

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

NOKIA OF AMERICA CORPORATION,

Petitioner

v.

SPADA INNOVATIONS, INC.,

Patent Owner

Case No. IPR2025-01442

U.S. Patent No. 11,589,142

PETITIONER'S BRIEF OPPOSING DISCRETIONARY DENIAL

Mail Stop PATENT BOARD
Patent Trial and Appeal Board
US Patent and Trademark Office
PO Box 1450
Alexandria, Virginia 22313-1450

TABLE OF CONTENTS

I. PATENT OWNER’S § 325(D) AND <i>BECTON, DICKINSON</i> ARGUMENTS ARE UNSUPPORTED BY PRECEDENT.....	2
A. Prong 1: Petitioner has not presented cumulative art or arguments.....	3
B. The inquiry should end with Prong 1, but Petitioner has also shown Examiner Error under Prong 2.	6
II. THE INTERIM GUIDANCE WEIGHS AGAINST DISCRETIONARY DENIAL	8
A. There are no settled expectations that favor discretionary denial.	9
B. The Petition’s arguments appropriately cite expert testimony, but they rely on the explicit teachings of the prior art.....	10
C. The USPTO has a compelling interest in reviewing potential office error during prosecution of the ’142 patent in this IPR. ..	12
III. <i>FINTIV</i> WEIGHS AGAINST DISCRETIONARY DENIAL.....	13
A. Factors 1 and 2 weigh strongly against discretionary denial: The district court has already issued a stay.....	13
B. Factor 3 weighs strongly against discretionary denial: There has been no investment in a district court proceeding.	14
C. Factors 4 and 5 weigh strongly against discretionary denial: Petitioner is not a party to the parallel proceeding, and so Petitioner has not raised any overlapping invalidity contentions to the court.	14
D. Factor 6 weighs strongly against discretionary denial: The merits of the petition are strong.	15
IV. CONCLUSION.....	19

TABLE OF EXHIBITS

Exhibit	Short Name	Description
Ex. 1001	'142 Patent	U.S. Patent No. 11,589,142
Ex. 1002	Hajduczenia Dec.	Declaration of Dr. Marek Hajduczenia
Ex. 1003	Hajduczenia CV	<i>Curriculum Vitae</i> of Dr. Marek Hajduczenia
Ex. 1004	'142 FH	File History of U.S. Patent No. 11,589,142
Ex. 1005	'042 FH	File History of U.S. Patent Application No. 17/128,042
Ex. 1006	'302 FH	File History of U.S. Patent Application No. 16/600,302
Ex. 1007	'602 FH	File History of U.S. Patent Application No. 16/431,602
Ex. 1008	'315 FH	File History of U.S. Patent Application No. 15/351,315
Ex. 1009	'092 FH	File History of U.S. Patent Application No. 14/419,092
Ex. 1010	'997 Prov FH	File History of U.S. Patent Application No. 61/678,997
Ex. 1011	G.984.1	ITU-T Recommendation G.984.1, Gigabit-capable Passive Optical Networks (G-PON): General Characteristics (Mar. 2008)
Ex. 1012	G.984.2	ITU-T Recommendation G.984.2, Gigabit-capable Passive Optical Networks (G-PON): Physical Media Dependent (PMD) Layer Specification (Mar. 2003)

Exhibit	Short Name	Description
Ex. 1013	G.984.3	ITU-T Recommendation G.984.3, Gigabit-capable Passive Optical Networks (G-PON): Transmission convergence layer specification (Mar. 2008)
Ex. 1014	RFC 4364	Network Working Group Request for Comments: 4364: BGP/MPLS IP Virtual Private Networks (VPNs) (Feb. 2006)
Ex. 1015	Ahn	<i>Certified English Translation of Shin-Young Ahn, et al., A student on Ethernet-PON System functionality for L2/L3 MPLS based VPN service (Nov. 2002)</i>
Ex. 1016	Ravindran	U.S. Patent Publication No. 2012/0159176 to Ravindran, <i>et al.</i>
Ex. 1017	Liu	U.S. Patent No. 6,005,694
Ex. 1018	Ramaswami	Rajiv Ramaswami & Kumar Sivarajan, <i>Optical Networks, A Practical Perspective</i> (2d ed. 2002)
Ex. 1019	Kramer	Glen Kramer & Gerry Pesavento, <i>Ethernet Passive Optical Network (EPON): Building a Next-Generation Optical Access Network</i> , IEEE Communications Magazine (February 2002)
Ex. 1020	BCM56685	Broadcom BCM56685 Product Brief
Ex. 1021	Wayback Affidavit	Affidavit of Mina Ching, Records Request Processor at the Internet Archive regarding public availability of BCM56685

