December 31, 2009, which is before the earliest priority date of the '658 patent. Ex. 1001, code (60); Ex. 1006, codes (45), (22). Petitioner asserts that Dasgupta is "prior art under at least 35 U.S.C. §102(e)." Pet. 2.

Dasgupta describes "user interfaces and user interface enhancements for media content access systems and methods." Ex. 1006, 1:64–65. Dasgupta's Figure 1 is reproduced below:

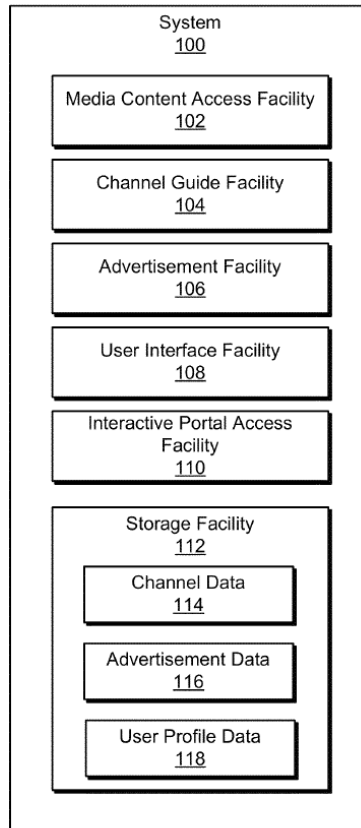


Fig. 1

Dasgupta's Figure 1, above, illustrates an exemplary media content access system 100 that may be configured to access and present media content, as well as to generate and provide one or more GUIs for viewing and utilization by a user (e.g., an end user such as a subscriber to one or more services accessible by system 100). *Id.* at 2:64–3:3. Dasgupta discloses that system 100 may include a media content access facility 102, a channel guide facility 104, an advertisement facility 106, a user interface facility 108, an interactive portal access facility 110, and a storage facility 112 selectively and communicatively coupled to one another. *Id.* at 3:4–8.

E. Obviousness over Darnell and Kim (Ground 1A)

For Ground 1A, Petitioner contends that claims 1–5 and 7–10 are unpatentable under 35 U.S.C. § 103 as obvious over Darnell and Kim. Pet. 9–44. Claims 1 and 7 are independent.

We begin our analysis by considering Petitioner’s rationale for combining the teachings of Darnell and Kim, which is not substantively challenged by Patent Owner.

1. Rationale to Combine Darnell and Kim

Petitioner contends that “Darnell and Kim address similar problems of aggregating and presenting multiple feed sources to users.” Pet. 13 (citing Ex. 1002 ¶ 146). Petitioner notes, for example, that “Darnell addresses ‘[l]ooking through a dense list of content items to locate items of interest,’ which is cumbersome for users,” and Kim “similarly addresses the problem of viewing multiple pieces of fragmented content from news sources, blog entries, email, and the like in a ‘consuming experience having significant drawbacks.’” Pat. 13–14 (citing Ex. 1002 ¶ 146; Ex. 1004 ¶ 9; Ex. 1005 ¶ 1).

Petitioner asserts that a person of ordinary skill in the art would have understood Kim’s teachings for aggregating news, blog entries, and email in a network computer and sending the feeds to a remote computer for display in a UI to be suitable for use with Darnell’s feed reader architecture, in which content feed sources are aggregated on a remote server instead of at the user device.

Pet. 14 (citing Ex. 1005 ¶¶ 20–24; Ex. 1002 ¶ 146).

Petitioner asserts that a person of ordinary skill in the art would have also been motivated to implement Kim’s identification of “traits” and the organization of the UI based on those traits in Darnell’s feed aggregation system. *Id.*, ¶ 147.

POSITAs would have been further motivated to implement Kim's feed application, email application, media application, and photo application using Darnell's server system 104 rather than on user devices, because doing so would allow users to access personalized content feeds on any device (e.g., phone, computer, tablet, etc.) instead of only on a single device.

Pet. 14–15 (citing Ex. 1002 ¶¶ 147–150).

Petitioner also asserts that a person of ordinary skill in the art would have further understood Darnell's and Kim's compatibility because they disclose content feed aggregators with a similar user experience—aggregating multiple content feeds from different sources into a unified UI displayed on user devices. Ex. 1004, Abstract, ¶¶ 8, 11–14, 30–32, 37–38, Fig. 1; Ex. 1005, Abstract, ¶¶ 20–23, 37, Fig. 1; Ex. 1002 ¶¶ 151–152. Thus, POSITAs would have been motivated to implement Kim's additional feed types and feed processing on a server instead of user devices based on Darnell's teachings.

Pet. 15 (citing Ex. 1002 ¶¶ 149–152).

Petitioner also argues that a person of ordinary skill in the art

would have had a reasonable expectation of success using Kim's traits and usage history to control how Darnell displays feeds based on scores because Kim shows that using such a technique to organize displayed feeds was well within the skill of POSITAs. Ex. 1002 ¶ 213. Furthermore, organizing and presenting content to users based on previous viewing of the content would have been a straightforward application of known, conventional content aggregation methods used according to their known functions to yield predictable results. *Id.*

Pet. 17.

Petitioner concludes that

[a]pplying Kim's teachings to Darnell would have been nothing more than applying Kim's known technique of detailed, trait-oriented organization of multiple feeds to improve Darnell's remote content feed aggregation systems in the same manner. And using Kim's organization of feeds based on user history and

relevance would have improved Darnell's system by tailoring content presentation to individual user preferences, making frequently accessed or popular feeds readily available.

Pet. 18 (citing Ex. 1005 ¶¶ 68–70; Ex. 1002 ¶¶ 226–231).

Based on the evidence and arguments presented, we find that Petitioner has established by a preponderance of the evidence that a person of ordinary skill in the art at the time of the claimed invention would have had a reason to combine the teachings of Darnell and Kim in the manner described in the Petition and would have had a reasonable expectation of success in doing so.

2. *Independent Claim 1*

Petitioner contends that independent claim 1 is unpatentable under 35 U.S.C. § 103 as obvious over the combined teachings of Darnell and Kim. Pet. 2, 18–37; Pet. Reply 11–17. Petitioner provides the testimonial evidence of Dr. Martin in support of its contentions. Ex. 1002 ¶¶ 154–213.

Patent Owner disputes Petitioner's contentions regarding limitations 1[b1], 1[b2], and 1[b3]. PO Resp. 35–46; PO Sur-reply 15–18. Patent Owner provides the testimonial evidence of Dr. Edwards in support of its contentions. Ex. 2010 ¶¶ 105–131.

We consider the disputed limitations first and start with Petitioner's contentions followed by Patent Owner's contentions.

a) *Limitation 1[b1]*

Limitation 1[b1] recites:

a master application stored in the memory of the master server and that executes on the processor of the master server and that includes software coded for organizing content data and content applications from multiple content sources or service providers pre-selected by the user.

Ex. 1001, 6:54–59; *see also* Pet. ix.

For this limitation, Petitioner asserts that “Darnell discloses or suggests this limitation.” Pet. 22 (citing Ex. 1002 ¶¶ 166–177). Petitioner explains that “Darnell’s server system 104 (*master server*) includes memory 504 (*the memory*) for storing programs, modules and data structures that correspond to different sets of instructions, as shown in [Darnell’s] Figure 5.” Pet. 22 (citing Ex. 1004 ¶¶ 71–80, Fig. 5; Ex. 1002 ¶ 166). Darnell’s Figure 5 annotated by Petitioner, is shown below.

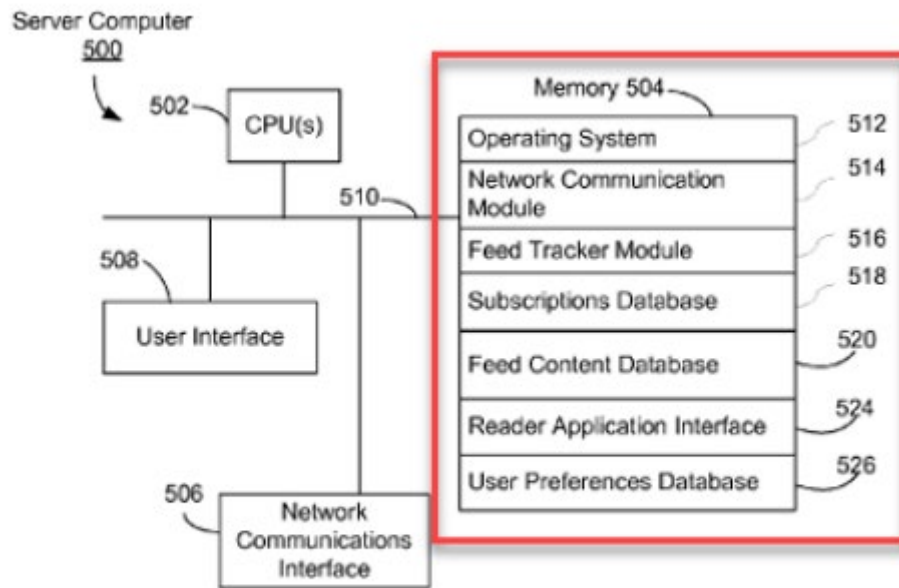


Figure 5

Darnell’s Figure 5 is a block diagram illustrating Server Computer 500 comprising CPU(s) 502, Memory 504 (annotated with red rectangle), Network Communications Interface 506, and User Interface 508. Memory 504 comprises Feed Content Database 520, which “stor[es] content items from content feeds and user information about content items.” Ex. 1004 ¶ 76. Petitioner points out that such content “may be any machine-readable data, including but not limited to web pages, images, digital audio, digital video, Portable Document Format (PDF) documents, and so forth.” Pet.

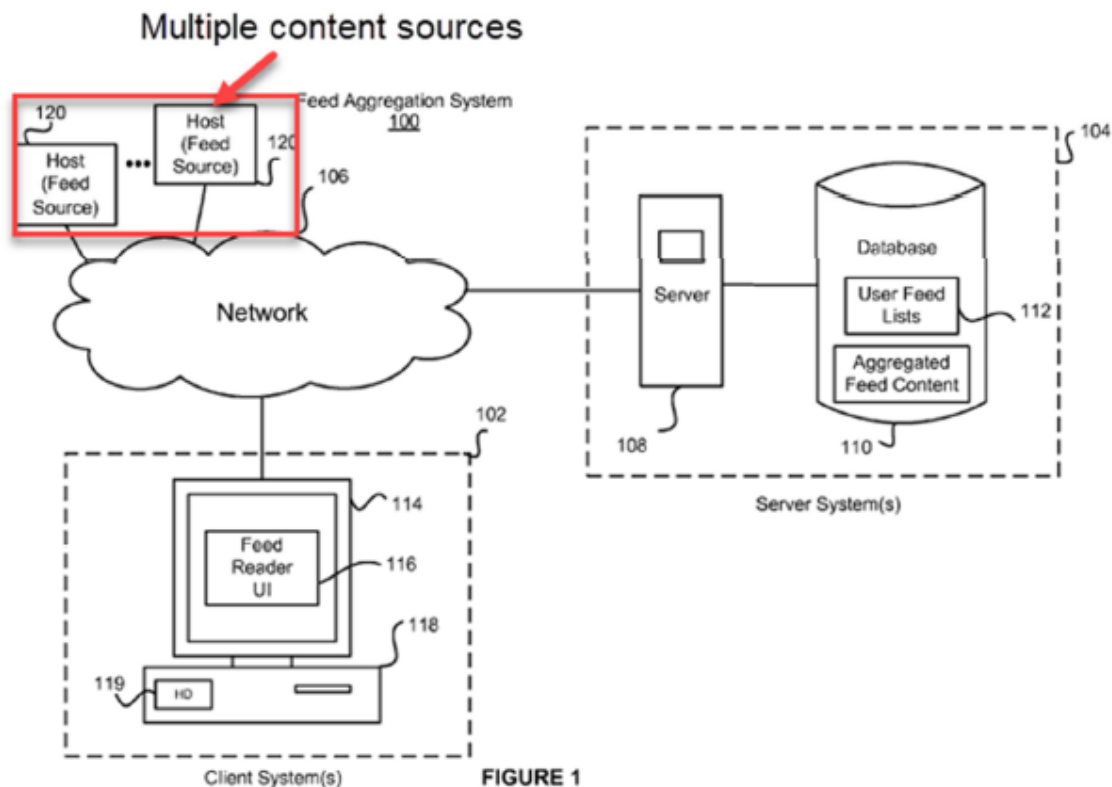
22–23 (citing Ex. 1004 ¶ 36). Petitioner explains that “a content item (*content data*) ‘may include the content associated with the item itself..., a title..., and/or a description of the content, a network location or locator (e.g., URL) of the content, or any combination thereof.’” Pet. 23.

According to Petitioner, “[c]ontent items are received at the server and stored in a database before being sent to the user through the feed reader interface.” *Id.* (citing Ex. 1004 ¶¶ 33 (“Server 108, sometimes called a front end server, retrieves the content feeds from the feed sources 120, and also provides an interface between the server system 104 and the client systems 102.”), 34 (“The server system 104 stores content items in the content feeds in the database 110.”), 40, 76, 81, 114; Ex. 1002 ¶ 167).

Darnell’s Figure 5 also illustrates Subscriptions Database 518 as part Memory 504, which, according to Petitioner, “stor[es] information about the content feed subscriptions of users of the system.” Pet. 23 (citing Ex. 1004 ¶ 75). Also illustrated as part of Memory 504 is Reader Application Interface 524 for “exchanging information with the feed reader modules in one or more client computers,” and User Preferences Database 526 for “storing user-specific information, including user preferences with regard to the user interface.” Pet. 23 (quoting Ex. 1004 ¶¶ 77–78). Darnell’s Server Memory 504 also includes Operating System 512 for running programs. Pet. 23 (citing Ex. 1004 ¶ 72).

According to Petitioner, a person of ordinary skill in the art “would have understood Darnell’s modules and data structures on the server collectively are a *master application* that resides in memory 504 (*memory*) of server system 104 (*master server*) and executes on the CPU 502 (*processor*).” *Id.* (citing Ex. 1002 ¶ 168).

Petitioner also provides Darnell’s annotated Figure 1, shown below.



Darnell's Figure 1 is a block diagram illustrating Feed Aggregation System 100 having "multiple feed sources 120 [annotated with red rectangle] (*multiple content sources or service providers*), and "[a] content feed (or channel)...provides a list of content items that are present, recently added, or recently updated at a feed source 120." Pet. 24–25 (citing Ex. 1004 ¶ 36, Fig. 1; Ex. 1002 ¶¶ 169–170). Petitioner points out that "[a] user interfaces with the server system 104 and views content items at a client system or device 102" via "a feed reader user interface 116 that may be presented on the display 114," as "a web-based user interface," and that allows the user to "create a list of feed subscriptions" (*preselected by the user*). Pet. 24 (citing Ex. 1004 ¶¶ 39–41; Ex. 1002 ¶¶ 169–170).

Petitioner explains that "[f]eed reader UI 116 presents an 'ordered list' of content items in compact or expanded format (*content applications*)

organized by timestamp or by ‘a score that takes into account both the content of the items and the timestamps of the items’ (*organizing content data and content applications*).” Pet. 25 (citing Ex. 1004 ¶¶ 30, 41, 43–45, 47, 49, 51–58, Figs. 3A–D; Ex. 1002 ¶ 170).

According to Petitioner, a person of ordinary skill in the art “would have understood the modules and data structures (collectively, *a master application*) on Darnell’s server 104 create this ordered list.” Pet. 25 (citing Ex. 1002 ¶ 170). Petitioner explains that

Darnell’s UI further uses “Frames” to partition the webpage and a “JavaScript application” that “receives content items from the server system 104, manages the rendering of those content items at the client, and also performs the client-side aspects of other tasks, such as marking items as read, adding and removing content feed subscriptions, labeling content feed subscriptions and/or individually selected content items, selecting or revising user preferences, and the like.”

Pet. 25–26 (citing Ex. 1004 ¶ 41; Ex. 1002 ¶¶ 172–177). Petitioner points out that “[t]he compact and expanded views of the content data in the UI is controlled by the HTML or XML programming of the webpage, including the JavaScript.” Pet. 26 (citing Ex. 1002 ¶ 172). According to Petitioner, a person of ordinary skill in the art “would have understood the web-based feed UI 116 renders the ordered list of content items using HTML or XML programming (including JavaScript and Frames) that constitutes a *content application*.” Pet. 26 (citing Ex. 1004 ¶ 67; Ex. 1002 ¶ 177; *accord* Ex. 1001, 4:4–6).

b) Limitation 1[b2]

Limitation 1[b2] recites:

and streamed to the master server simultaneously in real time from their respective servers on a master web-page and are

viewable from the remote computer devices through the master server on the master web-page,

Ex. 1001, 6:59–63; *see also* Pet. ix.

For this limitation, Petitioner asserts that “Darnell discloses or suggests this limitation.” Pet. 26 (citing Ex. 1002 ¶¶ 178–187). Petitioner explains that “[a]s shown in [Darnell’s] Figure 1 above, content items are streamed to server system 104 (*master server*) from their hosts/feed sources 120 (*their respective servers*).” Pet. 26 (citing Ex. 1004 ¶ 32; Ex. 1002 ¶ 183 (“server” and “host” are often used interchangeably, and hosts “serve” information to other computers)). Petitioner points out that “Darnell explains that server 108 (within server system 104) ‘retrieves the content feeds from the feed sources 120, and also provides an interface between the server system 104 and the client systems 102.’” Pet. 26 (citing Ex. 1004 ¶ 33). “Thus,” Petitioner asserts, “content from multiple feeds is simultaneously streamed to *the master server* and presented in the user’s feed chronologically with a timestamp.” Pet. 26–27 (citing Ex. 1004, Figs. 3A–3D ¶¶ 31 (“feed items from a content feed source can be considered to be a stream of items”), 51, 109; Ex. 1002 ¶ 183).

