

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 No. 9,729,658

PETITIONER'S REPLY TO PATENT OWNER'S RESPONSE

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Patent Trial and Appeal Board
U.S. Patent & Trademark Office
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PETITIONER’S EXHIBIT LIST

Exhibit	Description
1001	U.S. Patent No. 9,729,658 to Chris Trahan et al. (“the ’658 Patent” or “658Pat”)
1002	Declaration of Dr. Paul Martin, Ph.D. (“Martin”)
1003	Certified File History of U.S. Patent No. 9,729,658 (copies of prior art references omitted)
1004	U.S. Patent Publication No. 2008/0086484, filed Oct. 9, 2007, published April 10, 2008, to Benjamin G. Darnell et al. (“Darnell”)
1005	U.S. Patent Publication No. 2007/0016609, filed July 12, 2005, published Jan. 18, 2007, to Jane T. Kim et al. (“Kim”)
1006	U.S. Patent No. 8,640,052, filed Dec. 31, 2009, published June 30, 2011, issued January 28, 2014, to Mousumi Dasgupta et al. (“Dasgupta”)
1007	Executed Summons, Dkt. No. 14, <i>RazDog Holdings LLC v. Twitch Interactive, Inc.</i> , Case No. 24-cv-03638-JSC (N.D. Cal. filed Jun. 17, 2024)
1008	U.S. Patent Publication No. 2011/0078584, filed September 27, 2010, published March 31, 2011, to Daniel Ben Winterstein, et al. (“Winterstein”)
1009	Excerpt of File History of U.S. Patent Publication No. 2008/0086484 (“Darnell”) (Non-Final Office Action, dated Oct. 1, 2010)
1010	U.S. Patent Publication No. 2005/0165615, filed December 31, 2003, published July 28, 2005, to Nelson Minar (“Minar”)
1011	U.S. Patent Publication No. 2004/0093327, filed February 26, 2003, published May 13, 2004, to Darrell Anderson, et al. (“Anderson”)
1012	Amended Pretrial Order No. 1, <i>RazDog Holdings LLC v. Twitch Interactive, Inc.</i> , No. 24-cv-03638-JSC (N.D. Cal., Sept. 17, 2024), ECF No. 39
1013	Complaint, <i>RazDog Holdings LLC v. Twitch Interactive, Inc.</i> , No. 24-cv-03638-JSC (N.D. Cal., June 17, 2024), ECF No. 1

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1014	Excerpt of Preliminary Infringement Contentions from Razdog, Inc., <i>RazDog Holdings LLC v. Twitch Interactive, Inc.</i> , Case No. 24-cv-03638-JSC (N.D. Cal.), served Nov. 22, 2024
1015	Curriculum Vitae of Paul D. Martin, Ph.D.
1016	<i>Amazon EC2 Beta</i> , AMAZON WEB SERVICES BLOG (Aug. 29, 2006), [https://web.archive.org/web/20060829110501/http://aws.typepad.com/]
1017	<i>About Microsoft</i> , https://news.microsoft.com/about/ (last visited Dec. 15, 2024)
1018	<i>Reflecting on our ten year App Engine journey</i> , GOOGLE CLOUD BLOG, https://cloud.google.com/blog/products/gcp/reflecting-on-our-ten-year-app-engine-journey/ (last visited Dec. 15, 2024)
1019	Peter Mell & Tim Grance, <i>The NIST Definition of Cloud Computing</i> (National Institute of Standards and Technology, Version 15, Oct. 7, 2009), https://www.nist.gov/system/files/documents/itl/cloud/cloud-def-v15.pdf
1020	<i>The Benefits of Cloud Computing</i> (IBM Dynamic Infrastructure, July 2009), https://www.ibm.com/ibm/files/H300444G23392G14/13Benefits_of_Cloud_Computing_634KB.pdf
1021	<i>Cloud Computing and Sustainability</i> (Accenture Whitepaper, November 2010)
1022	RDF Site Summary (RSS) 1.0 (Oct. 11, 2010), [https://web.archive.org/web/20101011123954/https://web.resource.org/rss/1.0/spec]
1023	W3C RSS 1.0 News Feed Creation How-To (May 28, 2010), [https://web.archive.org/web/20100528134008/https://www.w3.org/2001/10/glance/doc/howto]
1024	<i>How Do RSS Feeds Work?</i> , RSS.com, https://rss.com/blog/how-do-rss-feeds-work/ (last visited Dec. 15, 2024)
1025	NetNewsWire.com (Sep. 7, 2009), [https://web.archive.org/web/20090907105218/https://netnewswire.com/]

