

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

GOOGLE LLC,
Petitioner

v.

SANDPIPER CDN, LLC,
Patent Owner

Case IPR2025-01010
U.S. Patent No. 10,057,322

**PATENT OWNER'S BRIEF ON
DISCRETIONARY DENIAL**

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TABLE OF CONTENTS

I.	INTRODUCTION	1
II.	BACKGROUND	2
III.	OVERVIEW OF THE '322 PATENT	6
IV.	PROSECUTION HISTORY	8
V.	LEGAL STANDARDS	10
VI.	THE BOARD SHOULD EXERCISE DISCRETION TO DENY INSTITUTION UNDER 35 U.S.C. § 314(a).	13
A.	The <i>Fintiv</i> Factors weigh in favor of denial in view of the parallel district court litigation.	13
B.	The Weak Merits of the Petition favor denial.....	19
1.	The Petition fails to establish that the cited art discloses or renders obvious the claimed “application programming interface (API)” (all Grounds).	20
2.	The Petition fails to establish that Verma, alone or in combination with Lewin, renders obvious the “tag” limitations of independent claim 1 (Grounds 3-5).	25
C.	Heavy reliance on expert testimony favors denial.	30
D.	Institution would not reflect an efficient use of the Board’s limited resources.....	31
E.	Compelling economic and public interest concerns favor denial.	33
VII.	CONCLUSION	34

TABLE OF AUTHORITIES

Cases

<i>Apple Inc. v. Fintiv, Inc.</i> , IPR2020-00019, Paper 11 (PTAB Mar. 20, 2020).....	<i>passim</i>
<i>Apple Inc. v. Fintiv, Inc.</i> , IPR2020-00019, Paper 15 (PTAB May 13, 2020).....	19
<i>Chevron Oronite Co. LLC v. Infineum USA L.P.</i> , IPR2018-00923, Paper 9 (PTAB Nov. 7, 2018)	32
<i>Dabico Airport Solutions Inc. v. AXA Power APS</i> , IPR2025-00408, Paper 21 (PTAB June 18, 2025).....	15
<i>Deeper, UAB v. Vexilar, Inc.</i> , IPR2018-01310, Paper 7 (PTAB Jan. 24, 2019).....	32
<i>EClinicalWorks, LLC v. Decapolis LLC</i> , IPR2022-00229, Paper No. 10 (PTAB Apr. 13, 2022)	16
<i>Hulu, LLC v. Piranha Media Distribution, LLC</i> , IPR2024-01252, IPR2024-01253 (PTAB April 17, 2025) (designated precedential May 7, 2025).....	15
<i>In-Depth Geophysical, Inc. v. ConocoPhillips Co.</i> , IPR2019-00850, Paper 56 (PTAB Sept. 3, 2020)	10
<i>iRhythm Technologies Inc., v. Welch Allyn, Inc.</i> , IPR2025-00363 Paper 10 (PTAB June 6, 2025).....	30
<i>Linkplay Tech, Inc. v. Sonos, Inc.</i> , IPR2025-00509, Paper 10 (PTAB July 31, 2025).....	17
<i>In re Magnum Oil Tools Int’l, Ltd.</i> , 829 F.3d 1364 (Fed. Cir. 2016)	10
<i>Motorola Sol’ns, Inc. v. Stellar, LLC</i> , IPR2024-01205, Paper 19 (PTAB March 28, 2025).....	19
<i>NXP USA, Inc. v. Redstone Logics LLC</i> , IPR2025-00485, Paper 11 (PTAB July 10, 2025).....	17

<i>Resmed Corp. v. Cleveland Med. Devices Inc.,</i> IPR2023-00565, Paper No. 13 (PTAB September 25, 2023).....	16
<i>Samsung Electronics Co. Ltd. V. OS-New Horizon Personal</i> <i>Computing Solutions Ltd.,</i> IPR2025-00613, Paper 10 (PTAB July 17, 2025).....	17
<i>Sandpiper CDN, LLC v. Google LLC,</i> No. 2:24-cv-03951, ECF No. 82 (C.D.Cal. June 24, 2025)	14, 15
<i>SAS Inst., Inc. v. Iancu,</i> 584 U.S. 357 (2018).....	11, 31
<i>Sirona Dental Sys. GmbH v. Institut Straumann AG,</i> 892 F.3d 1349 (Fed. Cir. 2018).....	11
<i>Sotera Wireless, Inc. v. Masimo Corp.,</i> IPR2020-01019, Paper 12 (PTAB Dec. 1, 2020).....	13, 18, 19
<i>Virtek Vision Int’l ULC v. Assembly Guidance Sys., Inc.,</i> 97 F.4th 882 (Fed. Cir. 2024).....	29

Statutes

35 U.S.C. § 101	1, 15, 17, 18
35 U.S.C. §312(a)(3).....	10
35 U.S.C. § 314(a)	13, 32
35 U.S.C. § 316(a)(11).....	15

Other Authorities

37 C.F.R. § 42.100 (2017)	33
37 C.F.R. § 42.104(b)(4).....	2, 30
H.R. REP. No. 112-98, pt. I (2011).....	33

PATENT OWNER'S EXHIBIT LIST

Exhibit No.	Description
2001	“Cloud CDN: content delivery network,” <i>Google Cloud</i> , accessed at https://cloud.google.com/cdn (last accessed July 2, 2025)
2002	Interim Processes for PTAB Workload Management Memorandum (March 26, 2025)
2003	National Judicial Caseload Profile – United States District Courts (March 2025)
2004	<i>Intentionally Left Blank</i>
2005	<i>Sandpiper CDN, LLC v. Google LLC</i> , No. 2:24-cv-03951, Invalidity Contentions (April 22, 2025)
2006	<i>Sandpiper CDN, LLC v. Google LLC</i> , No. 2:24-cv-03951, ECF No. 82 (C.D. Cal. June 24, 2025)
2007	<i>Sandpiper</i> , No. 2:24-cv-03951, ECF No. 28 (C.D. Cal. Sept. 16, 2024)
2008	FAQs for Interim Processes for PTAB Workload Management, accessed at https://www.uspto.gov/patents/ptab/faqs/interim-processes-workload-management
2009	Interim Director Discretionary Process, accessed at https://www.uspto.gov/patents/ptab/interim-director-discretionary-process

I. INTRODUCTION

The Petition here challenges one of seven patents presently asserted against Google LLC (“Petitioner”) in the Central District of California. All of the asserted patents are also challenged in Petitions before the Board, as shown below.