Exhibit	Short Name	Description
Ex. 1022	EPON v. GPON	<i>What is the Difference Between EPON and GPON?</i> , Hitron, https://us.hitrontech.com/learn/what-is-the-difference-between-epon-and-gpon/ (last accessed August 3, 2025)
Ex. 1023	EPON Call for Interest	10Gbps PHY for EPON Call for Interest (Mar. 7, 2006)
Ex. 1024	Ahn	<i>Original Korean Language version of Shin-Young Ahn, et al.</i> , A student on Ethernet-PON System functionality for L2/L3 MPLS based VPN service (Nov. 2002)
Ex. 1025	G.983 Standards	Collectively, ITU-T Recommendations G.983.1, G.983.2, G.983.3, G.983.4
Ex. 1026	Scheduling Order	<i>SPADA Innovations, Inc., v. AT&T Corp., et al.</i> , Case No. 2:24-cv-06703-MWF-MAR, Dkt. No. 61 (C.D.C.A. Aug. 7, 2025), Order Re Jury Trial, Order Re Deadlines
Ex. 1027	Complaint	<i>SPADA Innovations, Inc., v. AT&T Corp., et al.</i> , Case No. 2:24-cv-06703-MWF-MAR, Dkt. No. 1 (C.D.C.A. Aug. 7, 2024), Complaint
Ex. 1028	Opposition to MTD	<i>SPADA Innovations, Inc., v. AT&T Corp., et al.</i> , Case No. 2:24-cv-06703-MWF-MAR, Dkt. No. 31 (C.D.C.A. Dec. 16, 2024), Spada Innovations, Inc.’s Opposition to Defendants’ Motion to Dismiss Amended Complaint

Exhibit	Short Name	Description
Ex. 1029	Dec. to Opposition to MTD	<i>SPADA Innovations, Inc., v. AT&T Corp., et al.</i> , Case No. 2:24-cv-06703-MWF-MAR, Dkt. No. 31 (C.D.C.A. Dec. 16, 2024), Declaration in Support of Spada Innovations, Inc.’s Opposition to Defendants’ Motion to Dismiss Amended Complaint
Ex. 1030	Hall-Ellis Dec.	Declaration of Dr. Sylvia D. Hall-Ellis
Ex. 1031	Hall-Ellis CV	<i>Curriculum Vitae</i> of Dr. Sylvia D. Hall-Ellis
Ex. 1032	Attachment 1A	Hall-Ellis Declaration Attachment 1A
Ex. 1033	Attachment 1B	Hall-Ellis Declaration Attachment 1B
Ex. 1034	Attachment 1C	Hall-Ellis Declaration Attachment 1C
Ex. 1035	Attachment 1D	Hall-Ellis Declaration Attachment 1D
Ex. 1036	Attachment 1E	Hall-Ellis Declaration Attachment 1E
Ex. 1037	Attachment 2A	Hall-Ellis Declaration Attachment 2A
Ex. 1038	Attachment 2B	Hall-Ellis Declaration Attachment 2B
Ex. 1039	Attachment 3A	Hall-Ellis Declaration Attachment 3A
Ex. 1040	Attachment 3B	Hall-Ellis Declaration Attachment 3B
Ex. 1041	Attachment 4A	Hall-Ellis Declaration Attachment 4A
Ex. 1042	Attachment 4B	Hall-Ellis Declaration Attachment 4B
Ex. 1043	Attachment 4C	Hall-Ellis Declaration Attachment 4C
Ex. 1044	Attachment 4D	Hall-Ellis Declaration Attachment 4D
Ex. 1045	Attachment 5A	Hall-Ellis Declaration Attachment 5A
Ex. 1046	Attachment 5B	Hall-Ellis Declaration Attachment 5B

Exhibit	Short Name	Description
Ex. 1047	Attachment 5C	Hall-Ellis Declaration Attachment 5C
Ex. 1048	Attachment 5D	Hall-Ellis Declaration Attachment 5D
Ex. 1049	Attachment 5E	Hall-Ellis Declaration Attachment 5E
Ex. 1050	Attachment 5F	Hall-Ellis Declaration Attachment 5F