Exhibit	Description
1026	FeedDemon 3 – Free RSS Reader for Windows (Oct. 11, 2010), [https://web.archive.org/web/20101011081027/http://www.feeddemon.com/]
1027	NewsGator.com (Oct. 8, 2010), [https://web.archive.org/web/20101008110128/https://www.newsgator.com/]
1028	Google Reader Blog (Oct. 8, 2010), [https://web.archive.org/web/20101008110804/http://googlereader.blogspot.com/]
1029	RSS 0.90 Specification (Jul. 7, 2010), [https://web.archive.org/web/20100707223500/https://www.rssboard.org/rss-0-9-0]
1030	RDF Site Summary 1.0 Modules (Oct. 5, 2012), [https://web.archive.org/web/20121005062018/https://web.resource.org/rss/1.0/modules/]
1031	RDF Site Summary 1.0 Modules: Dublin Core (Sep. 28, 2010), [https://web.archive.org/web/20100928094047/https://web.resource.org/rss/1.0/modules/dc/]
1032	RDF Site Summary 1.0 Modules: Syndication (Oct. 11, 2010), [https://web.archive.org/web/20101011224813/https://web.resource.org/rss/1.0/modules/syndication/]
1033	RDF Site Summary 1.0 Modules: Content (Oct. 9, 2010), [https://web.archive.org/web/20101009185424/https://web.resource.org/rss/1.0/modules/content/]
1034	RSS 2.0 Specification (Oct. 11, 2010), [https://web.archive.org/web/20101011191039/https://www.rssboard.org/rss-specification]
1035	N. Nottingham & R. Sayre, <i>The Atom Syndication Format, Request for Comments 4287</i> , NETWORK WORKING GROUP (Mar. 3, 2010), [https://web.archive.org/web/20100303155855/http://www.rfc-editor.org/rfc/rfc4287.txt]
1036	J. Gregorio & B. de Hora, <i>The Atom Publishing Protocol, Request for Comments 5023</i> , NETWORK WORKING GROUP (Feb. 20, 2010),

Exhibit	Description
	[https://web.archive.org/web/20100220110543/https://www.rfc-editor.org/rfc/rfc5023.txt]
1037	Daniel Miessler, <i>RSS: Why We Should Just Call Them “Feeds” Instead of “RSS” Feeds</i> (Sep. 26, 2010), [https://web.archive.org/web/20100220110543/https://www.rfc-editor.org/rfc/rfc5023.txt]
1038	FEED Validator: Introduction to Atom (Jan. 23, 2010), [https://web.archive.org/web/20100123064931/https://validator.w3.org/feed/docs/atom.html]
1039	<i>Best Practices for XML sitemaps and RSS/Atom feeds</i> , Google Search Central Blog, https://developers.google.com/search/blog/2014/10/best-practices-for-xml-sitemaps-rssatom (last visited Dec. 15, 2024)
1040	<i>Awesome RSS</i> , GitHub, https://github.com/voidfiles/awesome-rss (last visited Dec. 15, 2024)
1041	Kyle Nazario, <i>How to Follow RSS Feeds in Chrome, Safari and Firefox</i> , TechNorms.com (Jul. 17, 2015), [https://web.archive.org/web/20150617232812/https://www.technorms.com/44712/follow-rss-feeds-in-chrome-safari-firefox]
1042	Sergey Tkachenko, <i>Google re-adds RSS support to the Chrome browser</i> , Winaero, https://winaero.com/google-re-adds-rss-support-to-the-chrome-browser/ (last visited Dec. 15, 2024)
1043	Chris Wetherell, <i>Google Reader Two Weeks</i> , Google Reader Blog (Dec. 15, 2005), [https://web.archive.org/web/20051215032412/https://google-reader.blogspot.com/2005/10/google-reader-two-weeks.html]
1044	Andy Wibbels, <i>How to Use Google Reader</i> (Oct. 24, 2005), [https://web.archive.org/web/20051024012030/http://andywibbels.com/flash/google_reader.htm]
1045	Andrew Hitchcock Blog (Oct. 25, 2005), [https://web.archive.org/web/20051024012030/http://andywibbels.com/flash/google_reader.htm]

Exhibit	Description
1046	<i>Analytics</i> , Cambridge Dictionary, https://dictionary.cambridge.org/us/dictionary/english/analytics (last visited Dec. 14, 2024)
1047	<i>Analytics</i> , Lexico powered by Oxford English Dictionary (Aug. 10, 2020) [https://web.archive.org/web/20200810063114/https://www.lexico.com/en/definition/analytics]
1048	SHELLEY POWERS, PRACTICAL RDF, 10-11 (O'Reilly & Associates, 1 st ed. 2003) (excerpts)
1049	WebTV, https://webtv.zone/ (last visited Dec. 15, 2024)
1050	<i>Instructions for using Web TV</i> , ChicagoNet (Jun. 21, 2010), [https://web.archive.org/web/20100621001111/http://www.chicagonet.net/webtv.htm]
1051	Twitch Company Profile, Crunchbase, https://www.crunchbase.com/organization/twitch#news (last visited Apr. 24, 2025)
1052	<i>The Future of Twitch and Streaming Video Games</i> , Team Lightstream (Jul. 5, 2022), https://golightstream.com/the-future-of-twitch-and-streaming-video-games/
1053	Ash Parrish and Jay Peters, <i>Twitch is cutting one-third of its staff</i> , The Verge (Jan. 10, 2024), https://www.theverge.com/2024/1/10/24032187/twitch-layoffs-video-game-industry
1054	Delaware Corporation Information for RazDog Holdings LLC
1055	Patent assignment to RazDog Holdings LLC
1056	Case Docket, <i>RazDog Holdings LLC v. Twitch Interactive, Inc.</i> , No. 24-cv-03638-JSC (N.D. Cal., June 17, 2024)
1057	Delaware Corporation Information for RazDog LLC
1058	Patent assignment to RazDog LLC
1059	Case Docket, <i>Razdog LLC v. Cooling Equipment Service, Inc.</i> , 1-19-cv-05704 (N.D. Ill. Aug. 25, 2019)
1060	Case Docket, <i>Razdog LLC v. Continental Salvage Co.</i> , 1-19-cv-04610 (N.D. Ill. Jul. 9, 2019)
1061	Case Docket, <i>Razdog LLC v. Cook Brothers Inc.</i> , 1-19-cv-05703 (N.D. Ill. Aug. 25, 2019)
1062	Order Directing Parties to Inform Court Whether They Consent to Magistrate Judge For all Purposes, <i>RazDog Holdings LLC v. Twitch Interactive, Inc.</i> , No. 24-cv-03638-JSC (N.D. Cal., June 17, 2024), ECF No. 51