IPR2025	Patent Expiration	Litigation Status
-00806 (’517)	Expired	Asserted
-00826 (’112)	Expired	Asserted
-00860 (’573)	2029	Asserted
-00846 (’778)	2032	Dismissed (§ 101)
-00952 (’886)	2032	Dismissed (§ 101)
-00969 (’903)	Expired	Asserted
-01010 (’322)	2036	Asserted

Inter partes review of U.S. Patent Number 10,057,322 (“the ’322 patent”) would be a waste of the Board’s limited resources. Trial is scheduled to occur *almost three months* before a Final Written Decision would be rendered here. There is currently no stay of the district court proceeding, and the district court has expressed reluctance to grant a stay unless *all* of Google’s petitions on the asserted patents were to be instituted. But, as shown in the table above, two of the petitions are directed to patents that were dismissed from the district court case and three of the petitions are directed to expired or nearly expired patents that have long settled expectations. *See* Section VI.A (Factor 1). These facts strongly favor exercising discretion to deny the Petition.

Moreover, the Petition contains numerous flaws that favor discretionary denial. Petitioner's arguments on the merits are weak, failing to identify disclosure of multiple claim elements in the cited art. This lack of disclosure, in turn, causes the Petition to rely heavily on expert testimony to supply missing elements in the cited art, contravening Petitioner's requirement to specify where each element of the claim is found in the prior art patents or printed publications relied upon under 37 C.F.R. § 42.104(b)(4). These flaws further favor discretionary denial.

II. BACKGROUND

The challenged patent arises from pioneering technology directed to delivering content across a network. Content delivery networks (CDNs) provide the critical services that enable content providers like Google to quickly deliver online content to millions of consumers simultaneously over the Internet. The technology underlying these CDNs was made possible through a series of inventions developed by a California start-up called Sandpiper Software Consulting, LLC, a predecessor of Patent Owner Sandpiper CDN, LLC.

In the early 1990s, the World Wide Web saw increasing adoption, becoming a household staple. This mass adoption led to data congestion issues from the ever-growing number of users seeking to simultaneously access Internet content. A typical computer server in the 1990s could only handle a limited number of simultaneous connections before becoming overloaded. Moreover, signals take

time to traverse routers and move through content-congested internet cables.

Consumers living far from the physical server(s) hosting content experienced sluggish load times and high latency due to problems such as overloaded servers, congested network segments, and geographic separation.

In the mid-1990s, Andrew Swart and David Farber were among the first individuals to develop services that allowed content providers to distribute their content over the Internet, while avoiding the common congestion and performance issues that plagued Internet transmission at that time. Sandpiper's solution was to deploy CDN servers around the world, replicate appropriate content from customers' origin servers to appropriate CDN servers, and transparently rendezvous end-users requesting that content to the "best" CDN server to deliver that content, all while providing their customers with control over their content and user experience. This service and its architecture was quickly imitated by many others in the industry.

Using solutions developed by Mr. Swart and Mr. Farber, end-users would connect to an optimal edge server—one that that was closer to them or that had available capacity. Distributing content across a network of servers alleviated data congestion issues, and allowing consumers to connect to edge servers located near them reduced latency. Swart and Farber developed and built systems and methods for propagating data from origin servers to edge servers (known as "caching")

based on network demand and for seamlessly routing users to the optimal edge server with the correct content. Using caching to perform the replication process within the CDN framework flew in the face of conventional wisdom.

In 1996, Mr. Swart and Mr. Farber founded Sandpiper Networks Inc. to further develop and commercialize their novel concept for a content delivery network. Sandpiper Networks was based in Thousand Oaks, California. There, the inventors designed and built a CDN ultimately referred to as “Footprint.” By at least May 24, 1996, the Sandpiper team had conceived techniques for delivering static and dynamic content, including streaming resources, such as audio and video, using Sandpiper’s CDN.

Sandpiper Networks labored not only to build and implement its CDN, but also to protect their groundbreaking innovation through the patent system. Recognizing that its invention could revolutionize content delivery worldwide, Sandpiper Networks (and its successor companies, including Patent Owner) filed numerous patent applications directed to its foundational CDN technology, including the patent challenged in this Petition.

By at least May 1998, Sandpiper Networks was caching content and delivering cached content to end users of content providers using its CDN. Sandpiper Networks’ first paying customer was the L.A. Times, which paid Sandpiper Networks to host the report of Independent Counsel Ken Starr on his

investigation of President Bill Clinton (“the Starr Report”) beginning on September 11, 1998. Sandpiper Networks’ CDN was capable of caching, and was used to cache and deliver Internet resources including inter alia, pictures, text files, dynamic resources, and streaming multimedia resources.

In the early-to-mid 2000s, demand for CDNs exploded. Sandpiper Networks continued to commercialize its technology and compete in this expanding market, doing business as various entities including Digital Island, Inc. and a company called “Level 3.” It also created Patent Owner, Sandpiper CDN, LLC. Other businesses also entered the market by misappropriating Sandpiper’s innovations and directly competing with Sandpiper for market share.

One such company is Google. Google built its own in-house CDN, which uses technology described and claimed by Sandpiper’s patents. Additionally, YouTube, which Google purchased in 2006, relies upon CDN technology to meet its enormous data streaming needs, as well as for Google’s video search results (powered by YouTube). EX2001. Google did not license this patented technology from Sandpiper, Level 3, and/or its predecessors. Accordingly, Sandpiper brought suit against Google in district court for patent infringement. Google filed IPR Petitions against all of Sandpiper’s asserted patents in response.

III. OVERVIEW OF THE '322 PATENT

Patent Number 10,057,322 (“the ’322 patent”) is entitled “Network Address Resolution,” and it claims priority to Provisional Patent Application No. 62/098,930 (“the ’930 Application”), filed on December 31, 2014.

The ’322 patent is directed to novel techniques for improving the performance of content delivery networks (CDNs), in some cases using an application programming interface (API) “to embed link resolution information within an HTML document or other content returned to a requesting client.” EX1001, 1:16-18. Aspects of the ’322 patent “involve an alternative to using conventional domain name system (DNS) servers for edge selection by instead calling an API or otherwise querying the CDN when constructing a uniform resource locator (URL) for the resource to be delivered from the CDN.” *Id.*, 3:10-14. The solutions described in the ’322 patent were unconventional at the time of the invention of the ’322 patent and continue to offer numerous technical benefits.