TABLE OF AUTHORITIES

	Page(s)
Cases	
<i>Alliance Laundry Systems, LLC v. PayRange LLC</i> , IPR2025-00950 (PTAB Sept 19, 2025).....	10
<i>Amazon.com, Inc., et al. v. SoundClear Technologies LLC</i> , IPR2025-00673 (PTAB Aug. 4, 2025).....	14
<i>Apple Inc. v. Apex Beam Technologies LLC</i> , IPR2025-00896, -0900, -00901, -00907,-00909, -00910, -00911 (PTAB Sept. 3, 2025);	10
<i>Apple Inc. v. Ferid Allani</i> , IPR2025-00856, -00857 (PTAB Sept 5, 2025)	15
<i>Azurity Pharmaceuticals Inc. v. Helsinn Healthcare SA</i> , IPR2025-00945 (PTAB Sept. 19, 2025).....	16
<i>Concurrent Ventures, LLC et al. v. Advanced Micro Devices, Inc. et al.</i> , IPR2025-00223 (PTAB Aug. 14, 2025);	10
<i>HS Hyosung Advanced Materials Corp. v. Kolon Industries, Inc.</i> , IPR2025-00662, -00663, -00664 (PTAB Aug. 14, 2025)	17
<i>Jumio Corp. v. Facetec, Inc.</i> , IPR2025-00108 (PTAB June 9, 2025).....	4
<i>MIM Software Inc. v. EXINI Diagnostics AB, Inc.</i> , IPR2025-00827 (PTAB Aug. 22, 2025).....	15
<i>Motorola Mobility LLC, et al. v. Multifold Int’l Inc. Pte.</i> , IPR2025-00040 (PTAB May 21, 2025)	5
<i>USAA Federal Savings Bank v. PACid Technologies, LLC</i> , IPR2025-00697 (PTAB Aug. 14, 2025).....	14
<i>Valneva Austria GMBH v. Takeda Vaccines, Inc.</i> , IPR2025-00776 (PTAB Aug. 11, 2025).....	9

Statutes

§325(d)	1, 2, 5
---------------	---------

Regulations

37 C.F.R. § 42.105	20
37 C.F.R. § 42.6(e).....	20

This is *exactly* the circumstance in which an IPR promotes efficiencies by addressing the invalidity of a newly issued patent *before* parties invest substantial resources in an expensive, ***but now stayed*** district court proceeding; discretionary denial is not warranted:

- The litigation involving the '142 patent is ***already stayed*** in favor of this IPR.
- The '142 patent is the ***only patent*** asserted in that stayed litigation.
- The '142 patent issued on February 21, 2023, ***less than 3 years ago***.
- The art presented in the Petition is ***rock-solid art***—much stronger than anything presented during examination—that was easily identified through a search.
- And the '142 patent would not have issued ***but for errors*** during Examination.

Now is the time to assess the validity in a centralized manner.

Despite the Office not evaluating the same art or arguments during prosecution, Patent Owner represented that its *only* basis for discretionary denial is §325(d) based on whether “the same or substantially the same prior art or arguments previously were presented to the Office.” *See* Br., 1 (“This brief is limited to § 325(d).”). By limiting its brief to § 325(d), Patent Owner implicitly concedes that all other factors weigh against discretionary denial.

And the art presented here is *different* and *stronger* than anything of record during the original examination. There are not one, ***but two key differences*** between the art presented here and what was considered during Examination. First, none of

the art of record showed a VRF-separated stream used within a Passive Optical Network (PON)—the Examiner’s rejections relied on the notion that it would be obvious to use those technologies together. But the primary references presented in the Petition *explicitly* disclose using VRF separation within a PON. Second, Patent Owner now suggests that the novel “key” to the invention was that traffic was separated upstream of the OLT—and that is exactly what the art presented in this IPR shows. Each primary reference shows an arrangement with a router or switch separate from the OLT. Therefore, the art is very different from that which was before the Office during the original prosecution.

For all these reasons, discretionary denial is not warranted here, and Petitioner respectfully requests that the Petition be assessed on the merits.

I. PATENT OWNER’S § 325(D) AND *BECTON, DICKINSON* ARGUMENTS ARE UNSUPPORTED BY PRECEDENT

- None of the references cited in the Petition were cited during prosecution of the ’142 patent.
- None of the references discussed during prosecution disclosed VRF-separated traffic being sent over a PON—the art presented in the Petition does.
- Patent Owner states that none of the references cited during prosecution showed VRF separation upstream of the OLT—in contrast, the art presented in this Petition does.