Exhibit	Description
1063	Declination to Magistrate Judge Jurisdiction, <i>RazDog Holdings LLC v. Twitch Interactive, Inc.</i> , No. 24-cv-03638-JSC (N.D. Cal., June 17, 2024), ECF No. 56
1064	Case Management Statement, <i>RazDog Holdings LLC v. Twitch Interactive, Inc.</i> , No. 24-cv-03638-JSC (N.D. Cal., June 17, 2024), ECF No. 36
1065	February 25, 2025, email from M. Halderman
1066	February 4, 2025, email from M. Halderman
1067	February 21, 2025, email from K. Johnston
1068	March 21, 2025, email from M. Halderman
1069	DocketNavigator Time to Milestones Statistics for J. Gilliam
1070	Twitch's Sotera stipulation
1071	April 21, 2025, email from J. Kaiser to F. Villegas
1072	April 24, 2025, email from F. Villegas
1073	April 25, 2025, email from J. Kaiser to the Acting Director
1074	DocketNavigator Statistics for Motion Success for Stay Pending IPR (Post-Institution) for NDCA
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1076	<i>Contour IP Holding, LLC v. GoPro, Inc.</i> , 3-17-cv-04738, Dkt. No. 721 (N.D. Cal. Mar. 24, 2025)
1077	Order of Recusal, <i>RazDog Holdings LLC v. Twitch Interactive, Inc.</i> , No. 24-cv-03638-JSC (N.D. Cal., June 17, 2024), ECF No. 60
1078	Order Reassigning Case, <i>RazDog Holdings LLC v. Twitch Interactive, Inc.</i> , No. 24-cv-03638-JSC (N.D. Cal., Apr. 29, 2025), ECF No. 61
1079	DocketNavigator Statistics for Motion Success for Stay Pending IPR (Post-Institution) for Judge Gilliam
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1081	Responsive Claim Construction Brief, <i>RazDog Holdings LLC v. Twitch Interactive, Inc.</i> , (No. 4:24-cv-03638 May 19, 2025), ECF No. 70
1082	Deposition Transcript of George Edwards (January 15, 2026)
1083	U.S. Pat. App. Pub. 2006/0271641

I. INTRODUCTION

The Petition (“Pet.,” Paper 1) shows the Challenged Claims are unpatentable by a preponderance of the evidence. PO’s Response (“POR,” Paper 26) does not undermine that showing. Prior to institution, the parties’ primary dispute was whether/how *on a web-page* relates to *software coded for organizing content data and content applications...streamed to the master server simultaneously in real time* in 1[b2].¹ PO now pays lip service to this dispute, but PO’s arguments about unpatentability grounds show that is no longer PO’s focus.

Instead, PO identifies ways it wishes the Challenged Claims had been drafted and attempts to distinguish the prior art with an ever-expanding list of requirements found nowhere in the claims. Once the Board properly rejects PO’s arguments, it should find the Challenged Claims unpatentable.

II. CLAIM CONSTRUCTION

PO devotes most of its claim construction section (POR, 15-26²) to *real time*, but there is no real dispute about that term’s meaning. Specifically, PO’s proposed

¹ Claim language italicized throughout.

² Petitioner addresses *master web-page* below, but as an initial matter, PO is incorrect that “Petitioner...concede[s] that the ‘master web-page’ must be dynamic.” POR, 26. The Challenged Claims impose no such requirement.

litigation construction (EX2005, 2), Petitioner's proposal (Pet., 27 n.9), and the majority's preliminary construction (DI, 15) are all similar and show *real time* is about timing, not about how/where information is transmitted. POR, 24-25.

Instead, PO focuses on the use of *real time* in independent claims, including 1[b2]/1[b3]. Twitch's expert (Dr. Martin) explained a POSITA would understand those limitations to "signify that the content from multiple sources is transmitted to the server when it becomes available, without significant delay between content sources," after which the content "is updated and displayed as soon as it becomes available" (e.g., using a "feed reader user interface, which includes a scroll bar allowing continuous, real-time access to updated content"). EX1002, ¶¶178, 182, 190. Notably, PO's expert (Dr. Edwards) does not disagree with this (EX2010, ¶89) or with the majority's finding that claim 1 requires "streaming content data and content applications to the master server simultaneously in real time from their respective servers" (1[b2]) and "scrolling or paging through the content data or the content applications...simultaneously and through the master server in real time" (1[b3]). DI, 15-16; EX1082, 150:18-151:15. Dr. Edwards (and PO) nevertheless believes the claims require more, but as explained below, PO's additional requirements are unsupported.

A. The Board should adopt the majority’s preliminary interpretation.

PO attacks the majority’s preliminary construction by twisting the intrinsic record and mischaracterizing Dr. Martin’s opinions.