For example, as users were able to access more content (e.g., television, movies, news, software updates) on networks, network providers sought alternatives to routing requests through DNS to select an edge server. EX1001, 1:39-50. The inventors of the ’322 patent devised techniques for “bypassing DNS,” thereby reducing the number of components involved in servicing requests while improving response speeds while delivering content. EX1001, 2:45-49, 5:29-32,

6:60-7:1. And these techniques are recited in the claims of the '322 patent. For instance, Petitioner-chosen representative independent claim 15 recites:

A method comprising:

providing, at a content delivery network, an application programming interface (API);

at the API, receiving, from an origin system that is separate from the content delivery network, an embedded resource and at least one parameter associated with the embedded resource;

generating a modified embedded resource providing a direct link to a node within the content delivery network for obtaining content associated with the embedded resource;

delivering, by the content delivery network, the modified embedded resource to the origin system;

receiving, at the node, a request from a client device to obtain the content; and

providing the content to the client device.

EX1001, 12:5-20.

The solutions described and claimed in the '322 patent improve the functioning of a CDN, including, for example, offloading computational resource consumption away from a client-side DNS infrastructure, and instead having content retrieved from an optimal node in the network.

IV. PROSECUTION HISTORY

The '322 patent was filed as U.S. Application No. 14/985,968 ("the '968 application") on December 31, 2015. The '322 patent claims priority to U.S. Provisional Application No. 62/098,930, filed December 31, 2014. The '322 patent received a thorough prosecution on the merits, including overcoming both §§ 101 and 102 rejections. EX1002, 15-18, 60-74, 95-108.

After receiving a non-final rejection (*see* EX1002, 95-108), Patent Owner amended the independent claims to clarify the architecture of the claimed systems and methods. EX1002, 56-59. For example, Patent Owner amended independent claim 12 (which issued as independent claim 11) as follows:

12. (Currently Amended) A content delivery ~~device~~ network comprising:
at least one processor in communication with a non-transitory computer readable medium including computer readable instructions for:
~~generating~~ providing an application programming interface (API);
at the API, receiving, from an origin system that is separate from the content delivery network, an embedded resource and at least one parameter associated with the embedded resource;
generating a modified embedded resource providing ~~information as to a location within a~~ a direct link to a node within the content delivery network for obtaining content associated with the embedded resource;
delivering, by the content delivery network, the modified embedded resource to the origin system;
receiving, at the node, a request from a client device to obtain the content; and
providing the content to the client device.

EX1002, 57-58.

Patent Owner also added independent claim 22 (which issued as independent claim 15) with similar limitations:

22. (New) A method comprising:

providing, at a content delivery network, an application programming interface (API);

at the API, receiving, from an origin system that is separate from the content delivery network, an embedded resource and at least one parameter associated with the embedded resource;

generating a modified embedded resource providing a direct link to a node within the content delivery network for obtaining content associated with the embedded resource;

delivering, by the content delivery network, the modified embedded resource to the origin system;

receiving, at the node, a request from a client device to obtain the content; and

providing the content to the client device.

EX1002, 59.

Patent Owner argued that the claimed architecture differed from the prior art (U.S. Patent Pub. No. 2014/0289319 to Richardson) because “Richardson required the client to either (a) communicate with the DNS server of the CDN to determine the node that will be used to deliver the content; or (b) execute translation code to ask the CDN for translation information, which translation information may include the address of the node that will be used to deliver the content.” EX1002, 72-73. Richardson thus did not disclose “generating modified embedded resource providing a direct link to a node within the content delivery network for obtaining

content associated with the embedded resource.” *Id.* Upon consideration of this and other arguments, the Examiner allowed the claims. *Id.*, 15-18.

As discussed below, the prior art presented in the Petition also fails to disclose or render obvious the limitations of the independent claims found allowable by the Examiner after being amended by Patent Owner during prosecution, which warrants denial of the Petition.

V. LEGAL STANDARDS

It is Petitioner’s burden to demonstrate unpatentability by a preponderance of the evidence. The Petition must establish, with particularity, the grounds and evidence that support invalidating the patented claims. 35 U.S.C. §312(a)(3). Petitioner “must ‘specify where each element of the claim is found in the [relied upon] prior art patents.’” *In-Depth Geophysical, Inc. v. ConocoPhillips Co.*, IPR2019-00850, Paper 56 at 27 (PTAB Sept. 3, 2020) (quoting 37 C.F.R. § 42.104(b)(4)).

In addition, the Board makes its determination regarding institution based on what the Petition actually presents and not what it could have reasonably contained had it been drafted differently. *In re Magnum Oil Tools Int’l, Ltd.*, 829 F.3d 1364, 1381 (Fed. Cir. 2016) (holding that the Board is not “free to adopt arguments on behalf of petitioners that could have been, but were not, raised by the petitioner during [a post-grant proceeding]”). The Board cannot “deviate from the grounds in

the petition and raise its own” theories of invalidity. *Sirona Dental Sys. GmbH v. Institut Straumann AG*, 892 F.3d 1349, 1356 (Fed. Cir. 2018); *SAS Inst., Inc. v. Iancu*, 584 U.S. 357, 365-367 (2018) (the Petition “define[s] the scope of” an IPR proceeding “all the way from institution through to conclusion,” and “the Board does not “enjoy[] a license to depart from the petition.”).

In addition to the underlying failures of the Petition, the Board should deny institution under *Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 11 (PTAB Mar. 20, 2020) (precedential) (“*Fintiv*”) and other discretionary factors committed to the Board’s discretion under § 314(b), including the factors identified by the Acting Director in the March 26, 2025 Memorandum (EX2002, “Director Memo”) and the Board’s latest guidance on the Interim Director Discretionary Process (EX2009).

The *Fintiv* factors include:

1. Whether the court has granted a stay or evidence exists that one may be granted if an IPR is instituted.
2. The proximity of the court’s trial date to the PTAB’s projected statutory deadline for a final written decision.
3. The investment in the parallel proceeding by the court and the parties.
4. The overlap between issues raised in the petition and those in the parallel proceeding.
5. Whether the petitioner and the defendant in the parallel proceeding are the same party.

6. Other circumstances that impact the PTAB's exercise of discretion, including the merits of the petition.

Fintiv, 5-6; EX2002, 2. The Board takes a "holistic view" of whether efficiency and integrity of the system are best served by denying or instituting review. *Id.*

Furthermore, the Director Memo identified a non-exhaustive number of additional factors that may be considered by the Board when evaluating how to apply the Board's discretion under § 314(b) ("Memo Factors") including:

1. Whether the PTAB or another forum has already adjudicated the validity or patentability of the challenged patent claims;
2. Whether there have been changes in the law or new judicial precedent issued since issuance of the claims that may affect patentability;
3. The strength of the unpatentability challenge (related to *Fintiv* Factor 6, above);
4. The extent of the petition's reliance on expert testimony;
5. Settled expectations of the parties, such as the length of time the claims have been in force;
6. Compelling economic, public health, or national security interests; and
7. Any other considerations bearing on the Director's discretion.