The Petition demonstrates that these references include many teachings that were not included in any of the art cited during prosecution, including the placement of VRF routing functionality and data separation at a Provider Edge device *upstream of the OLT*—the feature that Patent Owner alleges is new. Br., 6, 15-16. At least because Ahn and Ravindran teach that VRF functionality can be placed upstream of an OLT, these references are *not* cumulative of the art cited during prosecution of the '142 patent, and the arguments presented in the Petition are not cumulative with those arguments presented by the Examiner during the pendency of the '142 patent.

A. Prong 1: Petitioner has not presented cumulative art or arguments.

Patent Owner argues that the “prior prosecution and Petition both present: (i) PON standards, (ii) VRF references, and (iii) references teaching OLT receipt of Layer 3 data streams with router functionality at the OLT.” *Id.*, 6, 15-16. But Patent Owner does not assert that any of the original “PON references” (Dupont, Cheng, Akasaka, and Mitsunaga), the original “VRF references” (Daruwalla, Kolli, Vasseur, and RFC 2547¹), or the “methods by which OLTs received Layer 3 data streams”

¹ Patent Owner suggests that RFC 2547 is “the predecessor to RFC 4364” and is cumulative with the cited RFC 4364. Even without performing a line-by-line comparison between these standards, a POSITA would recognize that the mere fact

(Zheng, Schmidtke, and Rarick/Doiron) disclose, teach, or suggest a Provider Edge device having “the table in which the port information associated with the subscriber site and the routing information for subscriber traffic is registered [that] is referred to as an VRF (VPN Routing and Forwarding) Table” as disclosed in Ahn. Ex. 1015,

3. Nor does Patent Owner assert that any of the references considered during prosecution disclose, teach, or suggest a Content Oriented Network (CON) that provides content to a plurality of end users each using an optical network unit (ONU), wherein the CON is configured to “map existing transport virtualization constructs, such as VPN Routing and Forwarding Table (VRF), virtual router (VR), and/or Virtual Private Local Area Network Service (VPLS) constructs, which may be used in current networks or technologies” as disclosed in Ravindran. Pet. 75, (*citing* Ex.1016, [0070]). Because each of Ahn and Ravindran are relied upon for teachings that are not present in any of the references considered during prosecution, neither of these references are cumulative with the references considered during prosecution. *See Jumio Corp. v. Facetec, Inc.*, IPR2025-00108, Paper 17, 9 (PTAB

that RFC 4364 superseded RFC 2547 suggests that the newer document includes disclosure that is not present in the predecessor document. If there were no updates, the standards body would not have published the newer document at all.

June 9, 2025) (although the Board found that previously cited Todorki and newly cited Tanii “teach image distortion, the types of distortion the references are cited for are materially different.”); *Motorola Mobility LLC, et al. v. Multifold Int’l Inc. Pte.*, IPR2025-00040, Paper 10, 32-33 (PTAB May 21, 2025) (the newly cited reference is not cumulative of a reference considered during a prior reexam because the new reference executes the noted function “in a different way” than the previously considered reference).²

At least because Ahn and Ravindran teach functions of devices upstream of an OLT that are different from the teachings of all of the previously considered references (including performing VRF separation upstream of a receiving OLT device), the references cited in the Petition are not cumulative, nor are the arguments presented in the Petition cumulative of those considered during original prosecution.

² Patent Owner points to no support for its contention that “[t]he test is not whether the references are identical, but whether they present the same basic thesis” (PO’s DD Brief, 5), which is not supported by PTAB precedent. However, as discussed herein, Patent Owner’s arguments fail even under its own proposed “test:” none of the references cited in the Petition “present the same basic thesis” as the references considered during prosecution.

B. The inquiry should end with Prong 1, but Petitioner has also shown Examiner Error under Prong 2.

As discussed above, the prior art cited in the Petition and the arguments presented therein are not cumulative of the prosecution process. This ends the inquiry under §325(d), and the Petition should move on to merits assessment. Nevertheless, Petitioner notes that the prior art and arguments presented in the Petition addresses the Examiner's reasons for allowing the claims to issue and by extension, addresses the claimed steps of the method (Br., 8-9), as discussed below. Regardless of whether the Examiner's evaluation was "thorough and thoughtful" (Br., 16), the Examiner missed all the references cited in the Petition and never presented arguments that are the same as those presented in the Petition.