According to Petitioner, “Darnell’s feed tracker module 516 retrieves ‘content items for storage periodically and/or as content feeds are updated’ (Ex. 1004 ¶ 74), which [a person of ordinary skill in the art] would have understood to mean the server receives the content in real time within the meaning of the ’658 Patent.” Pet. 27 (citing Ex. 1004 ¶¶ 184–186).

Petitioner asserts that

Although the ’658 Patent does not define the term “real time,” POSITAs would have understood it in the context of the intrinsic record to include content from more than one source that is sent to the server as it becomes available. [Ex. 1002] ¶ 178. Any

argument by PO that a “stream” of real-time content requires ongoing, continuous data transmission is inconsistent with the patent. For example, claims 3 and 11 recite “the personal content account is an email account,” and claim 2—from which claim 3 depends—additionally recites that the “content sources or service providers include...social media...” [Ex. 1001], 2:40–46, 5:31–36, 7:14–19, 8:3–5. POSITAs would have known email and social media update when new content is available.

Pet. 27 n.9 (citing Ex. 1002 ¶¶ 178–182).

Darnell’s Figure 3A, annotated by Petitioner, is shown below.

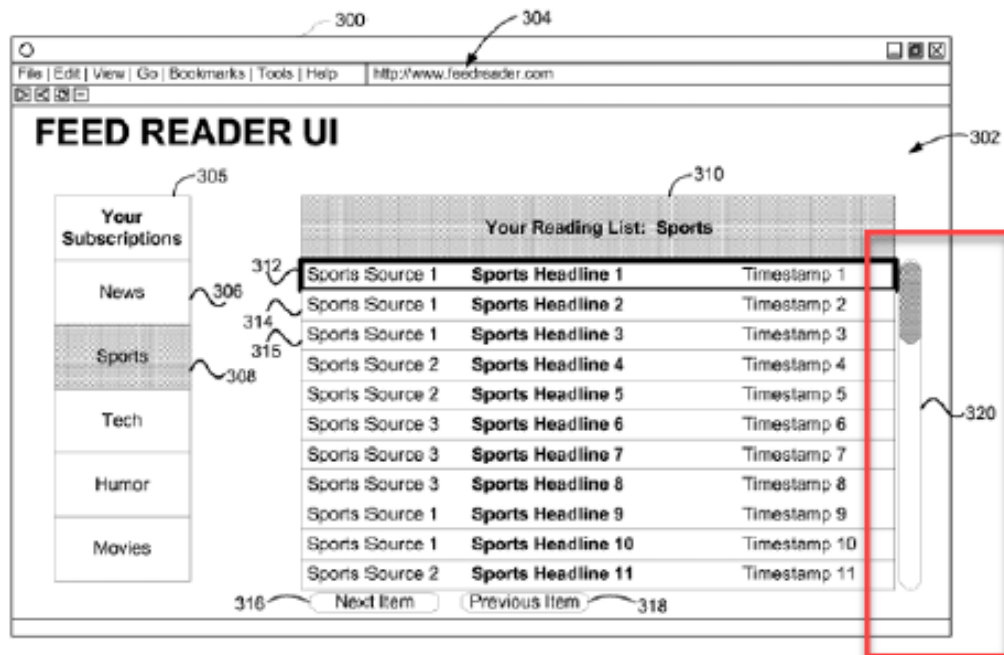


Figure 3A

Darnell’s Figure 3A is a schematic screenshot of web-browser user interface 300 presenting a web page that displays feed reader user interface 302 of a content feed reader, including URL field 304, label list 305 associated with user subscribed content feeds, ordered list 310 arranged according to timestamps associated with the items, and scrollbar 320 (annotated with red rectangle). Pet. 28; Ex. 1004 ¶ 49.

Petitioner explains that “[w]hen viewing content items, the user ‘may attempt to scroll beyond the end of the displayed list,’ which triggers a ‘fetch’ command to retrieve additional content items from server computer 104.” Pet. 28 (quoting Ex. 1004 ¶ 112). According to Petitioner, a person of ordinary skill in the art “would have therefore understood Darnell’s reader interface webpage to be a *master web page*.” Pet. 28 (citing Ex. 1002 ¶¶ 185–187; Ex. 1001, 4:21–26).

Petitioner argues that “Darnell thus *streams* content from multiple hosts 120 (*respective servers*) *simultaneously* when they send updates (*in real time*) to the server system 104 (*master server*), where content is viewable on feed reader interface 116 webpage (*master web page*) displayed on a client system device (*remote computing device*).” Pet. 28–29.

c) *Limitation 1[b3]*

Limitation 1[b3] recites:

wherein the master application programs a processor on the remote computer devices to operate and execute a slide tool program for scrolling or paging through the content data or the content applications from the multiple content sources or service providers simultaneously and through the master server in real time from the master web-page and from the remote computer by operating the slide tool program from the remote computer;

Ex. 1001, 6:63–7:4; *see also* Pet. ix.

For this limitation, Petitioner asserts that “Darnell discloses or suggests this limitation.” Pet. 29 (citing Ex. 1002 ¶¶ 188–191). Petitioner explains that “Darnell’s feed reader UI 116 is received from server system 104 executing modules and data structures (*the master application*) as a program (e.g., webpage) on the processor (*programs a processor*) of the client system(s) (*the remote computer devices*).” Pet. 29 (citing *id.* at Sec. VII.A.2.c; Ex. 1004 ¶ 67; Ex. 1002 ¶¶ 188–190). Petitioner notes that “[a]s

explained above in 1[b1]-1[b2], feed reader UI 116 includes scrollbar 320 (*a slide tool program*) for scrolling through an ordered list 310 of content items (*for scrolling or paging through the content data or the content applications from the multiple content sources or service providers*).” Pet. 29 (citing *id.* at Sec. VII.A.2.c–VII.A.2.d; Ex. 1004 ¶ 54; Ex. 1002 ¶ 189; *accord* Ex. 1001, 4:24–26). According to Petitioner, “[t]he web-based UI is “written in the Hypertext Markup Language (HTML), Extensible Markup Language (XML), or any other suitable language for preparing web pages, and may include one or more scripts for interfacing with the server system.” Pet. 29 (quoting Ex. 1004 ¶ 41). Petitioner points out that “[t]hose scripts (e.g., JavaScript or ECMAScript) are ‘embedded in a web page served from the server system 104 [and] . . . [w]hen the web page is rendered, the feed reader module 420 [script] is executed, thereby providing a web-based interface to the server system 104.’” Pet. 29 (quoting Ex. 1004 ¶ 67). “Thus,” Petitioner asserts, “users operate Darnell’s scrollbar 320 from a client system via the web-based UI (*from the master web-page and from the remote computer by operating the slide tool program from the remote computer*).” Pet. 29–30 (citing Ex. 1002 ¶ 191).

d) Patent Owner’s Contentions

(1) Real Time

Patent Owner first contends that “Darnell does not disclose content ‘streamed to the master server . . . in real time . . . on a master web-page.’” PO Resp. 35–43.

Patent Owner asserts that a person of ordinary skill in the art “would understand the ‘streamed’ limitation to require that content is streamed: (1) to the master server; (2) simultaneously in real time; (3) from their respective servers; **and** (4) on a master web-page.” *Id.* (citing Ex. 2010

¶¶ 71, 112–127. Patent Owner argues that “Darnell’s retrieve-merge-store workflow followed by on-request delivery of lists fundamentally differs from what the claim requires.” PO Resp. 35 (citing Ex. 2010 ¶¶ 113–116).

Patent Owner asserts that “Darnell’s system aggregates content feeds or content items on a server, merges new content with historical content, stores the merged content items in a persistent database, and then, upon a request by a user, delivers a static list of stored content items to a user interface.” PO Resp. 36 (citing Ex. 1004 ¶¶ 40, 106–109). Patent Owner argues that “[s]ubsequent transmission is not real-time transmission.” PO Resp. 36.

According to Patent Owner, “Darnell indicates that a server computer retrieves a currently published set of content items for a content feed and merges the retrieved content items into a previously stored set of previously published content items,” and “[t]he merged content items are stored in a database (906), such as feed content database 520, prior to transmitting an ordered list of content items to the user.” *Id.* (citing Ex. 1004 ¶ 106, Fig. 9A). Patent Owner argues that “[c]ontent items that are first merged and then stored in a persistent database on Darnell’s system before being transmitted to a user are not streamed ‘to the master server simultaneously in real time . . . on a master web-page,’” as claimed.” PO Resp. 36 (citing Ex. 2010 ¶¶ 114, 116).

Patent Owner also argues that “Darnell’s system only delivers content items to a user periodically or based upon a user’s request.” PO Resp. 36 (citing Ex. 2010 ¶ 115). Patent Owner asserts that in Darnell, “once a merged list of content items is stored in a database on Darnell’s system, a server will transmit an ordered list of content items to a user, but only *“[i]n response to a request from a client computer 400.”* PO Resp 36–37 (citing

Ex. 1004 ¶ 109). According to Patent Owner, “[t]he only content displayed to a user is provided from Darnell’s database and only upon a user request—not streamed to a master server from its source in real time on a master web-page, as claimed.” PO Resp. 38 (citing Ex. 2010 ¶ 121). Patent Owner argues that a person of ordinary skill in the art “would recognize that an item-based, store-then serve-upon-request workflow is incompatible with the real time presentation the claims require on the master web-page.” PO Resp. 38–39 (citing Ex. 2010 ¶ 117; Ex. 2012, 32:6–9).

Patent Owner argues that Darnell’s architecture cannot provide content that is “streamed and viewable in real time on the master webpage” and “[w]hether the master server briefly caches or buffers content is beside the point disputed here; what matters is that the user sees content on the master web-page as it streams.” PO Resp. 40–41 (citing Ex. 2010, ¶¶ 122, 126–127). Patent Owner asserts that “[n]o matter how quickly Darnell merges or stores data, it still presents a snapshot, not a live stream on a master web-page.” Ex. 2010 ¶¶ 117–119. According to Patent Owner, “no matter when the client requests new content, it is necessarily *not* real time content because it comes from Darnell’s database, not content streamed from multiple sources in real time on a master web-page.” PO Resp. 42 (citing Ex. 2010 ¶¶ 117–122).

We disagree with Patent Owner for several reasons. As we discuss above in Section III.C.3, the claim term “real time” is not defined in the ’658 patent, and we determine based upon the evidence of record that one of ordinary skill in the art at the time of the claimed invention considering the ’658 patent in its entirety, would understand that the term “real time” in the ’658 patent claims means that content data and content applications from multiple content sources or service providers pre-selected by a user are

streamed to a master server from their respective sources or providers as soon as it is available, wherein the master server organizes the content on a master web page making it viewable to a user on a remote computer device using a slide tool program for scrolling or paging through the content without significant delay to the user.

It is also important to bear in mind that Patent Owner concedes that storage is not precluded by the claims and that some delay may occur during operation of the claimed systems and method. *See* Sec. III.C.3, *supra*; *see also* Ex. 1082, 125:19–22, 126:3–10; Tr. 41:26–42:14, 53:20–25.

Patent Owner’s first argument, that “[s]ubsequent transmission is not real-time transmission,” is unavailing as Patent Owner does not cite to any evidence of record to support this pronouncement, and it is inconsistent with Patent Owner’s own admissions and the ’658 patent. PO Resp. 36. The ’658 patent expressly defines “content data” as “any data or information *that is stored remotely on servers.*” Ex. 1001, 4:1–3 (emphasis added). Any transmission that occurs after such storage, however short in time, would necessarily be a “subsequent transmission” because it occurs after the storage occurred. Consequently, there will always be at least some subsequent transmission of that remotely stored data.

There is nothing in the ’654 patent or its claims that precludes some form of storage or minimal time delay, and Patent Owner concedes as much in this proceeding. *See, e.g.*, Ex. 1082, 125:19–22, 126:3–10; Tr. 41:26–42:14, 53:20–25. Accordingly, the mere fact that Darnell’s system may aggregate content feeds or content items on a server, merge content, store content, and then deliver content to a user interface, does not preclude it from being done in “real time” as that term would be understood by a person of ordinary skill in the art reading the ’654 patent in its entirety.

Similarly, Patent Owner's argument that "Darnell's system only delivers content items to a user periodically or based upon a user's request," is equally unavailing. PO Resp. 36. First, Patent Owner incorrectly argues that Darnell's system only retrieves content "based upon a user's request," when in fact Darnell's feed tracker module 516 (part of server system 104 (*master server*)) retrieves content items "as content feeds are updated," without conditioning retrieval on a user request. *See* Ex. 1004 ¶ 74.

Second, a "user request" as Patent Owner identifies it, appears to be an integral part of the system encompassed by claim 1. For example, the "real time" experience of claim 1's system is influenced by the user "operating the slide tool program from the remote computer" as the user is "scrolling or paging through the content data or the content applications from the multiple content sources or service providers simultaneously and through the master server in real time from the master web-page." A person of ordinary skill in the art would understand that a user "operating the slide tool program" and "scrolling or paging through the content data or the content applications" with the slide tool program is issuing "user requests" to the master server through the master web page for the particular content that the user wishes to access and manipulate, i.e., "scrolling or paging through." *See, e.g.,* Ex. 1002 ¶ 188 ("A POSITA would have understood that "a slide tool program" is software implementing a slide tool, and a POSITA would have further recognized that this term includes a scrollbar. At the time of invention, scrollbars were widely known and commonly used in web interfaces as tools that allow users to navigate through displayed content.").

Patent Owner also argues that "[w]hether the master server briefly caches or buffers content is beside the point disputed here; what matters is

that the user sees content on the master web-page as it streams.” PO Resp. 41. This argument by Patent Owner appears to be based on the false assumption that claim 1 describes a “live stream” system where the user is merely a passive consumer of an automatic, ongoing, continuous streaming operation from content sources to the master web-page that is not influenced or directed by the user. Claim 1 describes no such system.

Rather, claim 1 requires a user to “operat[e] the slide tool program from the remote computer” for “scrolling or paging through the content data or the content applications from the multiple content sources or service providers simultaneously and through the master server in real time from the master web-page.” Ex. 1001, 6:63–7:4. Claim 1 does not describe “a live stream on a master web-page,” as Patent Owner argues (PO Resp. 41), or “the live delivery of data segments such that the user perceives an uninterrupted flow of content,” as Dr. Edwards opines without citation support. Ex. 2010 ¶ 118. Neither the ’658 patent nor its claims ever once use the terms “live,” “live stream,” or “live delivery” as Patent Owner attempts to suggest. *See* Ex. 1001.

(2) *Slide Tool Program*

Patent Owner next contends that Darnell does not disclose “a slide tool program for scrolling or paging through the content data or the content applications . . . in real time from the master web-page.” PO Resp. 43–45. Patent Owner asserts that “because Darnell lacks any content streamed *in real time on a master webpage* . . . it necessarily cannot disclose scrolling, paging through, or navigating such content *in real time from the master web-page*.” *Id.* at 43 (internal citation omitted).

Patent Owner argues that “scrolling or paging through Darnell’s feed reader interface necessarily involves scrolling content that resided on

Darnell’s server—not content from the content sources or service providers in real time from the master web-page, as required by the claim language.” *Id.* at 44. Patent Owner argues that “Darnell’s feed reader is static. Users do not scroll or page through a ‘dynamic’ list of content as in the ‘658 Patent.” *Id.* (citing Ex. 1001, 3:5–60; 6:1–27). Patent Owner points out that “even when a user scrolls beyond the end of a list of content items and “fetches” additional content, *the retrieved content resided on Darnell’s server computer.*” PO Resp. 44. Patent Owner concludes that a person of ordinary skill in the art “would understand that Darnell merely discloses scrolling through a list of past content that resided on Darnell’s server that must be updated by user actions, not scrolling through real time content as required by the claims.” *Id.* at 44–45 (citing Ex. 2010 ¶ 131).

Patent Owner also points out that “the ‘slide-tool program’ claimed and described in the ‘658 Patent is programmed by the master application to execute on the user’s device for scrolling or paging through streamed content in real time from the master web-page.” PO Resp. 45 (citing Ex. 1001 at 5:8–20; Ex. 2010 ¶¶ 128, 130). According to Patent Owner, “Darnell’s feed reader includes no such programming step.” PO Resp. 45 (citing Ex. 2010 ¶ 130). Patent Owner argues that “Darnell’s scrollbar operates via embedded scripts in a client rendered page.” PO Resp. 45 (citing Pet. 29; Ex. 1004 ¶ 67). Patent Owner adds that “[n]othing in Darnell describes any content that updates or scrolls in real time on a server-hosted webpage.” PO Resp. 45 (citing Ex. 2010 ¶¶ 130–131).

We disagree with Patent Owner. Patent Owner’s argument with respect to the recited “slide tool program” is based on the false assumption and incorrect claim interpretation that “Darnell lacks any content streamed in real time on a master webpage.” PO esp. 43 (emphasis omitted). As we

explain in detail in Section III.C.3 *supra*, none of the independent claims of the '658 patent recite the phrase “streamed in real time on a master webpage” as Patent Owner assumes and repeatedly asserts. Because Patent Owner’s argument with respect to the recited “slide tool program” is based on this false premise, Patent Owner’s argument fails.