EX2002, 2-3; EX2009, I.B..

VI. THE BOARD SHOULD EXERCISE DISCRETION TO DENY INSTITUTION UNDER 35 U.S.C. § 314(a).

Every *Fintiv* factors weighs in favor discretionary denial. Trial is scheduled to occur *almost three months* before a Final Written Decision would be rendered here. There is currently no stay of the district court proceeding, and the district court has expressed reluctance to grant a stay unless *all* of Google's petitions on the asserted patents were to be instituted. These facts strongly favor exercising discretion to deny the Petition. Moreover, the parties and court have already invested significant effort in the district court proceeding, and Petitioner's nominal *Sotera* stipulation does little to mitigate efficiency concerns in practice. Under similar circumstances, the Director has exercised discretion to deny institution and should do so here.

Additionally, the Petition is weak on the merits. The cited art presented in the Petition's anticipation and obviousness grounds fails to disclose multiple claim elements, requiring the Petition to rely heavily on bare expert testimony to address these missing elements. In view of this extensive gap filling, instituting review would be a waste of the Board's limited resources.

A. The *Fintiv* Factors weigh in favor of denial in view of the parallel district court litigation.

On March 24, 2025, the Office issued new guidance clarifying how the Board will apply the precedential *Fintiv* and *Sotera* decisions to parallel

proceedings (“*Fintiv* Guidance”). *See also Fintiv*, IPR2020-00019, Paper 11 (articulating six non-exclusive factors for determining whether to institute an AIA post-grant proceeding where there is parallel litigation). Every one of the *Fintiv* Factors favors denial, and the balance of the factors heavily favors discretionary denial of this Petition.

***Fintiv* Factor 1 favors denial.** There is no stay of proceedings in the parallel district court case and trial is set for September 28, 2026—almost three months before a Final Written Decision would be issued here. While the district court has extended certain pre-trial deadlines to fall after the Director’s expected discretionary denial decisions, the trial date remains unchanged. *See* EX2006, 5 (*Sandpiper CDN, LLC v. Google LLC*, No. 2:24-cv-03951, ECF No. 82 (C.D.Cal. June 24, 2025)).

The district court indicated that *if* the PTAB were to institute on *all* of Google’s pending petitions, then “the likelihood of resource conservation and issue simplification would be far more crystalized” and noted that Sandpiper (Patent Owner) would agree to a post-institution stay under such circumstances. *Id.* at 4. Patent Owner submits that the PTAB should not institute on all petitions. Indeed, it should discretionarily deny all of them or otherwise deny institution on the merits.

Indeed, for most of the petitions, certain countervailing facts align with situations the Director has recently found to justify discretionary denial. Google

petitions in IPR2025-00806, IPR2025-00826, and IPR2005-00969 challenge expired patents that have each been in force for over a decade. The Office has recently denied similar petitions. *See, e.g., Dabico Airport Solutions Inc. v. AXA Power APS*, IPR2025-00408, Paper 21 at 2 (PTAB June 18, 2025) (discretionarily denying review for a patent that had been in force for “almost eight years”). And Google petitions in IPR2025-00846 and IPR2025-00952 challenge patents that the district court found invalid under 35 U.S.C. § 101. *See EX2007 (Sandpiper*, No. 2:24-cv-03951, ECF No. 28 (C.D. Cal. Sept. 16, 2024)). The Office should deny institution of the ’846 and ’952 petitions under *Hulu, LLC v. Piranha Media Distribution, LLC*, IPR2024-01252, IPR2024-01253 (PTAB April 17, 2025) (designated precedential May 7, 2025).

Furthermore, all of Google’s petitions have serious flaws on the merits, as well as other factors that the Director considers to weigh in favor of denial, as further detailed in their respective briefs. Even if one or two petitions were instituted, the district court has now indicated that such a limited institution would not meaningfully conserve resources or simplify the issues, making a stay of the district court case less likely. *See EX2006*, 4. Factor 1, therefore, favors denial—for this and all six other Petitions.

***Fintiv* Factor 2 favors denial.** The projected statutory deadline for a Final Written Decision in this IPR is December of 2026. *See* 35 U.S.C. § 316(a)(11). A

jury trial in the parallel litigation is set for September of 2026. *See* EX2006, 5.

Accordingly, multiple tribunals will be adjudicating validity at the same time, increasing duplication and expenses for the parties and the tribunals. Moreover, the jury will render its verdict on all issues—including overlapping invalidity issues—almost three months *before* the PTAB would render its Final Written Decision here.

To the extent Google argues that the scheduled trial date is uncertain, this trial date further aligns with the median time to trial in the Central District of California, which is currently 27.8 months from case filing. EX2003, 68. As the district court proceeding was filed May 10, 2024, the median time to trial confirms that trial is expected to occur almost three months before the PTAB would render its Final Written Decision.

The Board has recently confirmed that where another tribunal will adjudicate the same issues presented in the petition before the scheduled FWD date, that fact weighs heavily against institution. *See, e.g., EClinicalWorks, LLC v. Decapolis LLC*, IPR2022-00229, Paper No. 10 at 9 (PTAB Apr. 13, 2022) (finding this factor weighed in favor of discretionary denial and denying institution where “the beginning of the jury trial . . . is roughly one or two months before any final decision would have been due had inter partes review been instituted” (emphasis added)); *see also, e.g., Resmed Corp. v. Cleveland Med. Devices Inc.*, IPR2023-

00565, Paper No. 13 at 11 (PTAB September 25, 2023) (denying institution where trial was scheduled to occur “approximately one month” before the deadline to issue a final written decision); *NXP USA, Inc. v. Redstone Logics LLC*, IPR2025-00485, Paper 11 at 2 (PTAB July 10, 2025) (denying institution where trial was scheduled to occur three months prior to final written decision); *Samsung Electronics Co. Ltd. V. OS-New Horizon Personal Computing Solutions Ltd.*, IPR2025-00613, Paper 10 at 2 (PTAB July 17, 2025) (denying institution where trial was scheduled to occur approximately three months prior to final written decision); *Linkplay Tech, Inc. v. Sonos, Inc.*, IPR2025-00509, Paper 10 at 2 (PTAB July 31, 2025) (denying institution where trial was scheduled to occur two months prior to final written decision). Factor 2, therefore, strongly favors denial.