Confusingly, Patent Owner argues that the Petition "mischaracterizes the claims" as "merely combin[ing] known standards." Br., 9. First, this argument is not relevant to a §325(d) analysis. Second, that the claims combine "two things that were known in the industry at the time of the invention" are the Patent Owner's own words from their *Opposition to Defendants' Motion to Dismiss Amended Complaint* that were filed in the district court. *See* Br., 9 (*citing* Pet. 14-15, 18, and 25, which include quotes from Patent Owner summarizing the scope of their claims, such as "SPADA's methods combine the use of two things that were known in the industry at the time of the invention."). Patent Owner cannot have it both ways—arguing in

district court that the claims are merely a combination of two old technologies for the purpose of proving infringement but arguing that the claims constitute something more specific to support their validity arguments. *Id.*, at 9, 13.

Patent Owner's other argument that the Petition "cites Layer-2 GEM Port-ID filtering but does not explain ONU extraction based on received Layer-3 VRF separation" is also irrelevant. Br., 9 (*internal citations omitted*). The claims never recite a specific "Layer" or explain what the recited "extracting" step is "based on." Patent Owner cannot distinguish the claims with language that does not exist and their argument should be ignored.

While, Patent Owner argues extensively that the Petition "[i]gnores objective indicia," this is simply untrue. *Id.*, 10, 13-14. The Petition and Dr. Hajduczenia each reviewed the file history of the '142 patent, including the alleged evidence of "industry skepticism and unexpected results" and "long-felt need." Pet., 6-7; Ex. 1002, ¶¶ 66-84. That evidence "demonstrate[s] that hardware capable of using VRF over a PON already existed and could be implemented with basic configuration of **prior art** equipment to activate these features." Pet. 6-7. The Patent Owner also never established any nexus between the "objective indicia" and the claims, and the File History includes no indication that the Examiner "credited" that evidence when allowing the claims. *See e.g.*, Ex. 1004, 18-19; Ex. 1006, 168-174 (Examiner's reasons for allowance, which never discuss any "objective indicia" as a reason for

allowance). Therefore, not only does the Petition address these objective indicia, they do not support the patentability of the claims.

Finally, the references presented in the Petition are not difficult to find and assess. The Ahn reference, for example, was and is catalogued in a database known to contain information concerning telecommunications generally and optical networks specifically. The Electronics and Telecommunications Research Institute, or ETRI (<https://www.etri.re.kr/eng/main/main.etri>), is a non-profit research institution known across the world for its work on telecommunications. It is one of the authoritative sources for telecommunications work performed in Korea.

Ravindran is a U.S. Patent Publication. After its publication, it has been cited in at least 37 other prosecutions relating to networking technologies, including being cited in a later application for “Mapping Information Centric Networking Flows to Optical Flows,” a concept similar to the patent in question.

II. THE INTERIM GUIDANCE WEIGHS AGAINST DISCRETIONARY DENIAL

The Office’s Interim Processes for PTAB Workload Management Memorandum dated March 26, 2025 (and summarized on the DD Process webpage) is directed to “discretion on institution of AIA proceedings under 35 U.S.C. §§ 314(a) and 324(a)” —not discretion under § 325(d). Regardless, the discretionary denial factors demonstrate why discretionary denial is inappropriate, and the IPR

procedure is the most efficient process for reviewing the validity of the '142 patent. Considerations of judicial efficiency, fairness to the parties, and opportunities for the USPTO to review potential prosecution errors all weigh in favor of reviewing the validity of the '142 patent in the present proceeding, rather than waiting for a district court to make a determination on the validity of the '142 patent.

A. There are no settled expectations that favor discretionary denial.

The '142 patent issued on February 21, 2023—less than 3 years before Petitioner filed the present IPR. The Director has never bestowed “settled expectations” on such a short-lived patent. *See Valneva Austria GMBH v. Takeda Vaccines, Inc.*, IPR2025-00776, Paper 11 (PTAB Aug. 11, 2025) (Patent in force since 2023 does not have settled expectations); *see also Concurrent Ventures, LLC et al. v. Advanced Micro Devices, Inc. et al.*, IPR2025-00223, paper 12, 2 (PTAB Aug. 14, 2025); *Apple Inc. v. Apex Beam Technologies LLC*, IPR2025-00896, -0900, -00901, -00907, -00909, -00910, -00911, Paper 10, 3 (PTAB Sept. 3, 2025); *Alliance Laundry Systems, LLC v. PayRange LLC*, IPR2025-00950, Paper 11, 3 (PTAB Sept 19, 2025) (All finding no settled expectations for a patent issued in 2021). Patent Owner’s arguments about the prosecution process are irrelevant. Br. at 16. This factor therefore weighs against using discretionary denial to deny the Petition.