Patent Owner’s next argument, that “Darnell’s feed reader interface necessarily involves scrolling content that resided on Darnell’s server” is similarly ineffective because nothing in the '658 patent claims precludes content from residing on a server. Indeed, claim 1 describes a “master server” that “includes software coded for organizing content data and content applications from multiple content sources or service providers pre-selected by the user.” The '658 patent also describes a “suitable remote computing device” that is “capable of accessing the log-in server or master server 105 over the internet/intranet and **displaying or viewing content data therefrom** on a master web-page.” Ex. 1001, 4:63–66 (emphasis added). Patent Owner’s own declarant, Dr. Edwards, explains that “[a] key feature of the inventions is the ‘master server that acts as a single point access and supports a user interface,’ which ‘is preferably an icon-based master web-page viewable over the master server from a remote computing device.’” Ex. 2010 ¶ 60 (citing Ex. 1001, 2:30–35, 2:38–42). Thus, Patent Owner’s argument that Darnell is unqualified because “Darnell’s feed reader interface necessarily involves scrolling content that resided on Darnell’s server” is antithetical to the system described and claimed by the '658 patent.

Patent Owner’s next argument, that Darnell is inapplicable because “Darnell’s feed reader is static,” and “[u]sers do not scroll or page through a ‘dynamic’ list of content as in the ‘658 Patent,” is similarly misplaced,

because nothing in the '658 patent claims requires a “dynamic” list of content” as Patent Owner appears to assert. The term “dynamic” is not recited in any of the '658 patent claims. Although the term “dynamic” is used in the specification to variously describe a “dynamic web page” (Ex. 1001, Fig. 3A at 305), “dynamic content data” (*id.* at Fig. 3B at 353), “dynamic user page” (*id.* at 355), and a master web-page (*id.* at 2:56-59), we decline to incorporate this term as a limitation into the claims. “Though understanding the claim language may be aided by the explanations contained in the written description, it is important not to import into a claim limitations that are not a part of the claim.” *SuperGuide Corp. v. DirecTV Enters., Inc.*, 358 F.3d 870, 875 (Fed. Cir. 2004). “If everything in the specification were required to be read into the claims, or if structural claims were to be limited to devices operated precisely as a specification-described embodiment is operated, there would be no need for claims.” *SRI International v. Matsushita Elec. Corp.*, 775 F.2d 1107, 1121 (Fed. Cir. 1985).

Moreover, Darnell’s feed tracker retrieves content “as content feeds are updated,” a description that is in direct opposition to Patent Owner’s assertion that “Darnell’s feed reader is static.” *See* Ex. 1004 ¶ 74 (“a feed tracker module 516 for retrieving content items for storage periodically and/or as content feeds are updated”).

We also disagree with Patent Owner’s remaining argument, that Darnell’s feed reader does not include a required “programming step” because “Darnell’s scrollbar operates via embedded scripts in a client rendered page.” *See* PO Resp. 45.

Claim 1 recites that “the master application programs a processor on the remote computer devices to operate and execute a slide tool program for

scrolling or paging through the content data or the content applications.”
Ex. 1001, 6:63–66. The Specification explains that “[t]he master content application software, hereafter master program, is further configured to program the remote computing device with code to operate a slide tool.” *Id.* at 2:60–62. The Specification further explains that

a master web-page 201' includes a slide tool or scrolling tool indicated by the arrow 226 operable from the computing device 111 (FIG. 1). In operation, when the remote computing device 111 logs into the log-in server or master server 105 over the internet/intranet, for at least the first time, the log-in server or master server 105 and the master application 107 initiates a download of software on to the remote computing device 111 that enables the slide tool or scrolling tool 226 to operable from an user input interface, such as a keyboard 123, a mouse 121, a touch screen (not shown) or any other suitable user interface on the remote computing device 111.

Id. 5:8–20. Figure 2B is shown below.

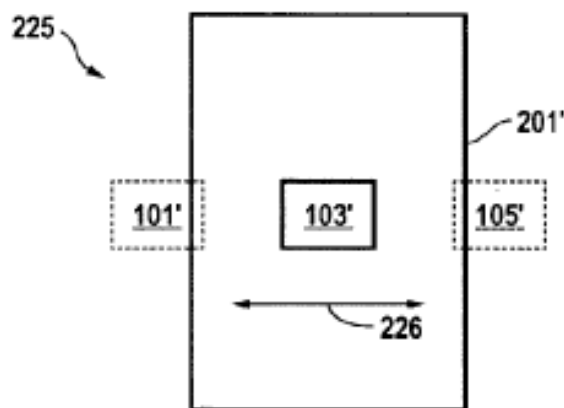


FIG. 2B

According to the Specification, Figure 2B “shows a representation dynamic user web-page for displaying and scrolling or paging through content data and/or content application from multiple content sources in real-time with a slide tool.” *Id.* 3:48–52.

The Specification's description of how a "master application programs a processor on the remote computer devices to operate and execute a slide tool program" or "is further configured to program the remote computing device with code to operate a slide tool," or "initiates a download of software on to the remote computing device 111 that enables the slide tool or scrolling tool 226 to [be] operable from an user input interface," is done in a very broad, general terms with little, if any, technical specificity. There is certainly nothing in the '658 patent claims or the Specification that would preclude "embedded scripts in a client rendered page" from satisfying the recited subject matter, as Patent Owner argues.

We credit Dr. Martin's testimony on this score where he testifies that Darnell's user interface is constructed in a web-compatible language that programs the client device to display the interface, including a scrolling tool for continuous, real time access to updated content. Dr. Martin testifies that

Darnell also explains that its user interface is constructed in a web-compatible language, such as HTML or XML, and that the webpage includes embedded scripts, such as JavaScript or ECMAScript, allowing the interface to interact with the server system. *Id.*, ¶41. **These scripts, embedded in the webpage served from the server system 104, are executed when the webpage is rendered. Specifically, the feed reader module 420 script within the HTML enables a user to scroll through the content items served from the server. *Id.*, ¶67. This architecture is like the architecture described in the '658 patent, where the master server "programs" the client-side device to display the feed reader user interface, which includes a scroll bar allowing continuous, real-time access to updated content.**

Moreover, as Darnell explains, the scrollbar's function operates from the client system, enabling the user to interact with the feed interface as updated content is dynamically loaded and displayed. **Darnell's server architecture programs the remote**

client device to interact with the feed content on the master webpage and provides a scrolling tool for viewing multiple content sources through the master server in real time.

Accordingly, Darnell's feed reader user interface, delivered by the server to the client device, includes a scrolling tool that allows for real-time navigation of aggregated content that meets the claim limitation 1[b3].

Ex. 1002 ¶¶ 190–191 (emphasis added).

Dr. Martin's testimony is fully supported by Darnell, which explains that

the feed reader module 420 may be a script-based module, embedded in a web page served from the server system 104 (FIG. 1). The web page may be rendered by a client application 430, such as a web browser, at the client computer 400. When the web page is rendered, the feed reader module 420 is executed, thereby providing a web-based interface to the server system 104. The script-based feed reader module may be written in JavaScript, ECMAScript or any other suitable scripting language.

Ex. 1004 ¶ 67. Both Dr. Martin's testimony and Darnell's description are consistent with, and appropriately support, the conclusion that a person of ordinary skill in the art would understand that Darnell teaches or suggests the recited master application that programs a processor on a remote computer device to operate and execute a slide tool program for scrolling or paging through content data or content applications of independent claim 1.

(3) Master Application

Patent Owner contends that Darnell does not disclose the claimed "master application" that "organizes content data and content applications." PO Resp. 46 (citing Ex. 2010 ¶¶ 106–111). Patent Owner asserts that "Darnell's aggregation system retrieves content items, merges them into a set of previously published content items, and transmits an ordered list of content items." PO Resp. 46 (citing Ex. 1004 ¶ 11; Ex. 2010 ¶ 108).

“Moreover,” Patent Owner asserts, “Darnell’s list is static and only updates when a user initiates a ‘fetch’ command.” *Id.* According to Patent Owner, a person of ordinary skill in the art “would understand that Darnell merely discloses content aggregation, not a ‘master application’ that organizes and displays content from multiple sources in real time as described and claimed in the ‘658 Patent.” PO Resp. 46 (citing Ex. 2010 ¶¶ 109–111).

We disagree with Patent Owner. Rather, we credit Dr. Martin’s testimony where he explains that “Darnell describes server system 104 as equipped with memory 504, which stores several programs, modules, and data structures, collectively functioning as a master application.” Ex. 1002 ¶ 166 (citing Ex. 1004 ¶¶ 70–80). Darnell’s Figure 5, annotated by Dr. Martin, is shown below.

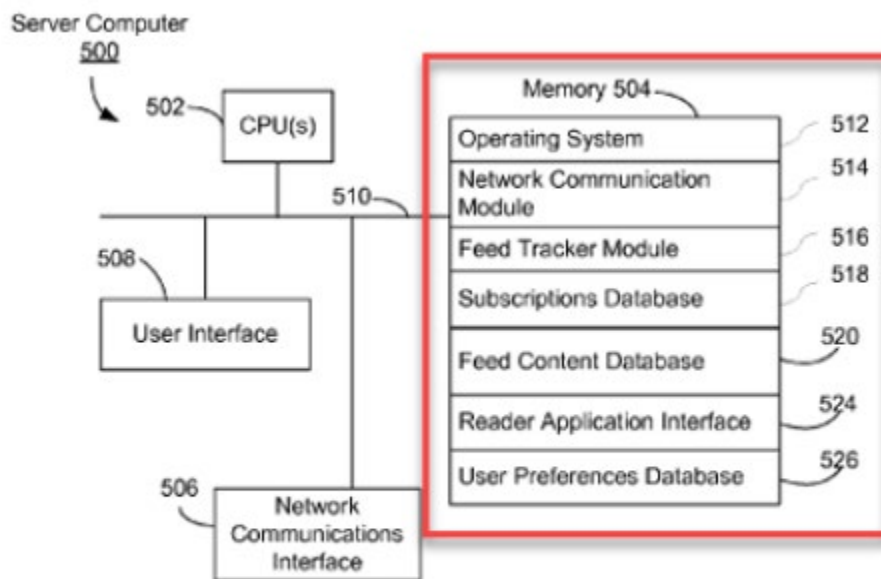


Figure 5

Darnell’s annotated Figure 5 is a block diagram illustrating a server computer. Dr. Martin testifies that

Darnell's feed content database 520 "stor[es] content items from content feeds and user information about content items." Ex. 1004 ¶ 76. Such content "may be any machine-readable data, including but not limited to web pages, images, digital audio, digital video, Portable Document Format (PDF) documents, and so forth." *Id.* ¶ 36. Furthermore, a content item "may include the content associated with the item itself..., a title..., and/or a description of the content, a network location or locator (e.g., URL) of the content, or any combination thereof." *Id.* The content data is received at the server and stored remotely in a database before being sent over the Internet to the user through the feed reader interface. *Id.* ¶ 33 ("Server 108, sometimes called a front-end server, retrieves the content feeds from the feed sources 120, and also provides an interface between the server system 104 and the client systems 102."), ¶ 34 ("The server system 104 stores content items in the content feeds in the database 110."), 40, 76, 81, 114; Ex. 1001, 4:1–3.

These programs and modules correspond to distinct sets of instructions performing specific functionalities. The server also includes a database 520 that stores content items and user information about these items. Ex. 1004 ¶ 76. Additionally, Darnell discloses a subscriptions database 518, which retains information regarding users' content feed subscriptions, and a user preferences database 526 that stores user-specific interface preferences. *Id.* ¶¶ 75, 78. Subscriptions database 518 "stor[es] information about the content feed subscriptions of users of the system." *Id.* ¶ 75. Reader application interface 524 is "for exchanging information with the feed reader modules in one or more client computers," and user preferences database 526 is "for storing user-specific information, including user preferences with regard to the user interface." *Id.* ¶¶ 77–78. Furthermore, Darnell's server includes an operating system to run the programs stored in memory. *Id.* ¶ 72. Darnell's Figure 5, for instance, illustrates this setup, where memory 504 and CPU 502 interact to carry out the functions required of a master server application. *Id.* Fig. 5. **A POSITA would have understood that Darnell's modules and data structures on the server collectively are a master application that resides in memory**

504 (memory) of server system 104 (the master server) and executes on the CPU 502 (the processor).

Ex. 1002 ¶¶ 167–168 (emphasis added).

Moreover, contrary to Patent Owner’s argument that “Darnell’s list is static and only updates when a user initiates a ‘fetch’ command,” Darnell clearly states that it provides “a feed tracker module 516 for retrieving content items for storage periodically and/or **as content feeds are updated.**” Ex. 1004 ¶ 74. A feed tracker module that retrieves content items as content feeds are updated is not a “static” list that “only updates when a user initiates a ‘fetch’ command,” as Patent Owner argues. Rather, Darnell’s feed tracker module retrieves content items as the content feeds are updated and the feed content database 520 is updated and stores the content items from the content feeds. *Id.* at ¶ 76.

e) Uncontested Limitations

Patent Owner does not substantively contest the remaining portions of independent claim 1. *See* PO Resp. 35–46. The uncontested portions of claim 1 include the preamble and limitations 1[a], 1[c1], and 1[c2].

Petitioner provides substantive evidence and argument, supported by the testimony of Dr. Martin, that these uncontested portions of claim 1 are met by Petitioner’s proposed combination of Darnell and Kim, and that at the time of the claimed invention, these portions of claim 1 would have been obvious to a person of ordinary skill in the art. *See* Pet. 18–21, 30–37; Ex. 1002 ¶¶ 154–165, 192–213.

We have considered Petitioner’s evidence and arguments with respect to the uncontested limitations of claim 1. Based on the complete record, we are persuaded that Petitioner has established that the combined teachings of Darnell and Kim meet the limitations of these uncontested limitations.

f) Conclusion as to Claim 1

Based on the complete record, we are persuaded that Petitioner has established by a preponderance of the evidence that the combined teachings of Darnell and Kim meet all the limitations of independent claim 1, and that a person of ordinary skill in the art at the time of the claimed invention would have had reason to combine their teachings in the manner described, and would have had a reasonable expectation of success in that endeavor.

3. Independent Claim 7

Petitioner contends that independent claim 7 is unpatentable under 35 U.S.C. § 103(a) as obvious over the combined teachings of Darnell and Kim. Pet. 41–42; Pet. Reply 17. Petitioner provides the testimonial evidence of Dr. Martin in support of its contentions. Ex. 1002 ¶¶ 214–225.

Patent Owner disputes certain of Petitioner's contentions with respect to claim 7. PO Resp. 46–49; PO Sur-reply 18–19. Patent Owner provides the testimony of Dr. Edwards in support of its contentions. Ex. 2010 ¶¶ 141–148.

Independent claim 7 reads as follows:

7[pre] *A computer system with*
7[a] *a master server with a memory and a processor for*
storing and executing a master application

7[b] *with a remote tool box feature that programs a*
processor on a remote computer with a slide tool program
for scrolling or paging through content data or content
applications from multiple content data sources or service
providers enabled by a user simultaneously on a web-page
created by the master application and hosted on the
master server using hardware on remote computer,

7[c] *wherein the content data or content applications are*
simultaneously streamed to the master server from servers

of multiple content data sources or service providers over the internet in real time to an account belonging to the user,

7[d] wherein the remote tool box feature allows the user to write code, select code or delete code to enable and disable tool features that control how sub-sets of the content data or the content applications from the multiple content sources or service providers are received, displayed or organized

7[e] and wherein the master server collects history analytics based which tool features are enabled to target specific products, services or information to the user.

Ex. 1001, 7:32–52 (formatting, alpha-numeric labels, and italics added).

Petitioner contends that Darnell alone or in combination with Kim, discloses or suggests the limitations of claim 7 for the reasons discussed in the Petition, § VII.A.2. Pet. 41 (citing Ex. 1002 ¶¶ 214–225). According to Petitioner, claim limitation 7[b] is substantially similar to claim limitation 1[b3] except that it recites a *remote tool box feature* that programs the remote computer instead of the *master application*. Pet. 41 (citing Ex. 1002 ¶ 218). Petitioner asserts that a person of ordinary skill in the art “would have understood the *remote tool box feature* to be part of the *master application* because a *tool-box* is a “set of sub-features” of an application.” Pet. 41 (citing Ex. 1001, 4:16–20; Ex. 1002 ¶¶ 218–220).

Petitioner asserts that “scripts” (e.g., JavaScript or ECMAScript) program the remote computer (citing Pet. § VII.A.2.e.), and a script is a *tool box*. Pet. 41 (citing *id.* § VII.A.2.f).

Petitioner also asserts that claim limitation 7[c] is substantially similar to claim 1[b2] except that it recites the content is simultaneously streamed *in real time to an account belonging to the user* instead of *viewable from the*

remote computer devices through the master server on the master web-page. Pet. 41 (citing Ex. 1002 ¶ 221). According to Petitioner, Darnell’s content is *streamed in real time to an account belonging to the user* because a “user’s feed reader account” comprises content items marked as read/unread and tagged or labeled with certain characteristics. Pet. 41 (citing Ex. 1004 ¶¶ 84, 92, 99, 105; Ex. 1002 ¶ 221). “Furthermore,” Petitioner explains, “Darnell’s remote computer starts the process of downloading content by sending a ‘login cookie’ to the server that identifies the user’s feed reader account.” Pet. 41–42 (citing Ex. 1004 ¶ 92). According to Petitioner, “[t]he ‘login cookie’ authenticates the user to log into the feed reader account.” Pet. 42 (citing Ex. 1004 ¶¶ 99–100, Fig. 7C). “Accordingly,” Petitioner concludes, “content items are sent to *an account belonging to the user.*” Pet. 42 (citing Ex. 1002 ¶¶ 221–223).

Petitioner provides a reference table (shown below).

Claim 7		
Limitation	Substantially Similar Limitation(s)	Reference
7[pre]	1[pre]	§VII.A.2.a
7[a]	1[a], 1[b1]	§§VII.A.2.b-VII.A.2.c
7[b]	1[b3]-1[c1]	§§VII.A.2.e-VII.A.2.f
7[c]	1[b2]	§VII.A.2.d
7[d]	1[c1]	§VII.A.2.f
7[e]	1[c2]	§VII.A.2.g

Petitioner’s reference table (above) correlates the sections of the Petition providing Petitioner’s evidence and arguments for claim 1’s limitations with claim 7’s limitations. Pet. 42.