***Fintiv* Factor 3 favors denial.** Significant work has already been done in the parallel district court litigation. Patent Owner served its infringement contentions in January 2025, and Petitioner served its invalidity contentions in April 2025. *See* EX2005. Fact discovery opened in March 2025 with the exchange of initial disclosures, and the parties have since propounded written discovery.

Additionally, the parties briefed and the district court already decided multiple substantive motions, including a motion to dismiss multiple asserted patents based on subject-matter ineligibility under 35 U.S.C. § 101. *See, e.g.*, EX2007. In the process of adjudicating these motions, the district court has already

become well-versed with the underlying patented technology (per *Alice* step one), and the general state of the art and specific disclosures of the pertinent prior art (per *Alice* step two). *Id.* Instituting review of the Petition will therefore do little to preserve judicial economy compared to other cases. Factor 3, therefore, at least somewhat favors denial.

***Fintiv* Factor 4 favors denial.** The parallel litigation involves the same claims and defenses as those at issue in the Petition. *See Fintiv* Memo, 7–8 (emphasis added). Petitioner has nominally executed a *Sotera* stipulation. *See* EX1020; *Sotera Wireless, Inc. v. Masimo Corp.*, IPR2020-01019, Paper 12 at 18–19 (PTAB Dec. 1, 2020) (precedential as to § II.A). The effect of this stipulation, however, is mitigated because Petitioner asserts obviousness combinations of unpublished system prior art in the district court proceeding together with prior-art references relied on in its Petition, and several other invalidity theories. *Compare* Pet., 81 *and* EX1020.

Indeed, Petitioner has expressly carved out from its stipulation the option to try overlapping invalidity arguments in multiple fora, undermining the efficiency sought by the creation of *inter partes* review in the AIA. *See* EX1020. As the Acting Director recently recognized, such stipulations do not ensure that the IPR proceedings would be a “true alternative” to the district court proceeding where unpublished system prior art is asserted in combination with the art used in the IPR

grounds. *Motorola Sol'ns, Inc. v. Stellar, LLC*, IPR2024-01205, Paper 19 at 3-4 (PTAB March 28, 2025) (finding that a *Sotera* stipulation was unlikely to moot the petitioner's combination of IPR art with unpublished system prior art in district court proceedings, and therefore could not outweigh other factors favoring denial). Because Petitioner's stipulation specifically preserves the right to file invalidity grounds based on prior-art systems and products, it confirms Petitioner's intent to raise the very kinds of duplicative arguments that the Director identified as a cause for concern in *Motorola. Id.* Factor 4, therefore, favors denial.

***Fintiv* Factor 5 favors denial.** The parties are the same in both proceedings. *Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 15 at 15 (PTAB May 13, 2020) (“*Fintiv II*”) (“Because the petitioner and the defendant in the parallel proceeding are the same party, this factor weighs in favor of discretionary denial.”).

***Fintiv* Factor 6 favors denial.** *Fintiv* Factor 6 concerns “other circumstances that impact the Board’s exercise of discretion, including the merits.” *Fintiv*, 14. As discussed in the sections below, the petition suffers from numerous flaws, including the weak merits of the arguments presented and heavy reliance on expert testimony to fill gaps in the prior art.

B. The Weak Merits of the Petition favor denial.

Fintiv Factor 6 and Memo factor 3 weigh against institution in view of multiple flaws in the unpatentability grounds advanced in the Petition. These flaws

span across all three independent claims, as well as multiple dependent claims, and therefore the Petition does not establish a reasonable likelihood of success with respect to any claim.

1. The Petition fails to establish that the cited art discloses or renders obvious the claimed “application programming interface (API)” (all Grounds).

Independent claims 11 and 15 recite various features involving an “application programming interface (API),” specifically:

[11b], [15a]: providing, at a content delivery network, **an application programming interface (API)**;

[11c], [15b]: **at the API**, receiving, from an origin system that is separate from the content delivery network, an embedded resource and at least one parameter associated with the embedded resource; ...

EX1001, 10:63-67 (Claim 11), 12:6-11 (Claim 15). Dependent claims 2 and 9 also recite various features involving an “API,” specifically:

[2a]: passing information based on the client IP address to **an application programming interface (API)** of the content delivery network;

[2b]: **in association with the API**, obtaining a parameter associated with the embedded resource; ...

[9b]: passing, by the origin system, the location identifier to **an application programming interface (API)** of the content delivery network to generate the modified embedded resource relating to the node.

EX1001, 10:23-27, 10:52-55.

The Petition relies solely on Verma (EX1005) for the recited “application programming interface (API)” across all Grounds. Pet., 11-12. Although Grounds 2 and 4 further rely on Raciborski and Lewin for certain limitations of claims 2, 9, 11, and 15, Petitioner does not rely on either reference for the recited “application programming interface (API).” Pet., Pet., 34, 37-39 (relying on Raciborski to allegedly render obvious “receiv[ing] the embedded resource and parameter associated with the embedded resource at Verma’s ‘broker’ to achieve Verma’s goal”—not for the recited API), 54 (relying on Lewin to allegedly render obvious “using a delivery parameter to obtain, by the origin system, a modified embedded resource from the CDN ‘based upon identification of the tag.’”), 67-68, 77.

Specifically, Petitioner alleges, “a POSITA would have understood Verma’s ‘**broker**’ is an API because it performs the same logical functions as the API in the ’322 patent, which provides that ‘[w]hen the origin server receives the request,’ it ‘calls an API’ to ‘communicate with the compute engine’ in the CDN.” Pet., 12 (citing EX1001, 4:49-52, 7:16-25). Verma’s “broker,” however, is not an API.