B. The Petition’s arguments appropriately cite expert testimony, but they rely on the explicit teachings of the prior art.

The Petition relies on the explicit teachings of the prior art and presents expert testimony only to explain and apply that art, not to supplement it or fill any gaps. Indeed, the Petition cites to the references for each limitation of the ’142 patent, in every presented ground of invalidity. Dr. Hajduczenia’s declaration provides background information about the functionality of PONs and VPNs (Ex. 1002, ¶¶33-46) and provides helpful context discussing the disclosure of the cited references and how a POSITA would view the overlap in teachings of all of these references. But the cited references themselves provide thorough teachings for each of the limitations recited in the ’142 patent claims, as reflected by the extensive citations to those references provided throughout the Petition.

Patent Owner appears to take issue with the mere presence of Dr. Hajduczenia’s declaration, stating, without support: “[i]f the claimed method were obvious, the prior art would have disclosed so explicitly.” Br., 11. And the prior art does, but regardless, this has never been the proper analysis for an obviousness ground of invalidity.

Contrary to Patent Owner’s argument, the Petition does *not* “need[] expert testimony to bridge between RFC 4364 PE routers and an OLT receiving data streams that have been virtually separated using VRF.” Br., 10-11. The Petition

explains that the references disclose this functionality. Ahn describes that a PE can implement VRF data tables for routing, so that a OLT receives data streams that have been virtually separated using VRF. Pet. 27-31 (*citing* Ex. 1015, 2-3). Dr. Hajduczenia provides context for what Ahn's PE device is and confirms that a POSITA would understand that Ahn's PE device would function in accordance with then-current standards for similar devices, *i.e.*, using functionality described in the cited GPON and RFC standards documents to provide VRF-separated data streams to an OLT. Ex. 1002, ¶¶ 145-157.

The Petition also points out that multiple references disclose "ONU extraction based on VRF data streams received at the OLT" (Br., 11). The GPON standard describes one example method through which OLTs can extract data streams from VRF separated data streams; for example, G.984.1 and G.984.3 teaches "Each ONU filters the downstream GEM frames based on their GEM port-IDs and processes only the GEM frames that belong to that ONU." Pet. 41 (*citing* Ex. 1013, 17). As Dr. Hajduczenia summarizes, this means that "a given ONU only extracts the GEM frames that have been specifically addressed to that ONU despite the fact that the ONU receives the GEM frames for other ONUs that are part of the common data feed." Ex. 1002, ¶180. Dr. Hajduczenia's summary clearly articulates that no "connection" is needed between GEM port-ID filtering and "extraction" by OLTs. And the Petition also points out that Ahn teaches this concept: Ahn explains that

“each ONU processes only the packets addressed to it, discarding all others intended for different ONUs. For example, ONU1 receives Packets 1, 2, and 3; however, only Packet 1 is delivered to User 1 [of FIG. 2].” Pet. 42, (*citing* Ex. 1015, 2).

Lastly, Patent Owner’s suggestion that the “Petition relies on expert testimony to assert Ahn teaches using virtually separated data streams received by an OLT, yet Ahn expressly teaches the same approach the Examiner found insufficient” (Br., 11) appears to reference Patent Owner’s repeated suggestion that Ahn *only* teaches an OLT implementing VRF separation. This argument overlooks Ahn’s *explicit* disclosure that a Provider Edge (PE) device—upstream of and OLT—can perform VRF separation. Ex. 1015, 3. Thus, Ahn expressly teaches more than the “approach [that] the Examiner found insufficient,” and so Patent Owner’s argument is incorrect.

C. The USPTO has a compelling interest in reviewing potential office error during prosecution of the ’142 patent in this IPR.

Patent Owner’s argument that examination of the ’142 patent was “thorough and thoughtful” (Br., 3-4, 16) is of no moment. The simple fact is, the Examiner did not consider any of the references cited in the Petition, which support strong grounds of invalidity, despite their presence in databases well-known to discuss telecommunications technologies. The USPTO has an interest in evaluating errors of the Examiners through the IPR process, which weighs against discretionary

denial. *USAA Federal Savings Bank v. PACid Technologies, LLC*, IPR2025-00697, Paper 9, 2 (PTAB Aug. 14, 2025) (Reviewing Examiner error weighs against discretionary denial).