First, the claim language does not undermine the majority’s construction. PO argues that if “on a master web-page refers to organizing content and content applications,” it creates an internally inconsistent and ambiguous limitation” because “the phrase ‘and are viewable’ [in 1[b]] makes little sense in the context of a master application.” POR, 16-17. PO misunderstands the claim; the phrase *and are viewable* refers to the *content data and content applications organiz[ed] on a master web-page by the master application*. See EX1003, 14-15 (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*).

PO further argues “‘on a master webpage’ modifies the immediately preceding ‘streamed’ phrase” such that the claim “refer[s] to a continuous streaming process that defines: where content is streamed (‘to the master server’); when the content is streamed (‘simultaneously in real time’); where content is streamed from (‘from their respective servers’); and what content is streamed on (‘on a master web-page’).” POR, 17-18. But the claimed flow of content data/applications is already captured in the majority’s preliminary construction: content data/applications

(“what?”) are streamed to the master server (“to where?”) simultaneously and in real time (“when?”) from their respective servers (“from where?”). Nothing is missing.

PO next excerpts claims 1, 7, and 12 and argues “[e]ach use of ‘real time’ in the claims links ‘real time’ to a user-facing operation involving the master web-page.” POR, 19. PO, however, ignores key claim language that links *real time* to a specific claim element. *Id.*, 18-19 (omitting *organizing content data and content applications—what the master application does on a master web-page—from [b2]*), 19 (omitting *a slide tool program—which allows scrolling/paging through content data and navigating through content data/applications—from 1[b3] and 12[b2], respectively*), 19 (excerpt from claim 7 does not mention a web-page). PO then argues “the claims describe...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.” POR, 20-21 (emphasis removed).³ PO 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.

PO also asserts the majority’s construction is “inconsistent with the usage of ‘real time’ elsewhere in the claims” because “claim 12 never mentions the words

³ Emphases added throughout unless otherwise noted.

‘master server’ at all.” POR, 22. But claim 12’s preamble expressly recites *a cloud-based master server*.

Second, PO is wrong that the specification and prosecution history undermine the majority’s construction. For the specification, PO makes a conclusory assertion based on a string cite that “[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.” POR, 21. PO’s cites do not support this: three do not mention a “web-page” or the “display” of content (EX1001, 1:57-62, 2:27-29, 2:30-34); 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*; and the last (*id.*, 2:56-59) is a passage the Board already addressed (DI, 17).

PO also mischaracterizes the prosecution history. According to PO, “what distinguishes the invention from the prior art” includes that “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.” POR, 20-21 (emphasis removed). That is incorrect. During 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. EX1003, 418-22. In the subsequent Notice of Allowance, the Examiner identified the *remote tool box feature application* as the “main reason for allowance.” *Id.*, 430. The patent’s alleged novelty thus derives from a limitation PO does not even address in the POR.

Further, PO points to one Office Action response to argue “[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.” POR, 21-22 (citing EX1003, 134-35). But PO misreads that response—nothing is “repeated,” and 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.” Contrary to PO’s assertion, this supports the majority’s preliminary construction, which already accounts for that two-part solution.

Third, PO’s attempts to discredit Petitioner’s expert should be rejected. Based on five paragraphs from Dr. Martin’s declaration, PO asserts he “cites portions of the specification...but none provide support for Petitioner.” POR, 23 (citing EX1002, ¶¶178-82). Notably, PO does not actually dispute Dr. Martin’s

observations in those paragraphs;⁴ rather, PO faults Dr. Martin for what he does not say. For example, according to PO, Dr. Martin's citation to 1:43-46 "says nothing about streaming content to a server" "or precludes streamed content from real time display on a master web-page," and his citation to 4:1-3 "says nothing about 'real time,' let alone a master server." POR, 23. Such arguments, however, do not undermine the Board's preliminary construction, which is based on the full intrinsic record. DI, 15-18.

PO next argues Dr. Martin "supports PO's interpretation" when he says 4:4-6 "shows that as contents 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" POR, 23 (citing EX1002, ¶181) (emphases removed). Neither side disputes the master application "organizes and displays content on the master web page" and promptly retrieves content when a user is "viewing updated data." But nothing in Dr. Martin's statement indicates the claims require displaying content in real time on a remote computer viewing the web-page.

⁴ PO does not disagree with Dr. Martin's (and the Board's preliminary) construction (EX2010, ¶89; EX1082, 150:18-151:15, 162:6-15, 164: 8-14, 167:3-17, 168:7-170:7, 177:9-178:3), but as discussed below, PO believes more is required.

Finally, PO points to Dr. Martin’s opinion that “‘simultaneously’ and ‘real time’ [] describ[e] a system where content from multiple sources is updated and displayed as soon as it becomes available.” POR, 24 (citing Ex.1002, ¶182 (emphases removed)). Nowhere in that passage (or anywhere else) does Dr. Martin say the claims require real-time display of content on a remote computer viewing the master web-page (*see infra*). But in any event, the Board already considered and rejected PO’s argument in construing the claim language based on the intrinsic record and a comprehensive review of Dr. Martin’s opinions. DI, 12-13, 16-17.

B. The Board should reject PO’s attempts to further narrow “real-time streaming” “on a master web-page.”

In discussing the invalidity grounds, PO and Dr. Edwards add numerous requirements to the claims (summarized below) under the guise of plain-and-ordinary-meaning for “real-time streaming” and “on a master web-page.”