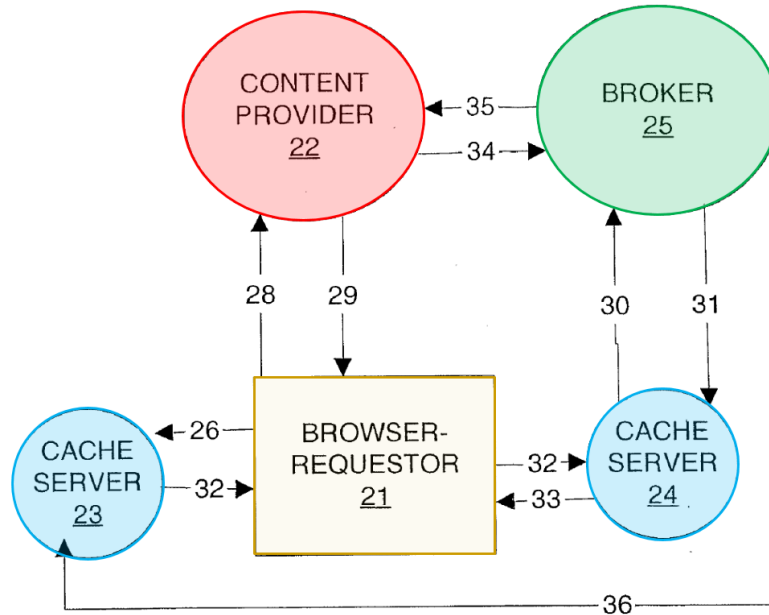
As is well understood in the art, an application programming interface (API) is “a set of rules or protocols that enables software applications to communicate with each other to exchange data, features and functionality.” EX2013, 1. For example, “in terms of a request and response between a client and server,” “[t]he API is the bridge establishing the connection between them.” *Id.* In other words, as

its name implies, an API acts as an interface that allows the client to communicate with an application executing on the server—it is *not* the application itself. *Id.*

In the context of the '322 patent, the “API” acts as a bridge between the origin server and the compute engine. EX1001, 6:24-30 (“[T]he API 26 provides the interface to a computing engine 30 that uses the information, passed to the engine through the API...”), 4:32-34 (“[C]ompute engine 30 should be **contacted via a call to an API 26** (operation 220).” *Id.*, 4:32-34 (emphasis added). The '322 patent further explains that “[w]hen the origin server receives the request (or at some time prior to receiving the request), the origin server **calls an API** in order to communicate with the compute engine 30 to format the address for the embedded resource.” *Id.*, 4:49-52 (emphasis added). Then, the “computing engine 30,” not the API, “determine[s] one or more nodes 32 in the CDN to serve the content...” *Id.*, 6:24-30.

Verma does not disclose or teach an API. In contrast, Verma’s describes “a content broker which receives information from the cache servers in a content delivery network as to traffic, availability of particular files and various locations, and then returns the re-written URL to the content server which received the request from the client.” EX1005, ¶12. For example, as depicted in Verma’s FIG. 1, a “browser 21 operates to request a content file, for example the movie entitled

‘Matrix Reloaded,’ by sending a URL 28 to a content provider 22, Movies-Inc.Com in this example.” EX1005, ¶25.



EX1005, FIG. 1 (annotated).

As Verma explains, “Movies-Inc.Com content provider 22 sends a request 34 for information to a content delivery network broker 25, which manages at least one, and preferably, a set of cache servers, exemplified by cache server 23 and cache server 24.” EX1005, ¶25. The broker sends availability inquiries to the cache servers, respectively, “to find out whether they currently store the requested movie file.” *Id.* Verma explains that “[t]he broker 25 provides content current and/or future availability information to Movies-Inc.Com content provider 22 where the content file URLs are prepended (Akamai-ed) for redirecting to cache servers.” *Id.*,

¶26. But nowhere does Verma disclose that its “content broker” is or makes use of an API to communicate with either the content provider or cache servers.

As Petitioner acknowledges, the '322 patent describes that an “API is a convenient and efficient way for disparate systems to uniformly and predictably **pass information to the computing engine and for the computing engine to return information.**” Pet., 12 (emphasis added). Verma’s purported “API,” however, performs entirely different logical functions. For example, Verma explains “[i]f the content file [to be delivered] is not immediately available ... Verma’s content server will negotiate with the content delivery network through the broker in order to determine the start time, end time, and the cache server where the content file will next be available during step.” Verma, [0038]. Determining the start time, end time, and the availability of the content file within each cache server—which are the logical functions performed by Verma’s broker—is different than an API that merely provides an interface for passing and returning information. Instead, Verma’s determination requires that its broker “schedule the distribution of content files to edge [or cache] servers.” EX1005, ¶22.

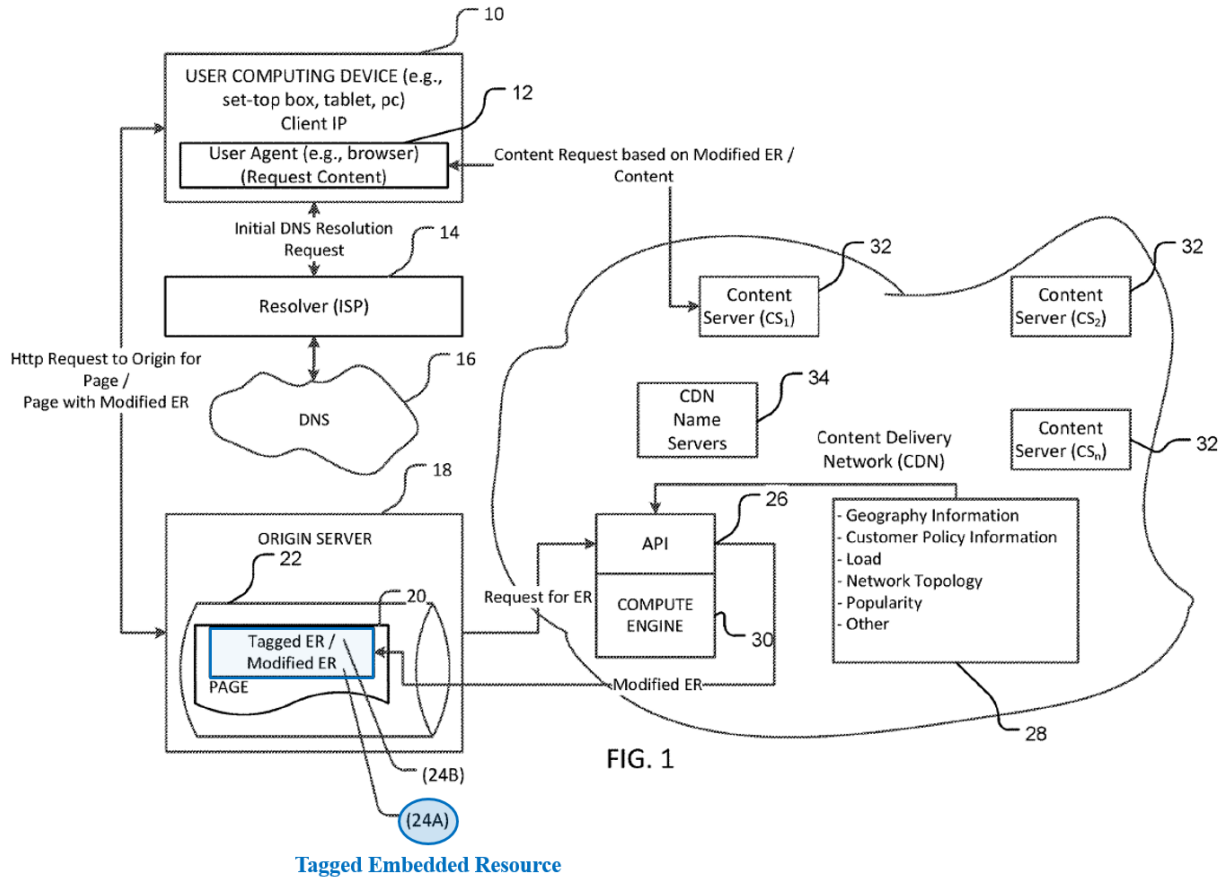
Accordingly, Verma does not teach that its broker is or provides the function of the claimed “application programming interface (API),” as required by claims 2, 9, 11, and 15. This element is wholly missing from Verma.