III. *FINTIV* WEIGHS AGAINST DISCRETIONARY DENIAL

As discussed below, all of the *Fintiv* factors weigh strongly against discretionary denial in this IPR, and all of these factors demonstrate that it is most efficient for the PTAB to review the validity of the '142 patent now, instead of waiting for a district court to review validity arguments in parallel with infringement arguments of the '142 patent.

A. Factors 1 and 2 weigh strongly against discretionary denial: The district court has already issued a stay.

As Patent Owner points out, the only district court case in which the subject patent is asserted—and it is the only asserted patent in that case—is stayed. *SPADA Innovations, Inc. v. AT&T Communication, LLC et al.* Civil Action No. 2-24-cv-06703, Dkt. 64 (C.D. Cal. Sept. 22, 2025); *see also* Br., 17-18. But contrary to the Patent Owner's argument, the already-existing stay—that Patent Owner agreed to—weighs strongly *against* discretionary denial. *See e.g., Amazon.com, Inc., et al. v. SoundClear Technologies LLC*, IPR2025-00673, Paper 11, 2 (PTAB Aug. 4, 2025); *MIM Software Inc. v. EXINI Diagnostics AB, Inc.*, IPR2025-00827, Paper 12, 2 (PTAB Aug. 22, 2025).

The present stay enhances judicial efficiency, at least because the patent owner need not litigate the validity of the '142 patent in parallel proceedings simultaneously. Moreover, because the present stay is in place until the present IPR is resolved, there is no risk of inconsistent judgments by the PTAB and district court—again, this weighs against discretionary denial because the parties can use the more efficient IPR process for evaluating the validity of the '142 patent without risk of inconsistent findings in the district court.

B. Factor 3 weighs strongly against discretionary denial: There has been no investment in a district court proceeding.

There is no parallel proceeding involving the Petitioner, and the parallel district court case involving the '142 patent was stayed before discovery began. This factor therefore weighs strongly against discretionary denial. *See Apple Inc. v. Ferid Allani*, IPR2025-00856, -00857, Paper 11 (PTAB Sept 5, 2025) (investment in the parallel proceeding weighed in favor of denial because the district court had already issued a *Markman* order, the parties served responses to written discovery, and infringement and invalidity contentions were submitted before the discretionary denial decision issued).

C. Factors 4 and 5 weigh strongly against discretionary denial: Petitioner is not a party to the parallel proceeding, and so

Petitioner has not raised any overlapping invalidity contentions to the court.

Petitioner is not a party to any parallel proceeding, and so these factors weigh strongly against discretionary denial. *See Azurity Pharmaceuticals Inc. v. Helsinn Healthcare SA*, IPR2025-00945, Paper 11, 2 (PTAB Sept. 19, 2025) (“Other considerations, however, counsel against discretionary denial. For example, the parties are not currently engaged in a parallel proceeding involving the challenged patents.”).

Because Petitioner is not a party to any parallel proceeding, the fact that Petitioner has not submitted a stipulation is irrelevant—Petitioner has not raised any overlapping invalidity arguments, and Petitioner is not risking any duplicative efforts or conflicting decisions of the validity of the ’142 patent, because Petitioner is involved only in this proceeding. *Compare HS Hyosung Advanced Materials Corp. v. Kolon Industries, Inc.*, IPR2025-00662, -00663, -00664, Paper 12, 2-3 (PTAB Aug. 14, 2025).

D. Factor 6 weighs strongly against discretionary denial: The merits of the petition are strong.

The Petition presents multiple invalidity grounds that each directly address the limitations that the Examiner found were missing in the prior art reviewed during prosecution: a “novel method for its distribution and replication of a feed in an optical network, which is not disclosed by conventional methods which pertain to

optical networks.” Ex. 1004, 19; *see also* Ex. 1005, 105.³ For example, the Petition demonstrates that RFC 4364 teaches these features, and Ahn teaches that “routing and MPLS edge functionalities are implemented at the OLT level” *or* at the PE level for Ahn’s discussion of L2/L3 MPLS-based VPN technology. Pet. 54 (*citing* Ex. 1015, 3). For Ground 3, the Petition points out that Ravindran also teaches these features: “Ravindran teaches that user groups may be virtually divided into VPGs, such as VPNs, and the CON used to distribute data may be configured to handle and service a plurality of VPG instances by virtually separating the data shared in each VPG instance.” Pet. 78 (*citing* Ex. 1016, [0028], [0035]).

Patent Owner’s “limited note on merits [*sic*] strength” also overlooks several portions of the Petition.