No.	Additional Requirement	POR	EX2010
1	“streamed or displayed incrementally”	27	¶96
2	“incremental transfer of partial content items to a master web-page”	29, 30	¶97
3	“incremental transfer of content items before they are fully delivered to the server”	30, 37	¶98
4	“rendering real-time content”		¶101
5	“dynamically organize or display live content from multiple sources in real time”	46	¶108
6	“maintaining an active, continuously updating master web-page accessible to multiple users”	46	¶108

No.	Additional Requirement	POR	EX2010
7	“centralized, real-time orchestration of heterogeneous web content”	46	¶109
8	“live, centralized organization”	46	¶110
9	“continuous, concurrent delivery of live content from multiple providers to a unified, server-hosted page that is tailored to the user and remains updated while the user navigates it”	25, 35	¶113
10	“real-time streaming on the master web-page, where the beginning of a data stream becomes available to the viewer while the remainder is still in transit”	35, 38-39, 41, 43	¶117
11	“the live delivery of data segments such that the user perceives an uninterrupted flow of content”	35, 38-39, 41, 43	¶118
12	“[A]n architecture that continuously transfers and renders data with capability for delivering data incrementally such that the display updates concurrently with transmission, not upon completion of a storage and fetch cycle”	35, 38-39, 41, 43	¶119
13	“server-orchestrated page that is kept live with data streams arriving from multiple external providers in real time”	35, 37, 40, 43	¶122
14	“the dynamic and continuous display of live streaming content on the user-facing master web-page”	35	¶124
15	“the capability to deliver data incrementally with partial or incremental transfer of a series of portions/pieces/parts of content items to achieve the continuous, concurrent streaming model”	35, 39-41	¶126
16	“present continuously updated data on the interface as it is received by the master server”	57	¶164
17	“continuously update or display multiple live feeds on a single interface”	58, 62-63	¶171

At his deposition, Dr. Edwards further added “real-time streaming implies a particular type of system architecture.” EX1082, 171:12-14; *see also id.*, 170:19-25, 171:1-11, 172:14-22. Thus, PO’s claim interpretation has become a moving target increasingly untethered from the intrinsic record.

PO apparently seeks to narrow the claims to fit a live-streaming paradigm (POR, 13-14, 38, 41, 48), but 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*). PO never explains how its proposed requirements could apply to those other types of content (e.g., emails, social media posts) or to *content applications*. And in any event, PO cites no support beyond Dr. Edwards’ conclusory statements (EX1082, 50:18-51:3, 52:1-6, 52:18-53:10), which are legally insufficient to add new claim limitations. *ST CaseITech, LLC v. Squires*, No. 2023-2305, 2025 WL 2860302, *5 (Fed. Cir. Oct. 9, 2025); *Smartrend Mfg. Grp. (SMG), Inc. v. Opti-Luxx Inc.*, 159 F.4th 1322, 1330-31 (Fed. Cir. 2025).

In sum, the Board should adopt the majority’s preliminary constructions and decline to adopt any of PO’s other claim-narrowing requirements.

III. PO'S PRIOR-ART ARGUMENTS ARE UNAVAILING

Nearly all of PO's alleged "deficiencies" in the prior art rely upon incorrect claim interpretations. If the Board rejects them—as it should—PO's arguments fail, and there is no real dispute that the Challenged Claims are invalid.

A. PO Mischaracterizes Darnell and Dasgupta

PO's arguments begin from fundamentally flawed premises: "Darnell is an 'aggregator'," and "Dasgupta is a 'navigator.'" POR, 26, 30 (citing EX1003, 134). Darnell, however, does not fit Applicant's description of an "aggregator" during prosecution (*see* EX1003, 135) because Darnell is not a search engine, nor does it direct users to another (e.g., third-party) website. And Dasgupta does not meet Applicant's "navigator" description (*id.*) either because Dasgupta also is not a search engine and does not open a new website to receive and display content. *See* EX1006, Abstract.

B. PO's Arguments Against Grounds 1A-1B Are Erroneous

1. Claim 1

a) 1[b2]⁵

⁵ PO additionally argues "Darnell does not disclose 'a master application'" (1[b1]) (POR, 45-46), but PO's argument is based on the same incorrect assertions as for 1[b2] and 1[b3] and fails for the reasons discussed below.

PO argues “Darnell’s retrieve-merge-store workflow followed by on-request delivery of lists fundamentally differs from what the claim requires” (POR, 35) because: **(1)** “[c]ontent items that are first merged and then stored in a persistent database...before being transmitted to a user are not streamed ‘to the master server simultaneously in real time...on a master web-page,’ as claimed”; and **(2)** “real time content must be streamed or displayed without user involvement—a feature that Darnell lacks.” POR, 36 (citing EX1004, [0106] (emphases removed)), 42. Both arguments fail.

Argument (1): PO calls Darnell’s system architecture “asynchronous because the retrieval of data, its storage, and its presentation occur at different times,” and PO calls Darnell’s “content items” “atomic units” because “each item is fully retrieved, merged, and stored before any of it is displayed to the user.” POR, 36-38. PO therefore argues that Darnell’s “subsequent transmission” (of “atomic units”) is “not real-time transmission” (*id.*, 36), and “what matters is that the user sees content on the master web-page as it streams,” whereas PO says “Darnell’s architecture does not meet that standard” because “[i]ts ‘merging’ step occurs before any display” such that “the data shown to the user represents what existed the last time content on the server was updated, not what is currently being streamed” (*id.*, 41). In other words, “Darnell’s system...is not streaming to the user in real time, it is delivering discreet snapshots.” *Id.*, 38.