Patent Owner disputes some of Petitioner’s evidence with respect to claim 7. PO Resp. 46–49. Patent Owner first argues that “Darnell does not disclose content “streamed to the master server . . . in real time to an account

belonging to the user,” because a person of ordinary skill in the art would understand “that to stream content ‘in real time to an account belonging to the user,’ the content must be accessible on the master web-page in real time.” *Id.* 46–47 (citing Ex. 2010 ¶¶ 145; PO Resp. § V.A.1). Relying on its evidence and arguments for the “real time” limitations of claim 1 (limitations 1[b1]–1[b3]), Patent Owner asserts that “Darnell fails to disclose this limitation of claim 7 for the same reasons.” PO Resp. 47 (citing Ex. 2010 ¶¶ 144–145).

Patent Owner’s argument fails for the same reasons we discussed above with respect to the term “real time” and limitations 1[b1]–1[b3]. Petitioner has established by a preponderance of the evidence that the combined teachings of Darnell and Kim meet the “real time” limitations of independent claim 1, namely limitations 1[b1]–1[b3]. Because Patent Owner relies on the same evidence and arguments with respect to claim 7 that it relied on with respect to claim 1, Patent Owner’s arguments with respect to claim 7 fail for the very same reasons we explained in Sections III.C.3 and III.E.2.d.1, *supra*.

Patent Owner next argues that “[g]iven that all of Darnell’s content items are merged and stored in a persistent database prior to providing them periodically or at a user-initiated request, any amount of marking, tagging, or labeling does not alter the fact that the content is fundamentally not displayed on a master webpage ‘in real time.’” PO Resp. 47 (citing Ex. 1004 ¶¶ 34, 40, 106). This is fundamentally the same argument Patent Owner previously made with respect to claim 1. *See, e.g.,* Section III.E.2.d.1, *supra*. Because Patent Owner relies on the same evidence and arguments with respect to this aspect of claim 7 that it relied on with respect to claim 1, Patent Owner’s argument fails for the same reason.

Patent Owner next argues that “Darnell’s account does not update until the user logs in and the client requests items—confirming there is no real-time streaming ‘to an account.’” PO Resp. 48. We disagree with Patent Owner. First, claim 7 does not preclude a user from “logging in” or requesting “items.” There is no language in claim 7 prohibiting such user actions and Patent Owner does not point us to any such language. Second, the Specification actually anticipates a “login” process where it describes “a log-in or master server that acts as a single point access and supports a single user interface,” and “a slide tool that allows a user to scroll or page through the content data and/or content applications from the multiple content data sources or service providers in real time from *a logged in remote computer device*.” Ex. 1001, Abstr. (emphasis added). Accordingly, Patent Owner’s argument that “Darnell’s account does not update until the user logs in and the client requests items—confirming there is no real-time streaming ‘to an account,’” fails. *See also* Section III.E.2.d.1, *supra*, discussing “user requests.”

Patent Owner also contends that “Darnell does not disclose a ‘slide tool program.’” PO Resp. 48–49. Patent Owner asserts that “for the reasons discussed above regarding the ‘slide tool’ limitation of claim 1, Darnell likewise fails to disclose this limitation of claim 7.” *Id.* at 49 (citing PO Resp. § V.A.2; Ex. 2010 ¶ 148). Because Patent Owner relies on the same evidence and arguments with respect to this aspect of claim 7 that it relied on with respect to claim 1, Patent Owner’s argument fails for the same reason. *See* Section III.E.2.d.2, *supra*.

Patent Owner also argues that “this limitation also requires the slide tool program to be ‘on a web-page created by the master application and hosted on the master server using hardware on remote computer,’” and

“Petitioner admits that Darnell’s scrollbar operates via embedded scripts in a client rendered page,” therefore “Darnell necessarily does not disclose a ‘slide tool program . . . on a web-page created by the master application and hosted on the master server,’ as claimed.” PO Resp. 49 (citing Ex. 1004 ¶¶ 67). Patent Owner’s argument about “embedded scripts” fails for the same reasons we discussed in Section III.E.2.d.2, *supra*.

Finally, Patent Owner argues that “Darnell does not disclose ‘a master application’” for the same reasons Patent Owner “discussed above regarding the ‘master application’ limitation of claim 1.” PO Resp. 49. Because Patent Owner relies on the same evidence and arguments with respect to this aspect of claim 7 that it relied on with respect to claim 1, Patent Owner’s argument fails for the same reason. *See* Section III.E.2.d.3, *supra*.

Based on the complete record, we are persuaded that Petitioner has established by a preponderance of the evidence that the combined teachings of Darnell and Kim meet all the limitations of independent claim 7, and that a person of ordinary skill in the art at the time of the claimed invention would have had reason to combine their teachings in the manner described, and would have had a reasonable expectation of success in that endeavor.

4. *Dependent Claims 2–5, 8–10*

Petitioner contends that dependent claims 2–5, 8–10 are unpatentable under 35 U.S.C. § 103(a) as obvious over the combined teachings of Darnell and Kim. Pet. 37–41; Pet. Reply 18–19. Petitioner provides the testimonial evidence of Dr. Martin in support of its contentions. Ex. 1002 ¶¶ 226–251.

Patent Owner disputes Petitioner’s contentions with respect to dependent claims 2, 3, and 10. PO Resp. 52–54; PO Sur-reply 19–20. Patent Owner provides the testimony of Dr. Edwards in support of its contentions. Ex. 2020 ¶¶ 132–140, 149–155.

a) *Contested Dependent Claims 2, 3, 10*

Dependent claim 2 recites “*The cloud-based computer system of claim 1, wherein the content sources or service providers include one or more personal content account and at least one or more social media account belonging to the user.*” Ex. 1001, 7:14–17.

With respect to dependent claim 2, Patent Owner contends that Kim “fails to disclose any mechanism for logging into a user’s personal accounts,” and that a person of ordinary skill in the art “would not understand Darnell and Kim to teach integrating ‘personal’ and ‘social media’ accounts belonging to the user.” PO Resp. 52–53 (citing Ex. 2010 ¶ 135; Ex. 1005 ¶¶ 21–22, 33, 36–39).

We disagree with Patent Owner. First, neither claim 2, nor claim 1 from which claim 2 depends, recites or requires “a mechanism for logging into a user’s personal account” as Patent Owner appears to assert.

Second, Patent Owner only addresses the Kim reference by itself, and fails to address the combined teachings of the asserted art, Darnell and Kim. “[One] cannot show non-obviousness by attacking references individually where . . . the rejections are based on combinations of references.” *Boundary Solns. Inc. v. Corelogic, Inc.*, 711 Fed. Appx. 627, 631–632 (Fed. Cir. 2017) (quoting *In re Keller*, 642 F.2d 413, 426 (CCPA 1981)).

With respect to claim 2, Petitioner contends that the combined teachings of “Darnell-Kim discloses or suggests this claim’s additional limitations.” Pet. 37 (citing Ex. 1002 ¶¶ 226–231). Petitioner provides evidence and argument that the asserted combination teaches or suggests the additional limitations of dependent claim 2. *See, e.g.*, Pet. 37–38; Ex. 1002 ¶¶ 226–231.

With respect to Patent Owner’s specific argument regarding a “mechanism for logging into a user’s personal accounts,” even though such functionality is not recited by the claim, Petitioner notes that “as explained for claim 4, users would have to log into the Darnell-Kim feed reader,” thus a person of ordinary skill in the art “would have understood user login to be a prerequisite.” Pet. 38 (citing *id.* at Sec. VII.A.5; Ex. 1002 ¶ 231).

With respect to Patent Owner’s argument that a person of ordinary skill in the art “would not understand Darnell and Kim to teach integrating ‘personal’ and ‘social media’ accounts belonging to the user,” Petitioner provides ample evidence showing that Kim receives both email and social media content. *See* Pet. 37–38 (citing Ex. 1005 ¶¶ 21–22, 33, 36–39, 42, 45, 58–59, 72, Figs. 3–9, 11–13; Ex. 1002 ¶ 226–230).

Dependent claim 3 recites “*The cloud-based computer system of claim 2, wherein the personal content account is an e-mail account.*” Ex. 1001, 7:18–19.

Patent Owner contends that “Petitioner fails to prove that Darnell, alone or in combination with Kim, discloses claim 3 of the ‘658 Patent.” PO Resp. 53 (citing Ex. 2010 ¶¶ 136–40). Patent Owner argues that Kim “does not describe authenticating or retrieving private emails of a user and does not disclose processing messages from user-specific accounts.” PO Resp. 53 (citing Ex. 2010 ¶ 139). Patent Owner asserts that “[n]either Darnell nor Kim would have been understood by a POSA to teach the login-based, account-specific integration needed to access ‘personal content account’ such as ‘an e-mail account’ or ‘email website belonging to the user.’” PO Resp. 53 (citing Ex. 2010 ¶ 139–40).

Patent Owner’s argument, however, is based upon a limitation that does not appear in claim 3. Patent Owner argues that Kim “does not

describe authenticating or retrieving private emails of a user and does not disclose processing messages from user-specific accounts.” PO Resp. 53. However, neither claim 3, nor claims 2 and claim 1 from which claim 3 depends, recites such a requirement. Accordingly, Patent Owner’s argument fails because it is based upon a limitation that is neither recited nor required by the claims.

Dependent claim 10 recites “*The computer system of claim 7, wherein the user interface is an icon-based master web-page.*” Ex. 1001, 8:1–2.

With respect to claim 10, Patent Owner argues that “neither Darnell’s nor Kim’s ‘icons’ are dynamic real time content as required by the claims; instead, both disclose, at most, user-interface elements that allow users to organize content or add/remove subscriptions.” PO Resp. 53–54 (citing Ex. 2010 ¶¶ 154–55). However, claim 10 recites a “user interface [that] is an icon-based master web-page.” Neither claim 10, nor claim 7 from which it depends, recites “icons [that] are dynamic real time content” as Patent Owner asserts. Accordingly, Patent Owner’s argument fails because it is based upon a limitation that is neither recited nor required by the claims.

We have considered Petitioner’s evidence and arguments with respect to dependent claims 2, 3, and 10, as well as Patent Owner’s evidence and arguments directed to these claims. Based on the complete record, we are persuaded that Petitioner has established by a preponderance of the evidence that the combined teachings of Darnell and Kim meet all the limitations of dependent claims 2, 3, and 10, and that a person of ordinary skill in the art at the time of the claimed invention would have had reason to combine their teachings in the manner described, and would have had a reasonable expectation of success in that endeavor.

b) Uncontested Dependent Claims 4, 5, 8, 9

Patent Owner does not substantively contest dependent claims 4, 5, 8, and 9. *See* PO Resp. 34–54.

Petitioner provides substantive evidence and argument, supported by the testimony of Dr. Martin, that uncontested dependent claims 4, 5, 8, and 9 are met by Petitioner’s proposed combination of Darnell and Kim, and that at the time of the claimed invention, these claims would have been obvious to a person of ordinary skill in the art. *See* Pet. 39–43; Ex. 1002 ¶¶ 237–248.

We have considered Petitioner’s evidence and arguments with respect to dependent claims 4, 5, 8, and 9. Based on the complete record, we are persuaded that Petitioner has established by a preponderance of the evidence that the combined teachings of Darnell and Kim meet all the limitations of these dependent claims, and that a person of ordinary skill in the art at the time of the claimed invention would have had reason to combine their teachings in the manner described, and would have had a reasonable expectation of success in that endeavor.

F. Obviousness over Darnell, Kim, and Dasgupta (Ground 1B)

For Ground 1B, Petitioner contends that claims 6, and 12–18 are unpatentable under 35 U.S.C. § 103 as obvious over Darnell and Kim. Pet. 9–44. Claim 12 is independent. We begin our analysis by considering Petitioner’s rationale for combining the teachings of Dasgupta with those of Darnell and Kim, which is not substantively challenged by Patent Owner.

1. Rationale to Combine Darnell, Kim, and Dasgupta

Petitioner contends that a person of ordinary skill in the art would have been motivated to extend the Darnell-Kim combination to incorporate Dasgupta’s advertising and/or virtual store teachings. Pet 46 (citing Ex. 1002 ¶ 253). According to Petitioner, a person of ordinary skill in the art

“would have understood Darnell’s and Kim’s teachings for aggregating content (news, sports, blog entries, and email) on a cloudbased server to be suitable for use with Dasgupta’s cloud-based media content access system.” *Id.* Petitioner points out, for example, that “Darnell, Kim, and Dasgupta each aggregate content on a server and stream that content to a client device, where the aggregated content is presented in a unified UI.” Pet. 46 (citing Ex. 1004, Abstr., ¶¶ 11–14, 30–32, Fig. 1; Ex. 1005, Abstr., ¶¶ 20–23, Fig. 1; Ex. 1006, 7:3–67, Fig. 2; Ex. 1002 ¶¶ 253–254. Petitioner asserts that a person of ordinary skill in the art “would have combined these references because they disclose streaming and organizing media content via the Internet and/or Hypertext Transfer Protocol (HTTP).” Pet. 46 (citing Ex. 1004 ¶¶ 8, 32, 63, 73, 96; Ex. 1005 ¶ 20; Ex. 1006, 7:3–29, 10:10–24, 12:48–62; Ex. 1002 ¶ 254).

According to Petitioner, “the Darnell-Kim combination and Dasgupta are directed to solving the problem of aggregating large amounts of content into a single UI.” Pet 46–47 (citing Ex. 1006, 1:7–29; Ex. 1002 ¶ 255). For example, “Dasgupta explains that ‘media content’...may refer generally to any content that may be accessed and/or presented by a media content access system for experiencing by a user of the media content access system.” Pet. 47 (citing Ex. 1006, 2:25–38). According to Petitioner, “Darnell similarly explains that such ‘content may be any machine-readable data, including but not limited to web pages, images, digital audio, digital video, Portable Document Format (PDF) documents, and so forth.’” Pet. 47 (citing Ex. 1004 ¶ 36). “Likewise,” Petitioner notes, “Kim discloses receiving feeds, email, audio and video content, and visual content.” Pet. 47 (citing Ex. 1005 ¶ 21). Petitioner asserts that a person of ordinary skill in the art “would thus

have understood that Darnell, Kim, and Dasgupta aggregate and stream a variety of content, including video.” Pet. 47 (citing Ex. 1002 ¶¶ 255–256).

Petitioner asserts that “[a]pplying Dasgupta’s teachings to Darnell-Kim would have been nothing more than using known techniques to improve the similar content aggregation systems taught by Darnell and Kim in the same manner.” Pet. 47 “For example,” Petitioner argues, “combining Dasgupta’s advertising framework . . . with the structured content and feed handling capabilities of Darnell and Kim would allow users to seamlessly interact with different types of content (RSS feeds, email, blogs, advertisements, etc.) through a unified, adaptable GUI accessible from any client device.” *Id.* (citing Ex. 1002 ¶ 257).

Petitioner also argues that a person of ordinary skill in the art would have found it obvious to extend the information Darnell and/or Kim display based on their respective analytics to include advertisements, as in Dasgupta, that ‘may include, without limitation, data representative of advertisement content (e.g., advertisements images, artwork, and text) as well as advertisement metadata, which may be descriptive of one or more attributes of advertisement content.’

Pet. 47–48 (citing Ex. 1006, 3:63–4:8; Ex. 1002 ¶ 258). According to Petitioner, a person of ordinary skill in the art “would have understood Darnell and Kim were ready for improvement because of their wide range of information display capabilities, and displaying advertisements would have improved Darnell and Kim by providing more information to the feed reader’s user based on the collected analytics.” Pet. 48 (citing Ex. 1002 ¶ 258).

Petitioner argues that a person of ordinary skill in the art “would have also been motivated to apply Dasgupta’s virtual store to Darnell’s feed reader UI to access content, such as other subscriptions or feeds that cost

money.” Pet. 48 (citing Ex. 1002 ¶ 258). Petitioner asserts that a person of ordinary skill in the art “would have understood the ability to purchase content in Darnell’s feed reader UI to extend its usefulness while streamlining operation.” Pet. 48 (citing Ex. 1002 ¶ 258).

Petitioner also argues that a person of ordinary skill in the art “would have had a reasonable expectation of success using Dasgupta’s advertisement facility or virtual store to enhance Darnell’s feed reader to allow for purchasing additional content from the content sources because Dasgupta shows aggregating a feed display was well within [their] skill.” Pet. 48 (citing Ex. 1002 ¶ 259). “Furthermore,” Petitioner argues, “providing advertisements and opportunities to purchase goods and services in a feed reader UI, as in Darnell, was well-known in the art and would have been a straightforward application of known, conventional content aggregation methods used according to their known functions to yield predictable results.” Pet. 48 (citing Ex. 1002 ¶ 259).

Based on the evidence and arguments presented, we find that Petitioner has established by a preponderance of the evidence that a person of ordinary skill in the art at the time of the claimed invention would have had a reason to combine the teachings of Darnell, Kim, and Dasgupta in the manner described in the Petition and would have had a reasonable expectation of success in doing so.

2. Independent Claim 12

Petitioner contends that independent claim 12 is unpatentable under 35 U.S.C. § 103(a) as obvious over the combined teachings of Darnell, Kim, and Dasgupta. Pet. 51–54; Pet. Reply 18. Petitioner provides the testimonial evidence of Dr. Martin in support of its contentions. Ex. 1002 ¶¶ 271–285.