2. The Petition fails to establish that Verma, alone or in combination with Lewin, renders obvious the “tag” limitations of independent claim 1 (Grounds 3-5).

Independent claim 1 recites, “**receiving**, by an origin system, a request from a client device for a content resource, the content resource including **at least one embedded resource with a tag**,” and “**upon identification of the tag**, using at least one delivery parameter to **obtain, by the origin system, a modified embedded resource** from a content delivery network that is separate from the origin system.” EX1001, 10:6-12 (elements [1a] and [1b], emphasis added). Claim 1 further requires that “the **modified embedded resource includes a direct link to a node within the content delivery network** that can deliver content associated with the embedded resource.” *Id.*, 10:13-18 (element [1c], emphasis added).

Petitioner acknowledges that “Verma does not expressly disclose its origin system receiving ‘a request from a client device for a content resource, the content resource including at least one embedded resource with a tag,’” instead relying on Lewin for the claimed “embedded resource with a tag.” Pet., 45-48. But Lewin does not supply this missing “tag” limitations.

Figure 1 of the ’322 patent illustrates the claimed “embedded resource with a tag.” EX1001, FIG. 1.



EX1001, FIG. 1 (annotated).

As the patent explains, “the origin server is connected with a database 22, which organizes and manages stored resources in some form of storage device (or devices), such as a storage appliance, that includes the HTML document 20 with an embedded resource 24.” EX1001, 4:22-26. “In this example, the embedded resource 24A is a link to some form of content that the user can obtain by selecting the link when the Web page is displayed.” *Id.*, 4:28-31.

The '322 patent further explains that “[t]he embedded resource may include a tag indicating that a resource address compute engine 30 should be contacted via a call to an API 26.” EX1001, 4:32-34 (emphasis added). In an

example, “the tag is ‘\$’ which causes the origin server 18 to call the API 26 to retrieve the address (only) or the complete URL,” and “[h]ence, **the presence of the tagged resource 24A** in the HTML document 20 at the origin servers **causes the origin server to call the API, the result of which causes the HTML document returned to the requesting client to include a modified embedded resource 24B.**” *Id.*, 4:40-48 (emphasis added).

This operation is expressly recited in claim 1, requiring “at least one embedded resource with a tag,” and “**upon identification of the tag**, using at least one delivery parameter to **obtain, by the origin system, a modified embedded resource** from a content delivery network that is separate from the origin system.” EX1001, 10:6-12. In other words, the claim 1 requires that the recited “tag” be used to initiate the operation of obtaining “the modified embedded resource [that] includes a direct link to a node within the content delivery network that can deliver content associated with the embedded resource.” *Id.*, 10:6-18.

Lewin’s purported “tag,” in contrast, is not used to obtain a “modified embedded resource [that] includes a direct link to a node within the content delivery network that can deliver content associated with the embedded resource,” as required by claim 1. In particular, the Petition alleges that in Lewin, “‘directives [] are placed in HTML pages’ and ‘evaluated on a server before the page is served,’ which ‘enable[s] the server to add dynamically-generated content to an

existing HTML page.” Pet., 47 (citing EX1007, ¶28). According to Petitioner, “[t]he ‘dynamic assembly instructions’ (URLs (embedded resources)) are ‘specif[ied]’ by ‘tags,’ like a ‘<esi:include> tag.” Pet., 47 (citing EX1007, ¶¶28, 30, 49).

Petitioner, however, does not explain how Lewin’s “<esi:include>” tags are used (alone or in combination with Verma) to “obtain ... a modified embedded resource” that “includes a direct link to a node within the content delivery network that can deliver content associated with the embedded resource,” as required by claim 1. *See* Pet., 46-50, 54-56. Instead, the Petition merely alleges that a “POSITA would have understood Lewin’s tags allow for identification of URLs, and would have wanted to incorporate tags in Verma to have a uniform and efficient way to identify URLs,” and that such tags would “enable Verma’s system to utilize and identify advantageous embedded content by providing a solution for dynamic identification and execution of the URLs.” Pet., 50, 55. But such analysis fails to address the claim language, requiring obtaining a “modified embedded resource [that] includes a direct link to a node within the content delivery network that can deliver content associated with the embedded resource” upon “identification of the tag.” EX1001, 10: 6-18.

Moreover, Petitioner provides no reason why a POSITA would seek to modify Verma’s existing markup scheme. As Petitioner acknowledges, Verma

already includes standard HTML tags (e.g., “a href” tags) to identify URLs. Pet.,

51. The Petition also does not explain how replacement of these tags with those disclosed by Lewin would improve Verma’s operation, or how they would function with Verma’s existing content broker and cache servers. Pet., 46-50, 54-

56. Further, by missing the *how* and *why* a POSITA would look to Lewin’s teachings, the Petition also fails to show an expectation of success of using Lewin’s “<esi:include>” tags to replace Verma’s standard HTML tags, such that combination with Lewin’s tag would meet the claimed “obtain ... a modified embedded resource” that “includes a direct link to a node within the content delivery network that can deliver content associated with the embedded resource.”

In the end, even had Lewin supplied the claim elements missing from Verma (it does not), the mere existence of those elements in the prior art is insufficient to render obvious claim 1. *Virtek Vision Int'l ULC v. Assembly Guidance Sys., Inc.*, 97 F.4th 882, 887 (Fed. Cir. 2024) (“The mere fact that these possible arrangements existed in the prior art does not provide a reason that a skilled artisan would have substituted” one arrangement for the other). As Lewin and Verma are not obvious to combine, and even if combined, still fail to teach “obtain[ing] ... a modified embedded resource” that “includes a direct link to a node within the content delivery network that can deliver content associated with the embedded

resource,” the Petition fails to establish a reasonable likelihood of prevailing with respect to independent claim 1.