“Asynchronous” and “atomic” do not appear in Darnell, and PO does not cite anything from the ’658 patent for support (there is none). Instead, PO relies exclusively on Dr. Edwards’ unsubstantiated say-so and out-of-context excerpts from Dr. Martin’s testimony. POR, 36-43 (citing EX2010, ¶¶112-127).⁶ For example, PO cites answers from Dr. Martin’s deposition in which he was asked about hypothetical cloud applications unrelated to Darnell. *Id.*, 37, 39, and 42 (citing EX2012, 32:6-9, 32:16-33:8, 36:11-17, 48:20-50:3).

Argument (2): PO argues Darnell’s “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’ that allegedly happens when “[t]he server returns a batch with a continuation token, and the client uses that token to fetch the next batch only after the user scrolls to the end of the current list.” POR, 36-37 (emphasis removed). PO then argues that because “a user must initiate a ‘fetch’ command” “to prompt Darnell’s system to

⁶ Without support, Dr. Edwards opines that “[s]treaming’ implies some degree of partial or incremental transfer of a series of portions/pieces/parts of a whole.” EX2010, ¶118; *see also id.*, ¶97. “Streaming” is not defined in the ’658 patent, and the parties agree that “streaming” should receive its plain and ordinary meaning (POR, 15; Pet. 7-8).

‘fetch’ new or additional content items from a database,” “Darnell’s system does not provide content data or application ‘in real time’ on a master webpage.” *Id.*

This argument has two flaws. **First**, it improperly adds “without user involvement” to the claim. POR, 42. Although PO says the intrinsic record supports this addition, the passage PO cites (EX1001, 1:47-62) does not refer to or otherwise prohibit “user involvement” in content viewing; instead, the passage focuses on use of “a single user interface” (e.g., a *master web-page*), an attribute that Darnell has. *See* Pet., 23-24, 26-29. Likewise, the prosecution history excerpt PO cites (EX1003, 179) says nothing about “user involvement” in viewing content on a *master web-page*; rather, it describes the use of a single user interface rather than “open[ing] up multiple web-sites.” Nothing in the intrinsic record supports PO’s new claim requirement.

Second, PO incorrectly suggests Darnell’s system only retrieves content in response to a user 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. EX1004, ¶74.

b) 1[b3]

PO argues Darnell fails to disclose a *slide-tool program* because “Darnell lacks any content streamed in real time on a master webpage” and therefore “necessarily cannot disclose scrolling, paging through, or navigating such content in

real time from the master web-page.” POR, 43 (emphasis removed). PO offers three unavailing arguments in support of this contention.

First, PO argues “Darnell’s scrolling is purely local—it navigates stored items fetched from Darnell’s server database,” meaning “Darnell’s scrollbar does not operate through a master server or scroll/page through real time streamed content.” *Id.*, 43-44. PO further says Darnell’s feed reader list is “static...users do not scroll or page through a dynamic list of content.” *Id.*, 44. Here again, PO improperly rewrites the claims to add “real time streamed content,” “operat[ing] through a master server,” and “a dynamic list of content.”⁷ And PO ignores that in Darnell, server system 104 (the *master server*) “retrieves ‘content items...**as content feeds are updated**’ and populates the feed reader user interface with that content. EX1004, ¶74; Pet. 9-11.

Second, PO argues Darnell’s scrollbar is not a *slide-tool program* because it “operates via embedded scripts in a client rendered page” and is not “programmed by the master application to execute on the user’s device.” POR, 45. But Dr. Martin explained that Darnell’s *master application* programs the client using “a web-

⁷ Dr. Edwards similarly opines that Darnell “does not dynamically organize or display live content from multiple sources in real time as required by the ’658 Patent.” EX2010, ¶108.

compatible language, such as HTML or XML, and that the webpage includes embedded scripts, such as JavaScript or ECMAScript” that “‘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.” EX1002, ¶¶189-91. The POR does not explain why this is allegedly insufficient to meet the limitation.⁸

Third, PO argues “the literal act of scrolling” in Darnell’s feed reader interface cannot satisfy 1[b3] because the “patent repeatedly refers to scrolling or paging via the slide tool in relation to real time content on a master web-page” (i.e., “‘in real time from the master web-page’ modifies the content being navigated, not the act of scrolling”). POR, 45. PO misinterprets 1[b3], which addresses use of the *slide-tool*, not the characteristics of the *content data or content applications (a slide-tool program for scrolling or paging through the content data or the content*

⁸ Dr. Edwards opines—without support—that “a POSITA would understand [1[b3]] to require server-programmed code that enables real-time navigation of live, server-delivered content to the master web-page itself, not merely local scrolling of already-fetched items on a client UI.” EX2010, ¶128; *id.*, ¶130. This appears to overlap with PO’s first argument above and is wrong for the same reasons. If Dr. Edwards means the *slide-tool program* must be part of the *master web-page*, the claims recite no such requirement.

applications...in real time from the master web-page and from the remote computer by operating the slide tool program from the remote computer). See EX2012, 81:7-91:17 (explaining “[y]ou’re scrolling through the content in real time, no matter what the content is”).