Patent Owner disputes certain of Petitioner's contentions with respect to claim 7. PO Resp. 50–52; PO Sur-reply 19. Patent Owner provides the testimony of Dr. Edwards in support of its contentions. Ex. 2010 ¶¶ 157–159.

Independent claim 12 reads as follows:

12[pre] *A method of navigating content data or content applications from multiple servers of multiple content sources or service providers through a master web-page hosted and created on a cloud-based master server from a remote computer, the method comprising:*

12[a] *setting up an account on the cloud-based master server which streams the content data or content applications from the multiple servers of the multiple content sources or service providers simultaneously to the cloud-based master server; and*

12[b1] *constructing the master web-page on the cloud-based master server from the remote computer via a tool box software stored on memory of the cloud-based master server and executed on a processor of the cloud-based master server and that is accessible from the remote computer,*

12[b2] *wherein a user navigates through the content data or content applications from the multiple content sources or service providers through master web-page in real time from the remote computer using a slide tool program executed from the remote computer,*

12[b3] *wherein the tool box software allows the user to write code, select code or delete code to enable and disable tool features that control how sub-sets of the content data or the content applications from the multiple content sources or service providers are received, displayed or organized:*

12[c] *simultaneously searching analytics based which tool features are enabled to target specific products, services or information to the user; and*

12[d] *purchasing the specific products, services or information from at least one of the multiple content sources or service providers from the master web-page.*

Ex. 1001, 8:6–37 (formatting, alpha-numeric labels, and italics added).

For the preamble,³ Petitioner asserts that the preamble is substantively similar to limitations 1[pre]-1[b1], except claim 12 is written as a method. Pet. 52 (citing Ex. 1002 ¶ 271). According to Petitioner, Darnell discloses a content feed aggregation system and method that includes a feed reader UI for users to scroll through different content items (*navigating content data or content applications from multiple servers of multiple content sources or service providers through a master web-page*). Pet. 52 (citing Ex. 1004 ¶¶ 11, 43–49, Figs. 3A–3D, cls. 1–8; Ex. 1002 ¶¶ 271–273). Petitioner points out that as illustrated in Darnell’s Figure 1, the feed reader UI (*master web-page*) is hosted and created on the server system (*hosted and created on a cloud-based master server*) and viewable on a client computer (*from a remote computer*). Pet. 52 (citing Ex. 1004, Fig. 1; Ex. 1002 ¶¶ 271–273).

For limitation 12[a],⁴ Petitioner asserts that this limitation is substantially similar to 1[b2], except it requires “*setting up an account on*

³ To the extent the preamble is limiting, Petitioner asserts that Darnell discloses 12[pre] for the reasons discussed with respect to claim 1 in 1[pre]-1[b1]. Pet. 51 (citing *id.* at Sec. VII.A.2.a–VII.A.2.c; Ex. 1002 ¶ 271).

⁴ Petitioner states that Darnell discloses or renders limitation 12[a] obvious for the reasons discussed in 1[b2] and claim 4. Pet. 52 (citing *id.* at Secs. VII.A.2.d, VII.A.5; Ex. 1002 ¶¶ 274–276).

the cloud-based master server.” Pet. 52 (citing *id.* at Sec. VII.A.2.d; Ex. 1002 ¶ 274). According to Petitioner, Darnell discloses a “user’s feed reader account” that identifies the user by a user login. Pet. 52 (citing *id.* at Sec. VII.A.5; Ex. 1002 ¶ 274). Petitioner notes that “[u]sers of Darnell’s content aggregation system must be a ‘registered user of the system.’” Pet. 52 (citing Ex. 1004 ¶¶ 81, 92). Petitioner argues that a person of ordinary skill in the art “would have understood an account must first be registered on the system (*setting up an account on the cloud-based master server*) for users of Darnell’s system to receive content with tags/labels in Darnell’s feed reader UI.” Pet. 52–53 (citing Ex. 1002 ¶¶ 274–276).

For limitation 12[b1],⁵ Petitioner asserts that this limitation is substantially similar to limitation 1[c1], except it requires “*constructing the master web-page on the cloud-based master server from the remote computer via a tool box software.*” Pet. 53. Petitioner asserts that “Darnell discloses that ‘server system 104, including the feed reader user interface 116, provides a web-based content aggregation service.’” *Id.* (citing Ex. 1004 ¶ 41). Petitioner argues that a person of ordinary skill in the art “would have understood that Darnell’s feed reader UI (*master web-page*) is *constructed* on the server system 104 (*cloudbased master server*) because the webpage is sent from the server to the client device for viewing.” Pet. 53 (citing Ex. 1002 ¶¶ 278–281).

For limitation 12[b2] Petitioner states that Darnell discloses or suggests this limitation for the reasons discussed in 1[b3]. Pet. 53 (citing *id.* at Sec. VII.A.2.e; Ex. 1002 ¶ 282).

⁵ Petitioner states that Darnell discloses or renders limitation 12[b1] obvious for the reasons discussed in 1[b3]-1[c1]. Pet. 53 (citing *id.* at Secs. VII.A.2.e–VII.A.2.f; Ex. 1002 ¶¶ 277–281).

For limitation 12[b3] Petitioner states that Darnell discloses or suggests this limitation for the reasons discussed in 1[c1]. Pet. 52 (citing *id.* at Sec. VII.A.2.f; Ex. 1002 ¶ 283).

For limitation 12[c],⁶ Petitioner asserts that “[t]his limitation is substantially similar to 1[c2], except it requires “simultaneously searching analytics.” Pet. 54 (citing *id.* at Sec. VII.A.2.g; Ex. 1002 ¶ 284). Petitioner argues that a person of ordinary skill in the art “would have understood Darnell’s server in the Darnell-Kim combination to read (*searching*) user preferences and/or usage history (*analytics*) to display the specific content.” Pet. 54 (citing Ex. 1002 ¶ 284).

For limitation 12[d], Petitioner states that Dasgupta discloses or suggests this limitation for the reasons discussed in claim 6. Pet. 54 (citing *id.* at Sec. VII.B.2; Ex. 1002 ¶ 285).

With respect to claim 12, Patent Owner asserts that “Darnell does not disclose “a user navigates through the content data or content applications . . . through master webpage in real time.” PO Resp. 50. Patent Owner asserts that “[t]his limitation should therefore be interpreted according to its plain meaning, which requires a user to navigate through content ***through the master web-page in real time.***” *Id.* Patent Owner argues that “Darnell fails to disclose scrolling, paging through, or navigating content in real time from the master web-page,” so “[f]or the same reasons, Darnell fails to disclose ‘navigat[ing] through’ content ‘***through the master web-page in***

⁶ Petitioner states that Darnell and/or Kim disclose or render limitation 12[c] obvious for the reasons discussed in 1[c2]. Pet. 54 (citing *id.* at Sec. VII.A.2.g; Ex. 1002 ¶ 284).

real time,’ as required by claim 12.” *Id.* at 51 (citing *id.* at Sec. V.A.2.; Ex. Ex. 2010 ¶ 158).

We disagree with Patent Owner. The portion of claim 12 reciting the term “real time” reads as follows:

12[b2] *wherein a user navigates through the content data or content applications from the multiple content sources or service providers through master web-page in real time from the remote computer using a slide tool program executed from the remote computer*

Ex. 1001, 8:21–25 (formatting, alpha-numeric label and italics added).

Limitation 12[b2] makes clear that “a user navigates through the content data or content applications” . . . “through [a] master web page in real time from the remote computer using a slide tool program executed from the remote computer.” As we similarly discussed with respect to independent claim 1, in claim 12 it is “a user” who navigates through a master web page in real time “*using a slide tool program executed from the remote computer.*” Claim 12 requires the active involvement of a user operating a slide tool program from a remote computer in order to navigate through content data or applications through a master web page in real time. Claim 12 does not describe a passive, automatic method of providing content data or content applications to a master web page in “real time” for passive consumption by a user on a remote device. Rather, claim 12 requires a user to actively navigate through the content data through a master web page in real time by “using a slide tool program executed from the remote computer.”

Because Patent Owner’s argument with respect to the use of the term “real time” in claim 12 relies on the same rationale that it used with respect

to the term “real time” in claim 1, Patent Owner’s argument here fails for the same reasons. *See* Secs. III.C.3, III.E.2.d.1, *supra*.

Patent Owner also argues that because “Darnell fails to disclose scrolling, paging through, or navigating content in real time from the master web-page,” “[f]or the same reasons, Darnell fails to disclose ‘navigat[ing] through’ content ‘*through the master web-page in real time*,’ as required by claim 12.” PO Resp. 51 (citing *id.* at Sec. V.A.2; Ex. 2010 ¶ 158). This argument of Patent Owner’s appears to relate to the recited “slide-tool program.” *See* PO Resp. Sec. V.A.2 (“Darnell does not disclose “a slide tool program for scrolling or paging through the content data or the content applications . . . in real time from the master web-page”). Because Patent Owner’s argument relies on the same rationale that it used with respect to this issue in claim 1, Patent Owner’s argument here fails for the same reasons. *See* Secs. III.C.3, III.E.2.d.2, *supra*.

Finally, Patent Owner argues that “Petitioner never addresses how a user navigates content through the master web-page in real time,” and “[t]hus, the Petition is deficient as it fails to specify where this claim element is found in the cited prior art. PO Resp. 51 (emphasis omitted). Petitioner, however, points to its evidence and arguments with respect to a similar limitation in claim 1, limitation 1[b3]. A comparison of these two limitations is shown in the table below.

Limitation 12[b2]	Limitation 1[b3]
wherein a user navigates through the content data or content applications from the multiple content sources or service providers through master web-page in real time from the remote computer using a slide tool program executed	wherein the master application programs a processor on the remote computer devices to operate and execute a slide tool program for scrolling or paging through the content data or the content applications from the multiple

from the remote computer	content sources or service providers simultaneously and through the master server in real time from the master web-page and from the remote computer by operating the slide tool program from the remote computer;
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Limitation 12[b2] describes a user navigating through content data through a master web page in real time using a slide tool program from the remote computer. Limitation 1[b3] describes scrolling or paging through content data through the master server in real time from the master web page by operating a slide tool program from the remote computer. Although the words that are used in the two limitations are slightly different, the concepts the words would convey to a person of ordinary skill in the art reading the '658 patent in its entirety would be remarkably similar. Whereas 12[b2] describes a user navigating through content data through a master web-page in real time, 1[b3] describes scrolling or paging through content data through the master server in real time from the master web-page. Accordingly, the evidence and arguments Petitioner provides with respect to demonstrating that the asserted prior art meets limitation 1[b3] (*see e.g.*, Pet. 29–30; Ex. 1002 ¶¶ 188–191) is also sufficient to demonstrate that the asserted prior art meets limitation 12[b2].

3. *Uncontested Dependent Claims 6 and 13–18*

Petitioner contends that dependent claims 6 and 13–18 are unpatentable under 35 U.S.C. § 103(a) as obvious over the combined teachings of Darnell, Kim, and Dasgupta. Pet. 49–51. Petitioner provides the testimonial evidence of Dr. Martin in support of its contentions. Ex. 1002 ¶¶ 260–270, 286–296.

Patent Owner does not substantively contest dependent claims 6 and 13–18. *See* PO Resp. 34–54.

We have considered Petitioner’s evidence and arguments with respect to dependent claims 6 and 13–18. Based on the complete record, we are persuaded that Petitioner has established by a preponderance of the evidence that the combined teachings of Darnell, Kim, and Dasgupta meet all the limitations of these dependent claims, and that a person of ordinary skill in the art at the time of the claimed invention would have had reason to combine their teachings in the manner described, and would have had a reasonable expectation of success in that endeavor.

G. Obviousness over Dasgupta and Darnell (Ground 2A)

For Ground 2A, Petitioner contends that claims 1, and 4–10 are unpatentable under 35 U.S.C. § 103 as obvious over Dasgupta and Darnell. Pet. 56–79. Claim 1 is independent. We begin our analysis by considering Petitioner’s rationale for combining the teachings of Dasgupta and Darnell, which is not substantively challenged by Patent Owner.

1. Rationale to Combine Dasgupta and Darnell

Petitioner asserts that a person of ordinary skill in the art would have understood incorporating Darnell’s feed-subscription methods (with content source selection and security) into Dasgupta would allow the user of Dasgupta’s system to better organize and configure media content sources while preventing unauthorized access to content. Pet. 56 (citing *id.* at Sec. VII.B.1.b; Ex. 1002 Martin ¶¶ 297–301). “For example,” Petitioner explains, “Dasgupta’s access facility configures the access and presentation of media content using ‘any technologies suitable for accessing media content.’” Pet. 56 (citing Ex. 1006, 3:14–28; Ex. 1002 ¶ 300). Petitioner argues that “[b]ecause the user in Darnell’s system ‘may create a list of feed

subscriptions via the feed reader user interface 116,’ and the system presents only those feeds to which the user subscribed when the user is identified and authorized (Ex. 1004 ¶¶ 40, 84, 99–102), [a person of ordinary skill in the art] would have understood Dasgupta’s content access system combined with Darnell’s feed subscription and security methods would display content to which the user had subscribed.” Pet. 56–57 (citing Ex. 1002 ¶ 300).

Petitioner asserts that a person of ordinary skill in the art “would have had a reasonable expectation of success using Darnell’s feed-selection methods in Dasgupta’s system because Dasgupta acknowledges any method may be used, and Darnell shows its technique controls which content sources are displayed.” Pet. 57 (citing Ex. 1006, 3:14–28; Ex. 1002 ¶ 300). “Furthermore,” Petitioner asserts, “creating content lists with restricted access would have been a straightforward application of known, conventional content-aggregation methods used according to their known functions to yield predictable results.” Pet. 57 (citing Ex. 1002 ¶ 301).

According to Petitioner, a person of ordinary skill in the art “would have further desired to combine Darnell’s security features with Dasgupta’s media-content system to make user accounts more secure” (*see* Pet. Sec. VII.A.5; Ex. 1002 ¶¶ 355–357) and “would have been motivated to combine Darnell’s security features with Dasgupta’s media content system because Darnell’s security features would enhance Dasgupta’s user profile privacy and security, preventing unauthorized access to user data (e.g., media content viewing history).” Pet. 57 (citing Ex. 1002 ¶¶ 353–358).

Petitioner also asserts that a person of ordinary skill in the art “would have reasonably expected success using Darnell’s user ID and token in Dasgupta’s media content access system because Dasgupta discloses that any method may be used and already stores user profile data.” Pet. 57–58

(citing Ex. 1002 ¶ 358). “Moreover,” Petitioner explains, “Darnell’s technique controls displaying content sources by authorized users in the UI.” *Id.* According to Petitioner, “saving a user ID or token in storage facility 112 would have been a straightforward application of known, conventional content-aggregation methods used according to their known functions to yield predictable results.” *Id.*

Finally, Petitioner asserts that “[a]pplying Darnell’s teachings to Dasgupta would have been nothing more than applying known techniques for enhancing control over content access and personalization to improve similar content aggregation systems already taught by Dasgupta in the same manner.” Pet. 58 (citing Ex. 1002 ¶¶ 298–301, 353–358).

Based on the evidence and arguments presented, we find that Petitioner has established by a preponderance of the evidence that a person of ordinary skill in the art at the time of the claimed invention would have had a reason to combine the teachings of Dasgupta and Darnell in the manner described in the Petition and would have had a reasonable expectation of success in doing so.

2. *Independent Claim 1*

Petitioner contends that independent claim 1 is unpatentable under 35 U.S.C. § 103 as obvious over the combined teachings of Dasgupta and Darnell. Pet. 2, 56–74; Pet. Reply 19–26. Petitioner provides the testimonial evidence of Dr. Martin in support of its contentions. Ex. 1002 ¶¶ 302–339.

Patent Owner disputes certain of Petitioner’s contentions regarding claim 1, in particular Petitioner’s identification of the recited “content data

and content applications,”⁷ and Petitioner’s evidence with respect to the recited terms “master web page,” “real time,” and “slide tool program.” *See* PO Resp. 55–64; PO Sur-reply 20–25. Patent Owner provides the testimonial evidence of Dr. Edwards in support of its contentions. Ex. 2010 ¶¶ 163–172. We consider the particular issues contested by Patent Owner first.

a) Content Data and Content Applications

Patent Owner contends that “Petitioner does not consistently identify ‘content data and content applications.’” POP Resp. 55–57. Patent Owner argues that Petitioner’s identification of “content data and content applications” shifts throughout its briefing, first identifying “channel icons and advertisements,” and then variously identifying “media content,” “media content channels including streams or frequency bands,” “channels,” “channels and advertisements,” and “channel icons that represent media content and interactive portals.” *Id.* at 56. Patent Owner asserts that “[t]his is not sufficient to prove, by a preponderance of the evidence, that Dasgupta discloses these limitations.” *Id.* at 57.

Petitioner replies by stating that “PO apparently misunderstands the Petition, which explains that [a person of ordinary skill in the art] ‘would have thus understood [Dasgupta’s] channel icons and advertisements to be *content data and content applications* **because they represent channel data and [an] interactive portal that access additional data.**” Pet. Reply 20 (citing Pet. 64–65). According to Petitioner, “[t]he channel icons are thus ‘launching points’ for ‘media content channels,’ and the corresponding

⁷ Petitioner raises the “content data and content applications” issue with respect to both claim 1 and claim 7, but we consider all the arguments by the parties directed to this issue here. *See* PO Resp. 55–57.

channel data is stored in storage facility 112.” Pet. Reply 20 (citing Ex. 2012, 208:14–209:10). Petitioner asserts that “Dasgupta’s channel icons, advertisements, and the associated media content are thus interrelated and collectively or individually correspond to *content data* and *content applications*.” Pet. Reply 20 (citing Pet. 64; Ex. 1002 ¶¶ 314–316).