C. Heavy reliance on expert testimony favors denial.

Memo factor 4 favors discretionary denial of the Petition. *See also* 37 C.F.R. § 42.104(b)(4). Here, Petitioner relies heavily on expert argument and inferences to fill in the gaps of the prior art, and to explain why the prior art would be modified and combined to allegedly arrive at the challenged claims. *Cf. iRhythm Technologies Inc., v. Welch Allyn, Inc.*, IPR2025-00363 Paper 10 at 2-3 (PTAB June 6, 2025) (suggesting that identifying portions of expert testimony to fill gaps in the prior art weighs in favor of denial). Petitioner also relies on expert testimony for every cited claim limitation and every ground, citing its expert’s declaration *approximately 300 times*, rather than providing a focused expert declaration addressing the limitations for which expert testimony is necessary. Pet., 1-82; *Contra* EX2008, at Q.21.

Specifically, for Ground 1A/1B, the Petition relies heavily on its expert’s declaration to provide the understanding and interpretation of a POSITA, for example, independent claim elements [15a], [15b], [15c], [15f], [11a], [11pre], [11b]-[11g], and dependent claims 12, 14. Indeed, Petitioner relies on its expert to fill numerous gaps in the prior art, alleging that “[a] POSITA would have understood,” “known,” “considered it obvious,” or “been motivated” to modify the

disclosure of the prior art more than 20 times for Grounds 1A/1B alone. *See* Pet., 10-33. For example, recognizing that Verma does not disclose use of an application programming interface (API), Petitioner relies solely on its expert to fill the gaps, alleging that “[a] POSITA would have understood Verma’s ‘broker’ is an API...” Pet., 12 (citing EX1003, ¶87). And Petitioner’s expert cites no corroborating evidence to support his opinions regarding this purported interpretation of Verma’s disclosure. EX1003, ¶87. The Petition similarly relies heavily on the expert declaration for the other grounds, making similar statements to fill gaps in the prior art approximately 50 additional times. *See* Pet., 34-43 (Ground 2), 43-63 (Ground 3), 63-77 (Ground 4), 77-82 (Ground 5).

Patent Owner, in its Preliminary Response, will present competing expert testimony explaining why Petitioner’s arguments and inferences are incorrect and do not meet the claim limitations. The extensiveness of the competing expert testimony better suits this dispute to resolution in district court, where the experts can present live testimony with cross-examination. This factor thus favors denial of institution.

D. Institution would not reflect an efficient use of the Board’s limited resources.

The Supreme Court has provided that IPR institution is an all-or-nothing proposition, and that the PTAB must institute on and adjudicate all claims and grounds (or deny institution). *See SAS Inst. Inc. v. Iancu*, 584 U.S. 357, 363–66

(2018). As a result, where only a small subset of grounds and claims in the Petition present meritorious challenges, it is appropriate for the Board to deny institution and avoid expending its limited resources on deficient arguments. *See Chevron Oronite Co. LLC v. Infineum USA L.P.*, IPR2018-00923, Paper 9 at 9–11 (PTAB Nov. 7, 2018) (denying institution on all claims under §314(a) when petitioner’s arguments and proofs were deficient with respect to a subset of claims); *Deeper, UAB v. Vexilar, Inc.*, IPR2018-01310, Paper 7 at 41–43 (PTAB Jan. 24, 2019) (denying institution because “instituting a trial with respect to all twenty-three claims and on all four grounds based on evidence and arguments directed to only two claims and one ground would not be an efficient use of the Board’s time and resources”).

As discussed in detail above, each of Grounds 1-5 of the Petition is flawed in multiple different ways. Each Ground has certain limitations for which the Petition relies heavily on expert opinion to fill in gaps in the prior art. *See* Section VI.C. Grounds 1-5 also have striking flaws on the merits, including limitations missing from the cited art. *See* Section VI.B.

In the event that the Director finds that certain identified flaws are less compelling, it would not change the overall conclusion that the vast majority of the arguments and challenged claims cannot succeed on their merits. Accordingly, even if one Ground presented a reachable merits issue for a subset of claims, it

would not be an efficient use of the Board’s resources to institute on all grounds and claims for a Petition that only presents a coherent challenge on a portion of issues. The parallel litigation, in which the parties can narrow and refine their challenges, is the better forum for this dispute. The Director should discretionarily deny institution.

E. Compelling economic and public interest concerns favor denial.

Memo Factor 6 favors denial. Congress enacted the Leahy-Smith America Invents Act (“AIA”), Pub. L. No. 112–29, 125 Stat. 284, in 2011 to, *inter alia*, “limit unnecessary and counterproductive litigation costs.” H.R. REP. No. 112-98, pt. I, at 40 (2011); *see also* 37 C.F.R. § 42.100 (2017) (observing the purpose of IPR as promoting just, speedy, and inexpensive resolution of patent-validity disputes). While promoting judicial economy is among the goals of the IPR process, the AIA was also a reaction to the financial hardship on many smaller defendants faced with complex commercial litigation. *Id.*

Petitioner Google is one of the most prolific patent-infringement defendants in history. On balance, this weighs against institution in view of the fact that Google (as of March 2025) has \$345.26 Billion USD in net assets and is the world’s 5th wealthiest company. Google is more than capable of litigating its patent challenges in district court. Unlike the smaller defendants Congress may have had in mind to benefit from a less-costly alternative to court, Google does not need to

tax the resources of the Patent Office to offload its invalidity defenses or reduce its litigation costs. The Office's limited resources are better used elsewhere.

VII. CONCLUSION

The Board should exercise discretion to deny *inter partes* review of the '322 patent.

Respectfully submitted,

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CERTIFICATE OF WORD COUNT (37 C.F.R. § 42.24(d))

1. This Patent Owner's Brief on Discretionary Denial complies with the type-volume limitation of 14,000 words, comprising 6,955 words, excluding the parts exempted by 37 C.F.R. § 42.24(a)(1).

2. This Patent Owner's Brief on Discretionary Denial complies with the general format requirements of 37 C.F.R. § 42.6(a) and has been prepared using Microsoft® Word 2016 in 14-point Times New Roman font.

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CERTIFICATE OF SERVICE (37 C.F.R. § 42.6(e))

I certify that the above-captioned **PATENT OWNER'S BRIEF ON
DISCRETIONARY DENIAL** and associated Exhibits 2001-2003 and 2005-2009
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