2. Claim 7

Many of PO’s arguments for claim 7 repeat PO’s claim 1 arguments (POR, 47-49) and fail for the same reasons. PO additionally argues Darnell does not meet 7[c] because “[a] POSA 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.*, 47. According to PO, “[a]n account belong[ing] to the user ‘is an account through which a user accesses a master web-page.’” *Id.*, 46-47 (citing EX1001, 6:7-18). The passage PO cites for support, however, does not mention “stream content” or “real time,” nor does claim 7 tie *an account belonging to the user* to real-time streaming of content to *the master web-page* as PO suggests.⁹

⁹ PO also asserts Dr. Martin “acknowledges [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.’” POR, 48. But this is unsupported attorney argument seeking to add a “real-time streaming” requirement.

3. Claim 12

Many of PO's arguments for claim 12 repeat PO's claim 1 arguments (POR, 50-52) and fail for the same reasons. PO additionally argues that 12[b2] "does not mention a master server in the context of the 'real time' limitation, so Petitioner's and the Board's preliminary construction...cannot be applied here." POR, 50. But claim 12's preamble expressly recites "*navigating content data or content applications...through a master web-page hosted and created on a cloud-based master server.*" Petitioner's (and the majority's) construction therefore applies equally to claim 12. PO also accuses the Board of "reading 'through master web-page' out of this claim" based on an ellipsis in the institution decision (*id.* (citing DI, 15-16)), but there is no indication that the Board substantively ignored any part of 12[b2]. On the contrary, the institution decision noted that claim 12 includes "through a master web-page." DI, 4-5.

Finally, PO argues Petitioner's claim 12 analysis "is deficient" because it cross-cites to 1[b3]. POR, 51. PO is mistaken because Petitioner explained, e.g., how "users operate Darnell's scrollbar 320 from a client system via the web-based UI" (the *master web-page*) to "scroll[] through an ordered list 310 of content items." Pet. 29-30.

4. Dependent Claims 2, 3, 10, 11

PO's arguments regarding dependent claims 2, 3, 10, and 11 misunderstand

Petitioner’s combination. For claim 2, PO argues Kim “fails to disclose any mechanism for logging into a user’s personal accounts.” POR, 52-53. Even though such a “mechanism” is not recited, Petitioner has nevertheless shown that Darnell (not Kim) provides security and login functionality. Pet. 38-39.

For claims 3 and 11, PO argues Kim “does not describe authenticating or retrieving private emails of a user” or “processing messages from user-specific accounts.” POR, 53. Neither of those phrases appears in the claims. PO’s assertions therefore lack explanation or support based on the actual claim language.

For claim 10, PO points to the specification (EX1001, 2:56-59) and argues “[a] POSITA would appreciate an ‘icon-based master web-page’ refers to the dynamic graphical user interface generated and maintained by the master server, which displays streaming content represented by selectable icons.” POR, 53-54. That language is likewise absent from the claim, so PO cites only Dr. Edwards to support its claim interpretation, and he, in turn, cites nothing. EX2010, ¶152. At bottom, PO’s argument that the Darnell-Kim combination fails to teach claim 10 is just another improper attempt to rewrite the claim to avoid the prior art.

C. PO’s Arguments Against Grounds 2A-2B Also Fail

1. *Content data/applications*

PO argues that Grounds 2A-2B “fail in their entirety because Petitioner changes what it refers to as ‘content data and content applications.’” POR, 55.

Specifically, PO asserts that “Petitioner appears to contend that Dasgupta’s channel icons and advertisements are content data and content applications...[b]ut when discussing the ‘streamed to the master server’ limitation, Petitioner refers broadly to ‘media content,’ ‘media content channels’ including streams or frequency bands, and ‘channels,’ all of which are different from channel icons and advertisements.” *Id.*, 56 (emphases removed). PO further asserts that for 1[b3], “Petitioner’s argument changes again” by pointing to “Dasgupta’s channel guide 104 and advertisement facility 106 allow users to scroll through *channels and advertisements*.” *Id.* (emphasis removed). And for 1[c1], PO says “Petitioner refers to ‘the guide highlighting channel icons that represent media content and interactive portals (*content data or content applications*).” *Id.* (emphasis removed).

PO apparently misunderstands the Petition, which explains that “POSITAs 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., 64-65. The channel icons are thus “launching points” for “media content channels,” and the corresponding channel data is stored in storage facility 112. *Id.*, 64; EX2012, 208:14-209:10. 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., 64; EX1002, ¶¶314-16. And notably, PO does

not actually dispute that Dasgupta discloses *content data* and *content applications* (see generally POR, 55-57).

2. Claim 1¹⁰

a) *master web-page*

PO argues “Dasgupta does not disclose ‘a master web-page’...for two reasons,” both of which are wrong. First, PO argues “the fact that Dasgupta discloses that subsystems *can* communicate via HTTP does not mean Dasgupta discloses a web-page.” POR, 57; *id.*, 63. According to PO, Dasgupta’s disclosure of web-pages is not inherent (POR, 57-58), but Petitioner 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.¹¹ Pet. 68-69; EX1002, ¶325. It 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. EX1083, ¶¶6-7; EX1004, ¶¶41, 96. It therefore would have been obvious based on

¹⁰ PO’s arguments regarding claim 7 closely track PO’s arguments regarding claim 1 (POR, 65-66) and are incorrect for the same reasons.

¹¹ Dr. Edwards offers no opinion on whether web-pages are transferred using HTTP. EX1082, 193:9-194:25.

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., 67-68; EX1002, ¶325.