In its Sur-reply, Patent Owner argues that “the Petition disclosed, at best, channel icons and advertisements,” and “Petitioner’s Reply does not, and cannot, show that the Petition relied on any of the channel icons, advertisements, or associated media content for each ‘content data and content applications’ claim element.” PO Sur-reply 21 (citing Pet. 64–65).

We disagree with Patent Owner. Limitation 1[b1] recites “*a master application stored in the memory of the master server and that executes on the processor of the master server and that includes software coded for organizing **content data and content applications from multiple content sources or service providers pre-selected by the user.***” Ex. 1001, 6:54–59 (emphasis added). The ’658 patent explains that “(1) *Content data is any data or information that is stored remotely on servers that are generally accessible over the internet/intranet via a service provider servers;*” and “(2) *Content applications are software applications that accesses display and organized content data, generally from a web-sites.*” *Id.* at 4:1–6.

The Petition clearly states with respect to Ground 2A and Dasgupta that

channel guide 104 and advertisement facility 106 are applications that provide data “for inclusion in the GUP” accessed by the UI. Ex. 1006, 4:45–5:5. The channel guide includes channel icons, “representing a plurality of media content channels,” arranged in a grid or a “three-dimensional stage” (*that includes software coded for organizing*).

Pet. 64 (citing Ex. 1006, 1:64–2:24, 13:9–23, 17:43–63; Ex. 1002 ¶ 314).

The Petition also points out that “Dasgupta further explains that ‘channel icons may provide launching points through which interactive portals associated with media content providers distributing media content via the media content channels may be accessed.’” Pet. 64 (citing Ex. 1006, 2:17–24, 6:1–6, 13:24–40, 18:33–38 (“user selection of a channel icon in channel guide 1602 may cause system 100 to access an interactive portal associated with the selected channel icon”). The Petition further explains that “[a]dvertisements are also displayed with the channel guide (*id.*, 13:41–14:44), maintained in storage facility 112 (*id.*, 3:63–4:8), and received from an entity with the media content (*id.*, 4:24–32, 15:10–29).” Pet. 64. The Petition concludes by stating that a person of ordinary skill in the art “would have thus understood the channel icons and advertisements to be *content data and content applications* because they represent channel data and interactive portal that access additional data.” Pet. 64–65. Dr. Martin provides corroborating testimony. Ex. 1002, ¶¶ 315–316. Dr. Martin testifies, for example, that “Dasgupta’s Figures 7 and 16 provide visual examples of the organized display of a channel guide featuring ‘a plurality of channel icons associated with a plurality of media content channels’ originating from multiple content providers, such as the inclusion of ‘HBO.’” *Id.* ¶ 316 (citing Ex. 1006, 17:43–63, Figs. 7, 16).

Accordingly, contrary to Patent Owner’s arguments, the Petition makes it clear that Dasgupta’s channel icons, which are associated with a plurality of media content channels and advertisements are *content data and content applications* as those terms are defined by the ’658 patent that represent channel data and interactive portals that access additional data.

b) Master Web Page

Patent Owner contends that “Petitioner fails to prove that Dasgupta discloses the claimed ‘master web-page’ for two reasons.” PO Resp. 57 (citing Ex. 2010 ¶¶ 164–68). First, Patent Owner argues that “the fact that Dasgupta discloses that subsystems *can* communicate via HTTP does not mean Dasgupta discloses a web-page.” PO Resp. 57–58 (citing *Web Techs., LLC v. Apple, Inc.*, 917 F.3d 1376, 1382 (Fed. Cir. 2019).

Second, Patent Owner argues that “even if Dasgupta somehow discloses ‘sending web-pages,’ Dasgupta fails to disclose the claimed ‘master web-page.’” PO Resp. 58 (citing Ex. 2010 ¶ 166). Patent Owner asserts that a person of ordinary skill in the art “would recognize that Dasgupta’s system merely transmits pre-encoded television signals for playback, not real time content streams on a single, interactive user interface, *i.e.*, a master web-page as disclosed in claimed in the ‘658 Patent.” PO Resp. 58 (citing Ex. 1001, 4:21–26; Ex. 2010 ¶ 166).

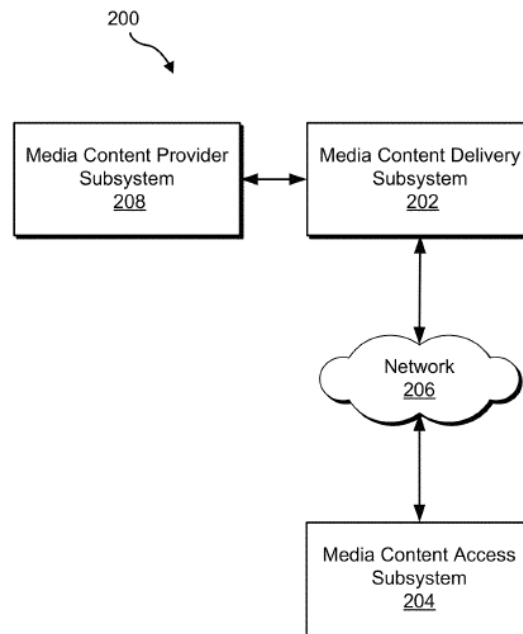
With respect to Patent Owner’s first argument, Petitioner replies that it “is not relying on inherency. Rather, the Petition explains that it would have been **obvious** to use a web-page as Dasgupta’s channel guide because it is transferred using HTTP.”⁸ Pet. Reply 21 (citing Ex. 1002 ¶ 325). Petitioner asserts that “[i]t was indisputably well-known at the relevant time that ‘Hypertext Transfer Protocol (HTTP) sets forth the rules for transferring content such as files or objects on the web’ and that web pages use HTTP to retrieve objects contained on those pages.” Pet. Reply 21 (citing Ex. 1083 ¶¶ 6–7; Ex. 1004 ¶¶ 41, 96). Petitioner argues that “[i]t therefore would

⁸ Petitioner notes that “Dr. Edwards offers no opinion on whether web-pages are transferred using HTTP.” Pet. Reply 21 n.11 (citing Ex. 1082, 193:9–194:25).

have been obvious based on Dasgupta's disclosure that web objects are transferred via HTTP between subsystem 202 and subsystem 204 for presentation on a web-page such as Dasgupta's channel guide." Pet. Reply 21–22 (citing Pet. 67–68; Ex. 1002 ¶ 325).

In its Sur-reply, Patent Owner contends that Petitioner is "simply chang[ing] its argument" because, according to Patent Owner, "the Petition never mentions obviousness for the 'master web-page' limitation." PO Sur-reply 22.

While we agree with Patent Owner that at first glance it may appear that Petitioner is changing its position on this issue, upon closer inspection we determine that Petitioner is clarifying the position taken in the Petition. With respect to Ground 2A, the Petition contends that claims 1, and 4–10 are unpatentable under 35 U.S.C. § 103 over the Dasgupta and Darnell references. *See* Pet. 2, 56 ("Dasgupta and Darnell Render Obvious Claims 1, 4–10"). With respect to claim 1, Petitioner relies on Dasgupta's Figure 2, shown below. *See* Pet. 59–60.



Dasgupta's Figure 2 is a block diagram illustrating media content access system 200 with media content delivery subsystem 202 communicatively coupled to media content access subsystem 204 through network 206. Ex. 1006, 6:52–61, Fig. 2.

With respect to limitation 1[b2] in particular, the Petition states that “Dasgupta discloses or suggests this limitation.” Pet. 67 (citing Ex. 1002 ¶¶ 323–326) (underline added). The Petition explains that Dasgupta

discloses that media content may be transmitted between subsystem 202 and subsystem 204 via network 206 using TCP/IP and “Hypertext Transfer Protocol (‘HTTP’)” (Ex. 1006, 7:20–35), which governs how web browsers and web servers intercommunicate to load web pages. Ex. 1002 ¶ 325. It was well-known that web pages include HTML and JavaScript programs to create UIs. *Id.* ¶ 325 (citing Ex. 1006). Accordingly, POSITAs would have understood subsystem 202 sends webpages to subsystem 204 using the HTTP (*on a master web-page*). Ex. 1002 ¶ 325.

Pet. 68–69.

This statement in the Petition, that a person of ordinary skill in the art “would have understood subsystem 202 sends webpages to subsystem 204 using the HTTP (*on a master web-page*),” is consistent with the position taken in the Petition that “Dasgupta . . . suggests this limitation.” *Id.* 67, 69. This stated position in the Petition is also consistent with the position stated in Petitioner's reply, that “the Petition explains that it would have been **obvious** to use a web-page as Dasgupta's channel guide because it is transferred using HTTP.” Pet. Reply 21 (citing Ex. 1002 ¶ 325).

This position is also consistent with the testimony of Dr. Martin, who states that

Dasgupta explains the use of the Hypertext Transfer Protocol (HTTP) within the Transmission Control

Protocol/Internet Protocol (TCP/IP) framework to manage data transmission. Ex. 1006, 7:20–29. HTTP is the foundational protocol for the World Wide Web, defining how data, including web pages, is transmitted from servers to client devices. Using HTTP, subsystem 202 can provide web-based content aggregation directly to subsystem 204 by sending structured data (such as HTML or other markup data) that is rendered on the client device. HTTP governs the interaction between web servers and web clients, such as browsers, allowing users to access and interact with content over the internet, which is particularly relevant when web-based interfaces serve as content aggregation platforms. *See, e.g.*, Ex. 1004 ¶¶ 41, 96, 102. A POSITA would have thus recognized that subsystem 202, acting as the master server, organizes and distributes content as web pages viewable on subsystem 204 over HTTP, creating a “master web-page” accessible on remote devices through the master server. At the time of the alleged invention, it was well known that webpages included HTML and JavaScript programs to create user interfaces. A POSITA would have understood that subsystem 202 sends webpages to subsystem 204 using HTTP (i.e., “on a master web-page”).

Ex. 1002 ¶ 325.

Thus, based on this record we determine that Petitioner’s statements in its Reply brief are a clarification of the position Petitioner asserted in the Petition, and that Petitioner has not changed its argument as Patent Owner contends.

Patent Owner’s second argument is that “Dasgupta fails to disclose the claimed ‘master web-page.’” PO Resp. 58 (citing Ex. 2010 ¶ 166). Patent Owner argues that “[a]ccording to the ‘658 Patent, ‘[a] dynamic user web-page or *master web-page* is a web-page viewable remotely from a remote computing device via log-in server or master server and which displays a slide tool that scrolls or pages through content data and/or content application from multiple content data sources and/or service providers in

real time.” PO Resp. 58 (quoting Ex.1001, 4:21–26). According to Patent Owner, a person of ordinary skill in the art “would recognize that Dasgupta’s system merely transmits pre-encoded television signals for playback, not real time content streams on a single, interactive user interface, *i.e.*, a master web-page as disclosed in claimed in the ’658 Patent.” PO Resp. 58 (citing Ex. 2010 ¶ 166).

Petitioner replies that “the patent never uses the phrases ‘real time content’ or ‘interactive user interface,’ nor does the patent mention or otherwise preclude transmission of ‘pre-encoded television signals’—not even in the specification passage PO quotes.” Pet. Reply 22 (citing Ex. 1001, 4:21–26). According to Petitioner, Patent Owner’s argument “has no intrinsic support.” Pet. Reply 22.

We agree with Petitioner. Although Patent Owner accurately quotes the Specification’s description of a master web-page, claim 1, however, does not recite “real time content streams on a single, interactive user interface” as Patent Owner appears to argue. Accordingly, we find Patent Owner’s argument unavailing.

c) Real Time

Patent Owner contends that “Dasgupta fails to disclose a system that provides content streamed in real time on a master webpage as required by claim 1.” PO Resp. 58 (citing Ex. 2010 ¶¶ 169–72). Patent Owner argues that “[i]nstead, Dasgupta discloses a GUI operating on a set-top box that displays ***a graphical representation of a channel guide with static channel icons and a graphical representation of one or more advertisements.***” PO Resp. 58–59 (citing Ex. 1006, 13:5–51). Patent Owner argues that “Dasgupta’s channel icons are not content data or content applications streamed in real time to a master web-page as claimed in the ’658 Patent.”

PO Resp. 59 (citing Ex. 2010 ¶ 169; Ex. 1006, Fig. 7). Patent Owner asserts that “Dasgupta simply presents static images *representative* of such content.” PO Resp. 60 (citing Ex. 2010 ¶ 169).

“Moreover,” Patent Owner argues, “these channel icons serve as ‘links’ that a user must ‘click’ to access a media provider’s content.” PO Resp. 60. Patent Owner argues that “[r]equiring a user to ‘click’ an icon to access content is directly contrary to what the ‘658 patent and file history describe as streaming content data or applications in real time on a master web-page.” PO Resp. 60 (citing Ex. 2010 ¶ 169; Ex. 1003, 134–135, 179).

Patent Owner argues that “Dasgupta’s advertisements are likewise not content data or applications streamed in real time on a master web-page,” because “[t]he patent provides a list of content data, which notably does not include advertisements or promotions,” and “if the inventors considered them content data, they would have been included in the list.” PO Resp. 60–61 (citing Ex. 1001, 6:41–48; Ex. 2010 ¶ 170). Patent Owner also argues that “Dasgupta’s advertisements are merely ‘visual prompts’ that ‘may be associated with advertisements 704 and/or with a virtual store through which products and/or services may be acquired by a user.’” PO Resp. 61 (citing Ex. 1006, 13:52–56).

Petitioner replies to Patent Owner’s arguments by pointing out that [t]he patent does not mention or otherwise prohibit the use of “static images.” On the contrary, *content data* broadly encompasses “any data or information that is stored remotely on servers that are generally accessible over the internet/intranet via a service provider servers” EX1001, 4:1–3, which includes, for example, an email—i.e., a static image. *E.g., id.*, claim 11 (“wherein one of the content sources or service providers includes an e-mail web-site belonging to the user”).

Pet. Reply 23.

Petitioner also points out that the claims “do not prohibit user action on the *master web-page*,” such as clicking on a link. Pet. Reply 23. Indeed, Patent Owner’s own expert, Dr. Edwards, testified with respect to claim 10 that a person of ordinary skill in the art “would understand that the term ‘icon-based master web-page’ refers to the dynamic graphical user interface generated and maintained by the master server, which displays streaming content and content applications **represented by selectable icons.**” Ex. 2010 ¶ 152 (emphasis added).

With respect to “advertisements,” Petitioner points out that “the patent expressly gives *content data* a broad meaning that encompasses advertisements and promotions.” Pet. Reply (citing Ex. 1001, 4:1–3; Ex. 1082, 195:23–24 (“I don’t see anything in lines 1 through 3 in column 4 that, by itself, would exclude advertising.”); Ex. 1002 ¶¶ 315, 328–29, 334).

We agree with Petitioner. The ’658 patent provides a broad definition of what constitutes the recited “content data” and “content applications.” According to the ’658 patent, “content data” is defined as “any data or information that is stored remotely on servers that are generally accessible over the internet/intranet via a service provider servers.” Ex. 1001, 4:1–3. Similarly, “content applications” are defined as “software applications that accesses display and organized content data, generally from a web-sites.” *Id.* at 4:4–6.

With respect to advertising, the ’658 patent specifically contemplates incorporating advertisements as part of the content data provided to the master web-page for the user. The ’658 patent explains that

The operations and activities of the user over the master web-page via the remote computing device is capable of being recorded and stored to provide user history analytics. The user history analytics can then be used select promotions,

advertisement, news and other information that targets the user based on the operations performed and/or the content data sources or service providers that are used. These promotions, advertisement, news and other information can then be directed to the master web-page or the viewable content data can be modified to represent the user's apparent interests.

Ex. 1001, 3:13–23.

Dr. Martin also testifies that “Dasgupta also discloses that subsystem 202, in conjunction with network 206, delivers content from multiple providers to subsystem 204, which operates as the remote client device.”

Ex. 1002 ¶ 325. Dr. Martin also testifies that “Dasgupta explicitly describes how media content becomes viewable on subsystem 204 (the remote computer device), which ‘present the media content for experiencing (e.g., viewing) by a user.’” *Id.* at ¶ 326 (citing Ex. 1006, 7:36–43). Dr. Martin testifies, and we agree, that a person of ordinary skill in the art “would have thus understood Dasgupta’s system as streaming content in real time to the master server, accessible from a master web-page and ultimately viewable on remote devices through that server-based interface. This understanding is reinforced by Dasgupta’s disclosure of subsystem 202 as a central server facilitating the distribution and display of media content on user-accessible interfaces, hosted and processed centrally and streamed to client devices for remote viewing.” Ex. 1002 ¶ 326.

Accordingly, we find Patent Owner’s arguments directed to these issues to be unavailing.

d) Slide Tool Program

Patent Owner contends that “[b]ecause Dasgupta fails to disclose streaming content in real time on a master web-page, it necessarily lacks any slide tool program for scrolling or paging through such content in real time

from the master web-page.” PO Resp. 64. Patent Owner argues that “Petitioner fails to mention the words ‘real time’ in this portion of its argument, let alone explain how scrolling static channel icons or advertisements (neither of which are ‘real time’ content data or content applications) constitutes ‘scrolling or paging through’ content data or applications ‘in real time from the master webpage.’” *Id.* (internal citation omitted).

Patent Owner’s argument is premised on the incorrect assumption that “Dasgupta fails to disclose streaming content in real time on a master web-page.” Because we determine based upon the complete record that the asserted art meets all of claim 1’s limitations, Patent Owner’s arguments are unavailing.

e) Claim 1 - Evidence and Arguments

We have considered Petitioner’s evidence and arguments with respect to independent claim 1. Petitioner provides persuasive evidence that the combined teachings of Dasgupta and Darnell meet all the recited limitations of independent claim 1. Pet. 56–74; Pet. Reply 19–26. Petitioner also provides the testimony of Dr. Martin supporting its position that the combined teachings of Dasgupta and Darnell meet the recited limitations of independent claim 1, which we find persuasive. *See* Ex. 1002 ¶¶ 302–339. Petitioner further provides persuasive evidence that a person of ordinary skill in the art at the time of the claimed invention would have had reason to combine their teachings in the manner described, and would have had a reasonable expectation of success in that endeavor, which Patent Owner does not contest. *See* Pet. 56–58; Ex. 1002 ¶¶ 298–301.