Second, PO argues "[a] POSA 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." POR, 58. But 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 (EX1001, 4:21-26). PO's argument has no intrinsic support, which is why PO relies once again on Dr. Edwards' say-so. POR, 58 (citing EX2010, ¶166).

b) 1[b2]

(1) Channel icons

PO next argues "Dasgupta fails to disclose a system that provides content streamed in real time on a master webpage as required by claim 1" because "Dasgupta's channel icons are not content data or content applications streamed in real time to a master web-page" but are instead "static images representative of such content." POR, 58-60. PO distinguishes this from "the claimed invention, which provides a real time view of content to users." *Id.*, 60. PO thus again seeks to add requirements to the claim, which never recites "real time view," "real time content,"

or (as Dr. Edwards opines) “dynamically updated content” (EX2010, ¶169). The 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”).

PO further argues Dasgupta’s “channel icons serve as ‘links’ that a user must ‘click’ to access a media provider’s content,” and “[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.” POR, 60 (citations omitted). The claims, however, do not prohibit user action on the *master web-page* (see §III.B.1.a). And the file history excerpts that PO cites (EX1003, 134-35, 179) merely say that in the alleged invention, “the user does not need to open up web sites to view multiple web sources simultaneously from a single user interface.” *Id.*, 13. That is true in Dasgupta as well: the interface does not “open up web sites” as a user scrolls through channel guide 1602. Pet., 69-72. PO also ignores its own position earlier in the POR that “an ‘icon-based master web-page’ refers to the dynamic graphical user interface generated and maintained by the master server, **which displays streaming content represented by selectable**

icons.” POR, 53-54. PO’s attempts to rewrite the claims are thus both unsupported and inconsistent.

(2) Advertisements

PO contends “Dasgupta’s advertisements are likewise not content data or applications streamed in real time on a master web-page.” POR, 60-61 (citing EX1001, 3:13-23, 6:41-48). PO’s cited passages do not define or limit what constitutes *content data*, nor do they, as PO asserts, “distinguish[] ‘real time’ content data and applications from advertisements and promotions.” *Id.*, 61. Instead, the patent expressly gives *content data* a broad meaning that encompasses advertisements and promotions. EX1001, 4:1-3; EX1082, 195:23-21 (“I don’t see anything in lines 1 through 3 in column four that, by itself, would exclude advertising.”); EX1002, ¶¶315, 328-29, 334.

PO next argues “Dasgupta’s advertisements are merely visual prompts’ that ‘may be associated with advertisements 704 and/or with a virtual store,’” and Petitioner “fails to explain how a visual prompt corresponding to an advertisement or a virtual store accessible through ‘specific user inputs’ teaches or suggests providing the content itself (instead of a visual prompt) in real time.” POR, 61. If PO contends a “visual prompt” cannot be *content data*, that is wrong for the reasons discussed above. Moreover, PO overlooks the Petition’s detailed explanation of how

Dasgupta's advertisement facility 106 works with the rest of Dasgupta's system to meet 1(b). *See* Pet., 64-70.

c) The server

PO's final argument for 1[b2] is that Petitioner "improperly focuses on content streamed to, sent to, or received by Dasgupta's server in real time," and "[b]y strictly focusing on content sent to Dasgupta's...delivery subsystem 202[], Petitioner fails to identify any disclosure in Dasgupta that teaches or suggests providing 'real time' content data or applications on the master webpage itself, as required by the claims." POR, 62. This is the same claim-construction argument PO makes for Darnell, and it is misguided for the same reasons (*see* §III.B.1.a), including because the claims do not require "real time content." Furthermore, as PO acknowledges, Petitioner's position is "that because media content is transmitted from a provider subsystem 202 to access subsystem 204, it is available 'on a master webpage' of Dasgupta, *i.e.*, the channel guide." POR, 63. Specifically, Dasgupta's channel guide includes, among other things, "channel icons," "channel data," and advertisements received from a source and stored in storage facility 112 of subsystem 202. Pet., 64-65. In other words, Dasgupta streams *content data and content applications to the master server*, which populates the *master webpage* with that content. PO's remaining arguments to the contrary—channel icons and advertisements are not content data or content applications, and "a user must 'click'

a channel icon to access a provider's separate 'interactive portal' to view media content (POR, 64)—are unavailing for the reasons already discussed above.¹²

d) 1[b3]

PO argues “[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.” POR, 64. That is wrong for the reasons discussed in §§III.C.2.a), III.C.2.b)

IV. CONCLUSION

The Board should find claims 1-18 of the '658 patent unpatentable.

Respectfully submitted,
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Dated: January 28, 2026

¹² PO also says, without explanation/support, “the fact that media content is viewable from access subsystem 204 says nothing about whether it is viewable on Dasgupta’s channel guide, let alone ‘real time.’” POR, 64. The Petition, however, clearly addresses what content is viewable on the channel guide. Pet., 64-65.

CERTIFICATE OF WORD COUNT

I hereby certify that the foregoing PETITIONER’S REPLY includes 5,585 words (as calculated by Microsoft Word), excluding those in a table of contents; a table of authorities; a listing of facts that are admitted, denied, or cannot be admitted or denied; a certificate of service or word count; or an appendix of exhibits. Accordingly, this Reply is under the word count limit of 5,600 words.

Respectfully submitted,
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Dated: January 28, 2026

CERTIFICATE OF SERVICE

I hereby certify that on January 28, 2025 true and correct copies of the foregoing PETITIONER'S REPLY TO PATENT OWNER'S RESPONSE and EXHIBITS 1082-1083 were served via electronic mail upon the following counsel of record for Patent Owner:

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