We have also considered the evidence and arguments provided by Patent Owner supported by the testimony of Dr. Edwards. *See* PO Resp. 55–64; PO Sur-reply 20–25; Ex. 2010 ¶¶ 163–172.

Based on the complete record, we are persuaded that Petitioner has established by a preponderance of the evidence that the combined teachings of Dasgupta and Darnell meet all the limitations of independent claim 1, and that a person of ordinary skill in the art at the time of the claimed invention would have had reason to combine their teachings in the manner described, and would have had a reasonable expectation of success in that endeavor.

3. *Independent Claim 7*

Petitioner contends that independent claim 7 is unpatentable under 35 U.S.C. § 103 as obvious over the combined teachings of Dasgupta and Darnell. Pet. 2, 76–78. Petitioner provides the testimonial evidence of Dr. Martin in support of its contentions. Ex. 1002 ¶¶ 340–352.

Patent Owner disputes certain of Petitioner’s contentions regarding claim 7, in particular Petitioner’s evidence with respect to the recited terms “master web page,” “real time,” and “slide tool program.” *See* PO Resp. 65–66. Patent Owner provides the testimonial evidence of Dr. Edwards in support of its contentions. Ex. 2010 ¶¶ 176–178. Patent Owner’s arguments with respect to claim 7, however, rely on the same arguments that Patent Owner made with respect to claim 1. *See* PO Resp 65–66.

For the reasons we explain with respect to independent claim 1 in Section III.G.2, *supra*, we also find Patent Owner’s arguments with respect to claim 7 unavailing.

We have considered Petitioner’s evidence and arguments with respect to independent claim 7. Petitioner provides persuasive evidence that the combined teachings of Dasgupta and Darnell meet all the recited limitations

of independent claim 1. Pet. 76–78. Petitioner also provides the testimony of Dr. Martin supporting its position that the combined teachings of Dasgupta and Darnell meet the recited limitations of independent claim 7, which we find persuasive. *See* Ex. 1002 ¶¶ 340–352. Petitioner further provides persuasive evidence that a person of ordinary skill in the art at the time of the claimed invention would have had reason to combine their teachings in the manner described, and would have had a reasonable expectation of success in that endeavor, which Patent Owner does not contest. *See* Pet. 56–58; Ex. 1002 ¶¶ 298–301.

We have also considered that evidence and arguments provided by Patent Owner supported by the testimony of Dr. Edwards. *See* PO Resp. 65–66; Ex. 2010 ¶¶ 176–178.

Based on the complete record, we are persuaded that Petitioner has established by a preponderance of the evidence that the combined teachings of Dasgupta and Darnell meet all the limitations of independent claim 7, and that a person of ordinary skill in the art at the time of the claimed invention would have had reason to combine their teachings in the manner described, and would have had a reasonable expectation of success in that endeavor.

4. Uncontested Dependent Claims 4–6, and 8–10

Petitioner contends that dependent claims 4–6, and 8–10 are unpatentable under 35 U.S.C. § 103(a) as obvious over the combined teachings of Dasgupta and Darnell. Pet. 74–79. Petitioner provides the testimonial evidence of Dr. Martin in support of its contentions. Ex. 1002 ¶¶ 353–370.

Patent Owner does not substantively contest dependent claims 4–6, and 8–10. *See* PO Resp. 54–66.

We have considered Petitioner’s evidence and arguments with respect to dependent claims 4–6, and 8–10. Based on the complete record, we are persuaded that Petitioner has established by a preponderance of the evidence that the combined teachings of Dasgupta and Darnell meet all the limitations of these dependent claims, and that a person of ordinary skill in the art at the time of the claimed invention would have had reason to combine their teachings in the manner described, and would have had a reasonable expectation of success in that endeavor.

H. Obviousness over Dasgupta, Darnell, and Kim (Ground 2B)

For Ground 2B, Petitioner contends that dependent claims 2, 3, and 11 are unpatentable under 35 U.S.C. § 103 as obvious over Dasgupta, Darnell, and Kim. Pet. 56–79. We begin our analysis by considering Petitioner’s rationale for combining the teachings of Dasgupta, Darnell, and Kim, which is not substantively challenged by Patent Owner.

1. Rationale to Combine Dasgupta, Darnell, and Kim

Petitioner asserts that a person of ordinary skill in the art “would have been motivated to include Kim’s email and blog content with Dasgupta’s media-content system to improve the user experience of Dasgupta’s system.” Pet. 79 (citing Ex. 1002 ¶ 374). According to Petitioner, “[a]dding such content sources to Dasgupta’s unified UI would remove the need for separate applications for television, email, and social media.” Pet. 79–80 (citing Ex. 1002 ¶¶ 374–377). Petitioner asserts that a person of ordinary skill in the art “would have also understood Kim’s email and blog content could be processed and presented by Dasgupta’s media content access facility because it aggregates and presents any type of media, including media transmitted using known protocols.” Pet. 80 (citing Ex. 1006, 7:20–29; Ex. 1002 ¶ 378). Petitioner asserts that a person of ordinary skill in

the art “would have also understood combining Kim’s email content account into Dasgupta’s media content system would enable users to view and respond to critical email messages without requiring a different device or different login information.” Pet. 80 (citing Ex. 1002 ¶ 375).

Petitioner asserts that a person of ordinary skill in the art “would have had a reasonable expectation of success incorporating Kim’s additional media content (email and blogs) into Dasgupta’s media content access system because Dasgupta discloses that any method may be used to access content (Ex. 1006, 3:14–28), and Kim’s technique allows accessing email and blogs in addition to other media content in a feed aggregation UI.” Pet. 80 (citing Ex. 1002 ¶¶ 378–379). “Furthermore,” Petitioner adds, “receiving email and blog content in Dasgupta’s media content access system would have been a straightforward application of known, conventional content aggregation methods used according to their known functions to yield predictable results.” Pet. 80 (citing Ex. 1002 ¶ 379).

According to Petitioner, a person of ordinary skill in the art would have had a reasonable expectation of success using Kim’s addition media content (email and blogs) in Dasgupta’s media content access system because Dasgupta discloses ‘any other form of media content’ may be presented (Ex. 1006, 2:25–38), and any method may be used to access content (*id.*, 3:14–28), and Kim’s technique allows access to email and blogs in addition to other media content in a feed aggregation UI.

Pet. 80–81 (citing Ex. 1002 ¶ 378). “Furthermore,” Petitioner adds, “receiving email and blog content in Dasgupta’s media content access system would have been a straightforward application of known, conventional content aggregation methods used according to their known functions to yield predictable results.” Pet. 81 (citing Ex. 1002 ¶¶ 378–379). “Applying Kim’s teachings to Dasgupta.” Petitioner asserts, “would also

have been nothing more than applying known techniques to improve the similar content aggregation systems already taught by Dasgupta in the same manner.” Pet. 81 (citing Ex. 1002 ¶ 379).

Based on the evidence and arguments presented, we find that Petitioner has established by a preponderance of the evidence that a person of ordinary skill in the art at the time of the claimed invention would have had a reason to combine the teachings of Dasgupta, Darnell, and Kim in the manner described in the Petition and would have had a reasonable expectation of success in doing so.

2. Uncontested Dependent Claims 2, 3, and 11

Petitioner contends that dependent claims 2, 3, and 11 are unpatentable under 35 U.S.C. § 103(a) as obvious over the combined teachings of Dasgupta, Darnell, and Kim. Pet. 79–82. Petitioner provides the testimonial evidence of Dr. Martin in support of its contentions. Ex. 1002 ¶¶ 371–389.

Patent Owner does not substantively contest dependent claims 2, 3, and 11. *See* PO Resp. 54–66.

We have considered Petitioner’s evidence and arguments with respect to dependent claims 2, 3, and 11. Based on the complete record, we are persuaded that Petitioner has established by a preponderance of the evidence that the combined teachings of Dasgupta, Darnell, and Kim meet all the limitations of these dependent claims, and that a person of ordinary skill in the art at the time of the claimed invention would have had reason to combine their teachings in the manner described, and would have had a reasonable expectation of success in that endeavor.

IV. CONCLUSION⁹

For the foregoing reasons, we determine that Petitioner has demonstrated by a preponderance of the evidence that claims 1–18 of U.S. Patent No. 9,729,658 B2 are unpatentable on the bases set forth in the following table.

Claim(s) Challenged	35 U.S.C. §	Reference(s)/Basis	Claim(s) Shown Unpatentable	Claim(s) Not Shown Unpatentable
1–5, 7–10	103	Darnell, Kim	1–5, 7–10	
6, 12–18	103	Darnell, Kim, Dasgupta	6, 12–18	
1, 4–10	103	Dasgupta, Darnell	1, 4–10	
2, 3, 11	103	Dasgupta, Darnell, Kim	2, 3, 11	
Overall Outcome			1–18	

⁹ 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).

V. ORDER

Accordingly, it is

ORDERED that Petitioner has demonstrated by a preponderance of the evidence that claims 1–18 of U.S. Patent No. 9,729,658 B2 are unpatentable; and

FURTHER ORDERED that because this is a Final Written Decision, any party to the proceeding seeking judicial review of this Decision must comply with the notice and service requirements of 37 C.F.R. § 90.2.

IPR2025-00307
Patent 9,729,658 B2

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

TWITCH INTERACTIVE, INC.,
Petitioner,

v.

RAZDOG HOLDINGS LLC,
Patent Owner.

IPR2025-00307
Patent 9,729,658 B2

Before KEVIN C. TROCK, AARON W. MOORE, and
JASON M. REPKO, *Administrative Patent Judges*.

MOORE, *Administrative Patent Judge, dissenting*.

I respectfully dissent from the majority’s decision to find the challenged claims unpatentable because, in my view, the majority’s construction of “real time” is not correct, and Petitioner has not met its burden of proving by a preponderance of the evidence that either Darnell or Dasgupta teaches or suggests “content data and content applications . . . streamed . . . simultaneously in real time . . . on a master web-page,” as required by the plain language of the claims.

Claim Construction

The majority explains that “[b]oth parties . . . appear to agree that a person of ordinary skill in the art . . . would understand that the ordinary and customary meaning of the term ‘real time’ is a temporal one, where transmission of content is updated and displayed as soon as it becomes available, without significant or perceptible delay.” Maj. Op. 17.¹ I generally agree with that. And, in my view, that should be the end of the “real time” claim construction analysis.

The majority, however, uses the construction of “real time” to rewrite other parts of the claim, seemingly combining some or all of 1[b1], 1[b2], and 1[b3], to conclude that “real time” means

that content data and content applications from multiple content sources or service providers pre-selected by a user are streamed to a master server from their respective sources or providers *as soon as it is available*, wherein the master server organizes the content on a master web page and makes it viewable to a user on a remote computer device using a slide tool program for scrolling or paging through the content *without significant or perceptible delay to the user*.

Maj. Op. 31–32 (emphasis added). I see no reason to work all of that language into the construction of “real time,” particularly because much of it already exists in the claim, and it is unclear to me whether and to what

¹ See Pet. Reply 1–2 (explaining that “[Patent Owner’s] proposed litigation construction (EX2005, 2 [“matching the human perception of time or proceeding at approximately the same rate as a physical or external process”]), Petitioner’s proposal (Pet. 27 n.9 [“as soon as it becomes available”]), and “the majority’s preliminary construction (DI, 15 [“to provide or transmit content when it is available without significant delay”]), are all similar and show *real time* is about timing, not about how or where information is ultimately transmitted”).

extent that construction is meant to replace the language already in 1[b1], 1[b2], and 1[b3].

Moreover, the majority's construction does not include, or otherwise account for, the language of 1[b2] specifically requiring that the content be "streamed to the master server simultaneously in real time . . . *on a master web-page.*"

The actual dispute here is whether the claim requires only that the data be *streamed to the server* in real time, or whether it must be *streamed on the master web-page* in real time. I view that as a fairly straightforward question, however, because the claim requires software for "organizing content data and content applications from multiple content sources or service providers . . . streamed to the master server simultaneously in real time from their respective servers on a master web-page."² So, the plain language of the claim requires that the data be "streamed," "in real time," "on a master web page." That concept is described in equally plain terms in the patent: "The master web-page is a 'dynamic' in the sense that *the master web-page displays streaming content data and content applications from the multiple content data sources in real time.*" Ex. 1001, 2:56–59 (emphasis added).

The majority's claim construction analysis focuses on the slide tool of 1[b3] ("a slide tool program for scrolling or paging through the [content] simultaneously and through the master server *in real time*"), but does not appear to account for the distinct language of 1[b2] ("streamed to the master server simultaneously in real time . . . on a master web-page"), concluding

² The ellipsis omits "pre-selected by the user," which does not affect the analysis.

that one would “understand that the ‘real time’ experience of the user occurs though the use of the slide tool program operating on the remote computer device by scrolling or paging through the content data or content applications on the master web page organized by the master application residing on the master server.” Maj. Op. 28. The claim, however, requires **both** that the content is streamed “simultaneously in real time . . . on a master web-page,” as recited in 1[b1], **and** that there is a slide tool program to allow the user to scroll through that real time content, as recited in 1[b2].

The majority states that the “fundamental problem” with Patent Owner’s argument is that it “misinterprets the full context of claim 1,” a problem that is “made evident” by “Patent Owner’s repeated emphasis of the phrase ‘in real time on a master web page,’ or similar iterations, in its arguments even though that particular phrase does not appear in any of the claims verbatim.” Maj. Op. 28–29. But “verbatim” is doing very much work in that analysis, because the subject claim language is “*in real time* from their respective servers *on a master web-page*.” Omitting “from their respective servers,” which is not necessary to this argument, one is left with “in real time . . . on a master web-page,” meaning that Patent Owner’s arguments concerning “in real time on a master web page” are fully consistent with and supported in the claim language. Patent Owner is relying on the actual the language of the claim.

I also note that reading the claim to require real time streams *on the master web-page* is consistent with the prosecution, as prior art reference Perlman disclosed a “user interface screen [that] allows a user to watch 15

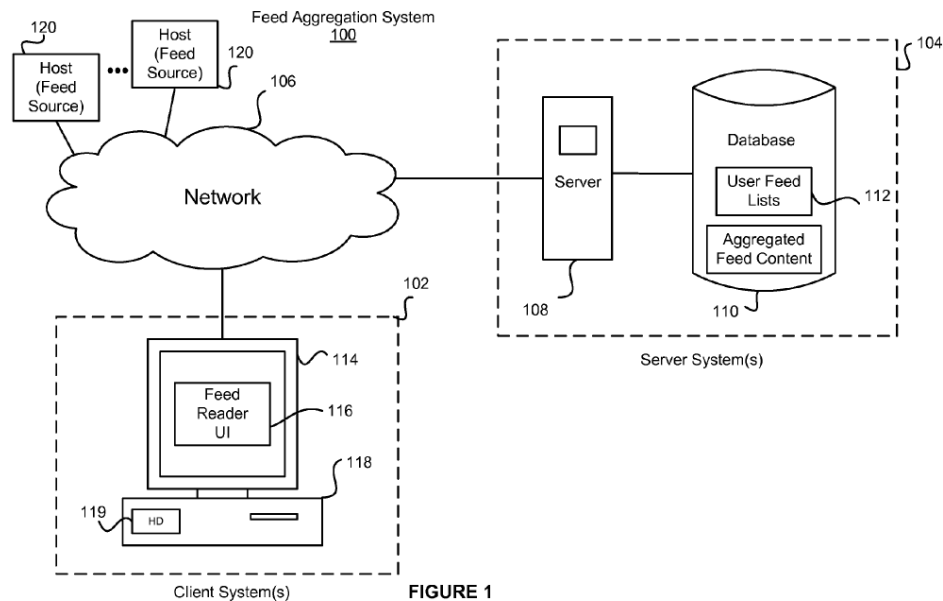
games that are being played live by other users.” Ex. 1003, 366.³ It is true that the claims were allowed due to the remote tool box feature, but that was because the Examiner had a reference that streamed multiple content items in real time. The fact that the applicant was able to overcome the art that was before the Examiner with the addition of the toolbox feature does not mean that Petitioner need not show real time streaming on a master web page in its combination of entirely different references.

For these reasons, I would agree with the parties that “real time” should mean that the “transmission of content is updated and displayed as soon as it becomes available, without significant or perceptible delay.” Because the concepts of transmitting (“streamed”) and displaying (making “viewable”) are already in the claim, the construction could be shortened to “as soon as it becomes available, without significant or perceptible delay,” which I believe to be consistent with the common meaning of “real time” in this and similar contexts, consistent with the parties’ constructions, and consistent with how the Examiner viewed the claims.

³ See also Ex. 1003, 135 (applicant arguing that “[t]he second part of the invention is an application that is executed from a master server” [and] directs live stream web sources or content providers to single user interface or page simultaneously, such that the user can view all of the web sources or providers simultaneously”).

Darnell Ground

Figure 1 of Darnell is reproduced below.



Darnell’s Figure 1 “FIG. 1 is a block diagram illustrating a content feed aggregation system.” Ex. 1004 ¶ 15.

This figure shows server system 104 that “accesses content feeds from the feed sources 120.” Ex. 1004 ¶ 33. “Server 108 . . . retrieves the content feeds from the feed sources 120, and also provides an interface between the server system 104 and the client systems 102.” *Id.* “The server system 104 stores content items in the content feeds in the database 110.” *Id.* at 34.

“A user interfaces with the server system 104 and views content items at a client system or device 102,” such as “a computer 118 or computer controlled device,” “a personal digital assistant (PDA), [a] cellular telephone or the like.” Ex. 1004 ¶ 39.

In some embodiments, “the feed reader user interface 116 may be a web-based user interface” that “may be written in the Hypertext Markup Language (HTML), Extensible Markup Language (XML), or any other suitable language for preparing web pages, and may include one or more

scripts for interfacing with the server system 104.” Ex. 1004 ¶ 41. In other embodiments, “the feed reader user interface 116 may be a part of a standalone application that is run on the client system 102” and “may interface with the server system 104 via an application programming interface (API).” *Id.* at 42.

Darnell’s Figures 2 and 3 describe how the list of items is displayed to the user and how the user may interact with the list, e.g., interacting the items, expanding them, marking them as read, and using labels or folders. *See* Ex. 1004 ¶¶ 43–60. Figure 4 describes the client computer (*see id.* ¶¶ 61–70), and Figure 5 shows a server embodiment (*see id.* ¶¶ 71–80). Of note, the server includes “a feed tracker module 516 for retrieving content items for storage periodically and/or as content feeds are updated.” *Id.* ¶ 74.

In Figure 6, Darnell describes the data structures that hold the feed items, user subscriptions, and user preferences. *See* Ex. 1004 ¶ 81–90. In one embodiment “[t]he feed content items may be stored in a data structure, such as a table data structure 600,” which “includes a row 610 for each content item from each feed source,” where “[e]ach row includes one or more fields (612, 614) that identify the content item, such as a content ID 612 and a feed ID 614 (which identifies the feed source of the content item).” *Id.*

Darnell’s Figure 7 describes “a flow diagram illustrating a process 700 for presenting content items to a user, in accordance with some embodiments.” Ex. 1004 ¶ 91. Specifically, “[c]lient 400 detects user selection of a bookmark . . . (702)” and “[i]n response, client 400 downloads a document associated with the bookmark (704) and displays the downloaded document to the user (712).” *Id.* Figure 8 shows the same process but in a web browser instead of a feed reader. *See* Ex. 1004 ¶ 103.

Figure 9A is “a flow diagram illustrating a process 900 for retrieving and storing content items for subsequent transmission to client computer 400.” Ex. 1004 ¶ 106. “Server computer 500 retrieves a currently published set of content items for a content feed, for each of a plurality of respective content feeds (902),” where “[s]tep 902 is performed, for example, by feed tracker module 516,” and “[t]he retrieved content items are merged into a previously stored set of previously published content items, otherwise known as historical content items, for each of the plurality of content feeds (904).” *Id.* “The merged content items are stored in a database (906), such as feed content database 520 (FIG. 5).” *Id.*

Then, “*in response to a user action*, client computer 400 transmits to server computer 500 a request for a set of content items corresponding to a specified stream (922)” and “[s]erver computer 500 receives the request and retrieves the requested set of content items from server memory 504 (924) and responds by transmitting a set (e.g., an ordered list) of content items for a specified stream (908).” *Id.* ¶ 110 (emphasis added). “Client computer 400 receives the transmitted set of content items and displays at least a subset of the content items to the user (926).” *Id.*

Darnell also explains that “[a] user viewing the displayed list of content items (926) may attempt to scroll beyond the end of the displayed list,” which “*will prompt client computer 400 to fetch from server computer 500 an additional set of content items*, corresponding to the specified stream, to display to the user.” Ex. 1004 ¶ 112 (emphasis added).

Darnell thus describes a system in which the server collects items and stores them in a database, and then, either by direct request from a user or by the user attempting to scroll beyond the displayed content, the server will provide items for display to the user.

Darnell Analysis

The independent claims of the '658 patent require “organizing content data and content applications from multiple content sources or service providers . . . and streamed to the master server simultaneously in real time from their respective servers on a master web-page.”⁴ As explained above, I agree with the parties that “real time” generally means “without significant or perceptible delay.”

I don't believe this claim language is met by a system, like the one disclosed in Darnell, that only provides updated items when requested by the user. In Darnell's system, if a user were to make a first request, the server would provide the most current items, but if new items were to become available with the passage of time and obtained by the server's feed tracker, they would be stored in the database on the server, but not made available to the user until new a request was made, and thus not streamed in real time to the master web page.

The Petition asserts that “Darnell's feed tracker module 516 retrieves “content items for storage periodically and/or **as content feeds are updated**” (Darnell, ¶ 74), which a POSITA would understand to mean that the server receives the content *in real time* within the meaning of the '658 Patent.” Pet. 27 (citing Ex. 1002 ¶ 184–185). Even if “as content feeds are updated” could be sufficient for “streamed,” Darnell's feed tracker nevertheless does not satisfy the language of the claim, because it requires that the data/content be “*streamed* to the master server *simultaneously in real time* from their respective servers *on a master web-page* and are

⁴ The ellipsis omits “pre-selected by the user,” which does not affect the analysis.

viewable from the remote computer devices through the master server on the master web-page.” Darnell’s feed tracker module retrieves new items “for storage,” but nothing in Darnell indicates that they are streamed in real time on the master web page. Instead, as described above, Darnell stores the items until the user requests them.

Petitioner also asserts that “[a]ny argument by [Patent Owner] that a ‘stream’ of real-time content requires ongoing, continuous data transmission is inconsistent with the patent.” Pet. 27, n.9 (citing Ex. 1001, 2:40–46, 5:31–36, 7:14–19, 8:3–5.). I don’t find this persuasive because there does not seem to be any reason why other types of content could not be streamed in real time. A view of an email inbox, for example, could be displayed in real time. The view might not reflect any change until a new email was received, for example, but when a new email was received, the display would be updated without significant or perceptible delay.⁵

The majority relies on the idea that “storage is not precluded by the claims and that some delay may occur during operation of the claimed systems and method” to conclude that Darnell’s system of storing new information and then delivering it only when requested is sufficient for real time streaming. Maj. Op. 50. I disagree. There is a fundamental difference between streaming data in real time, in which there may be some minor delays incidental to the streaming process (temporary storage in a buffer, for

⁵ An email program is just an application, like the games being streamed in the Examiner’s Perlman reference, the main difference being that there is presumably more ongoing activity in a video game being played than in an email inbox.

example),⁶ and sending data to a database where it is not made available until subsequently requested. In the former case, the data will be received and displayed close to the time of its creation; in the latter, the data will only be seen by the user upon request.

The majority also relies on Darnell’s “feed tracker module.” *See* Maj. Op. 50–51. As explained above, however, the feed tracker module “retriev[es] content items *for storage* periodically and/or as content feeds are updated.” Ex. 1004 ¶ 74 (emphasis added). Nothing in Darnell suggests that the feed tracker module displays retrieved content in real time on the master web page.

The majority also seeks draw an analogy between Darnell’s user requesting new content and the ’658 patent’s “slide tool.” *See* Maj. Op. at 51. I find this unpersuasive because the question is whether Darnell discloses streaming in real time to a master web page, not how the system of the patent operates. And, in any event, there is nothing to suggest that the patent’s slide tool does anything to request new data. The majority asserts that “[a] person of ordinary skill in the art would understand that a user ‘operating the slide tool program’ and ‘scrolling or paging through the content data or the content applications’ with the slide tool program is issuing ‘user requests’ to the master server through the master web page for the particular content that the user wishes to access and manipulate, i.e., ‘scrolling or paging through.’” *Id.* The cited paragraph of Dr. Martin’s

⁶ Both experts acknowledge that “real time” streaming may include a slight delay. Petitioner’s expert’s definition includes “without *significant* delay between content sources” (Ex. 1002 ¶ 178 (emphasis added)), and Patent Owner’s expert includes “without *perceptible* delay to the user” (Ex. 2010 ¶ 72 (emphasis added)).

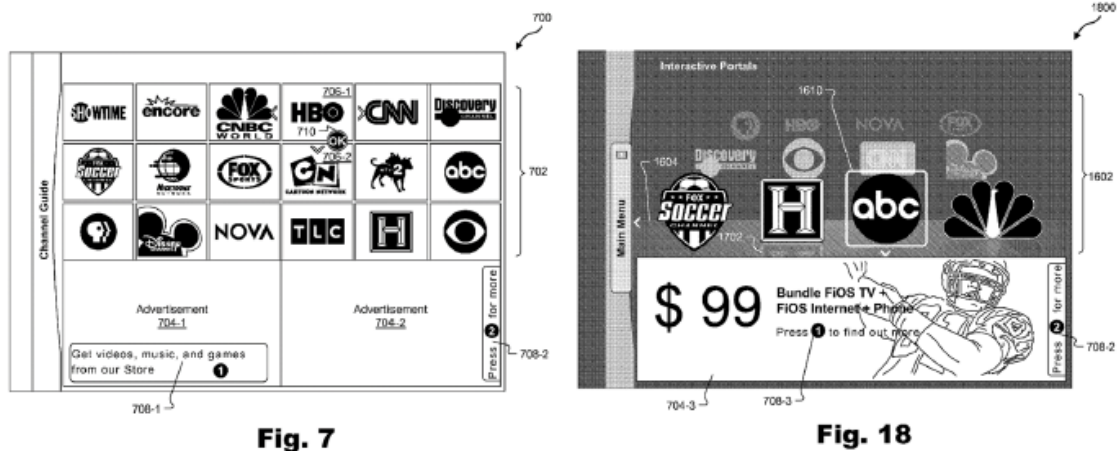
declaration, however, simply opines that the claimed “slide tool program” could be met by Darnell’s scrollbars, which were a known method of moving through data, *not* that scrollbars issue requests for new data.

For these reasons, I would find that Petitioner has not shown that Darnell teaches or suggests “a master application . . . that includes software coded for organizing content data and content applications . . . streamed to the master server simultaneously in real time . . . on a master web-page” and, thus, I would find that Petitioner has not met its burden of establishing by a preponderance of the evidence that the challenged claims would have been obvious in view of Darnell and Kim.

Dasgupta Ground

Dasgupta concerns improvements to the user interface of a set-top box that are said to “provide an intuitive and appropriate balance of information, advertisements, usability, aesthetics, and functionality.” Ex. 1006, 1:7–29.

The Petition refers to Dasgupta’s Figures 7 and 18:



Figures 7 and 18 of Dasgupta, as shown on Page 45 of the Petition.

According to Petitioner, “Figure 7’s ‘selector 710’ allows a user to scroll through different content items in a feed, such as HBO 706-1” and

“Figure 18 shows a channel guide GUI that ‘includes a three-dimensional grid matrix view of a plurality of channel icons associated with a plurality of media content channels.’” Pet. 45 (citing Ex. 1006, 14:45–15:44, 17:43–63, 19:4–16).

Petitioner asserts that “Dasgupta’s media content access system includes ‘a media content access facility 102, a channel guide facility 104, an advertisement facility 106, a user interface facility 108, an interactive portal access facility 110, and a storage facility 112 selectively and communicatively coupled to one another.’” Pet. 45 (citing Ex. 1006 3:4–13). Petitioner further asserts that “[t]he ‘[m]edia content access facility 102 may be configured to access, process, and present media content for experiencing by a user’ and ‘may employ any technologies suitable for accessing media content, including accessing media content distributed by a remote source.’” *Id.* (citing Ex. 1006, 3:14–21).

For limitation 1[b1], which requires “a master application stored in the memory of the master server and that executes on the processor of the master server,” and “includes software coded for organizing content data and content applications from multiple content sources or service providers.” Petitioner asserts Dasgupta has “‘one or more applications 310’ (*a master application*) stored in the storage device 306 of subsystem 202 (*stored in the memory of the master server*).” Pet. 63 (citing Ex. 1006, 8:28–67).

For limitation 1[b2], which requires that the data/applications be “streamed to the master server simultaneously in real time from their respective servers on a master web-page,” the Petition argues that “Dasgupta’s provider subsystem 208 ‘provide[s] media content to delivery subsystem 202 for distribution over network 206,’” and “[t]hus, content items are streamed to subsystem 202 (*streamed to the master server*) from

each provider subsystem 208 (*from their respective servers*). Pet. 68 (citing Ex. 1006, 7:44–55; Ex. 1002 ¶ 323).

The Petition then argues that because “Dasgupta’s media content channels include ‘streams . . . or . . . frequency bands to which media content access facility may tune to access media content carried over the frequency bands,’” “POSITAs would have understood that the content is *streamed* . . . *simultaneously* in real time because each channel is available at the same time.” Pet. 68 (citing Ex. 1006, 2:25–50, 3:14–28, 9:25–10:24, 12:40–13:4; Ex. 1002 ¶ 325).

The Petition further argues that Dasgupta “discloses that media content may be transmitted between subsystem 202 and subsystem 204 via network 206 using TCP/IP and ‘Hypertext Transfer Protocol (‘HTTP’),’ . . . which “governs how web browsers and web servers intercommunicate to load web pages,” and that “[i]t was well-known that web pages include HTML and JavaScript programs to create UIs.” Pet. 68 (citing Ex. 1002 ¶ 325). The Petition concludes that “POSITAs would have understood that subsystem 202 sends webpages to subsystem 204 using the HTTP (*on a master web-page*).” *Id.* at 69.

Dasgupta Analysis

As I explained at institution, I am not persuaded by the fact that Dasgupta’s subsystem 202 and subsystem 204 can communicate using, among other methods, HTTP, that Dasgupta’s subsystem 202 is “send[ing] webpages” to subsystem 204, as the Petition argues.

Dr. Martin testifies that “HTTP is the foundational protocol for the World Wide Web, defining how data, *including web pages*, is transmitted from servers to client devices.” Ex. 1002 ¶ 325 (emphasis added). Because HTTP is used to transmit data other than web pages, even Dasgupta

embodiments that might use HTTP are not necessarily doing so with “web pages.” In my view, the mention of HTTP as a communication protocol does not mean that subsystem 202 is “sending webpages” to subsystem 204.

Petitioner evidently agrees that Dasgupta does not sufficiently disclose “stream[ing] . . . on a master web-page,” as claimed, as it argues in the Reply that it “is not relying on inherency,” and, instead, asserts that “the Petition explains that *it would have been obvious* to use a webpage as Dasgupta’s channel guide because it is transferred using HTTP.” Reply Br. 21 (citing Pet. 68–69; Ex. 1002 ¶ 325) (emphasis added). That does not appear to be correct.

The Petition states that “Dasgupta also discloses that media content may be transmitted between subsystem 202 and subsystem 204 via network 206 using TCP/IP and ‘Hypertext Transfer Protocol (‘HTTP’)’ . . . , which governs how web browsers and web servers intercommunicate to load web pages.” Pet. 68. The Petition then asserts that “[i]t was well-known that web pages include HTML and JavaScript programs to create UIs” and that “*a POSITA would have understood that subsystem 202 sends webpages to subsystem 204 using the HTTP (on a master web-page).*” Pet. 68–69 (emphasis added); *see* Ex. 1002 ¶ 325 (Dr. Martin: “A POSITA would have thus recognized that subsystem 202, acting as the master server, organizes and distributes content as web pages viewable on subsystem 204 over HTTP, creating a ‘master web-page’ accessible on remote devices through the master server.”). The Petition thus argued that a skilled artisan would have understood Dasgupta to be sending web pages, **not** that it would have been obvious to send webpages.

The majority conclude that Petitioner has not adopted a new position in the Reply but instead “is clarifying the position taken in the Petition.”

Maj. Op. 87. According to the majority, the Petition’s assertion that “a person of ordinary skill in the art ‘would have understood subsystem 202 sends webpages to subsystem 204 using the HTTP (on a master web-page),’ is consistent with the position taken in the Petition that “Dasgupta . . . suggests this limitation.” *Id.* at 88. I do not agree that the Petition supports the new obviousness argument.

The “position taken in the Petition” that the majority identifies is an *introduction* for the entirety of limitation 1[b2]. *See* Pet. 66 (“Dasgupta discloses or suggests this limitation. Martin, ¶¶ 323–326.”). Notably, Petitioner begins each of sections 1[pre], 1[a], 1[b1], 1[b2], 1[b3], 1[c1], and 1[c2], with “Dasgupta discloses or suggests this limitation.”

But nowhere in the section addressing 1[b2], or in the corresponding paragraphs of the Martin declaration, does Petitioner argue that it would have been *obvious* to use web pages. Instead, the *only* argument is that “***a POSITA would have understood that subsystem 202 sends webpages*** to subsystem 204 using the HTTP (on a master web-page).” Pet. 69 (citing Ex. 1002 ¶ 325) (emphasis added). It is evident that, if the skilled artisan “understood that subsystem 202 sends webpages” there would be no need for a modification, obvious or otherwise.

A further, and, I think, fatal, problem with the idea that an obviousness argument was made in the Petition, is that the Petition provides no obviousness *analysis*, at all. There is no explanation of how or why this modification of Dasgupta would work, nor is there anything that even purports to be a motivation to make the modification. This is far from sufficient to satisfy Petitioner’s burden. *See Corephotonics, Ltd. v. Apple Inc.*, 84 F.4th 990, 1004 (Fed. Cir. 2023) (“To satisfy its burden of proving obviousness, a petitioner cannot employ mere conclusory statements. The

petition must instead articulate specific reasoning, based on evidence of record, to support the legal conclusion of obviousness.”) (*quoting In re Magnum Oil Tools Int’l, Ltd.*, 829 F.3d 1364, 1380 (Fed. Cir. 2016)).

Because the Petition does not establish that Dasgupta discloses streaming to a web page and, in my view, does not even attempt to make a case that it would have been obvious to stream to a web page, I would conclude that Petitioner has not shown by a preponderance of the evidence that claim 1 would have been obvious in view of Dasgupta and Kim.

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