³ As discussed in greater detail herein, the Patent Owner also summarizes the Examiner’s reasons for allowance at pages 8-9 of its discretionary denial request by reading-in limitations that are not recited in the claim, including “a PON OLT receiving and operating on Layer 3 VRF data streams without router functionality at the OLT.” PO’s DD Brief, 8-9. Petitioner’s cites to Exs. 1004 and 1005 show that the Examiner never mentions “Layer 3” in any reasons for allowance.

The Petition demonstrates that the cited references teach “receiving VRF-separated data streams at the OLT.” *See* Br., 19. For example, Ahn’s FIG. 4 shows a Provider Edge (PE) device performs VRF separation and communicates with a “Customer Edge” (CE) / Subscriber Site of a network. Pet. 30 (*citing* Ex. 1015, 3, FIG. 4). As the Petition points out, Ahn explains that the PE, as an edge of a network, “forwards the plurality of data streams to the OLT.” This is explained in Ahn in reference to Ahn’s FIG. 1. Pet., 30-31 (*citing* Ex. 1015, 2). The Petition also points out that G.984.1 “confirms that the OLT would receive traffic from a PE router.” Pet., 31 (*citing* Ex. 1011, 12). In Ground 3, the Petition also points out that Ravindran teaches VRF-separated data streams are received at an OLT, from a CON “that uses Virtual Private Groups (VPGs), such as VPNs, to provide content to a plurality of users with optical network terminals (ONUs).” Pet. 75, (*citing* 1016, [0031], [0069]).

The Petition also shows that the references teach “OLT aggregation of those data streams” and “distributing the common data feed to ONUs” (Br., 19): Ahn’s FIG. 2 shows this clearly: multiple data streams (ONU-specific packets 1, 2, and 3) are transmitted on a common data feed that is split using an optical splitter and the common data feed is distributed to multiple ONUs. Pet. 32 (*citing* Ahn, 2, FIG. 2). G.984.1 also shows this, and the use of a splitter for communicating to multiple ONUs. Pet., 33-34 (*citing* Ex. 1011, 6-7).

Patent Owner argues that the petition “fails to establish a motivation to combine” (Br., 12), but these arguments appear to rely on Patent Owner’s mischaracterization of Ahn, suggesting that Ahn teaches *only* “routing an MPLS edge functionalities are implemented at the OLT level.” As discussed herein, Ahn also teaches that an OLT can *receive* data streams that are VRF-separated at a PE device upstream of the OLT.

The Petition also presents strong reasons why a POSITA would have combined the teachings of these references. For example, a POSITA looking to implement Ahn’s teachings would have looked to existing relevant standards, including RFC documents and GPON standards that respectively provide details on the various features discussed in Ahn. Patent Owner’s argument that “Ahn expressly states that ‘routing and MPLS edge functionalities are implemented at the OLT level’” misses contrary disclosure in Ahn: a PE device having a VRF table containing “port information associated with the subscriber site and the routing information.” Pet. 22 (*citing* Ex. 1014, 3). Similarly, given Ravindran’s disclosure of using a CON to distribute media content to an ONU, a POSITA would have been motivated to look at standards documents relevant to using ONUs, including the GPON standards and RFC 4364 standards documents for additional implementation details. Pet. 73. The Petition points out that these standards documents detail functional configurations of the network devices discussed in Ahn and Ravindran,

and so a POSITA would have had a reasonable expectation of success in using these devices according to these standards when combined with either Ahn or Ravindran. Pet. 19-20, 73.

Therefore, all of the *Fintiv* factors weigh against discretionary denial in the present IPR.

IV. CONCLUSION

Petitioner opposes Patent Owner's Request for Discretionary Denial.

Dated: November 26, 2025

By: / Christopher TL Douglas /
Christopher TL Douglas
Reg. No. 56,950
ALSTON & BIRD LLP
Vantage South End
1120 S. Tryon Street, Suite 300
Charlotte, NC 28203
Phone: 704.444.1119
Fax: 704.444.1799
Email:
christopher.douglas@alston.com

CERTIFICATE OF SERVICE

Pursuant to 37 C.F.R. §42.6(e), the undersigned hereby certifies that a true and correct copy of the above-captioned **PETITIONER'S BRIEF OPPOSING DISCRETIONARY DENIAL** was served in its entirety on November 26, 2025 via filing through the Patent Trial and Appeal Case Tracking System (P-TACTS) and electronic mail on the following counsel of record for Patent Owner:

Mark Bloomberg
mbloomberg@zuberlawler.com

Casey A. Kniser
ckniser@zuberlawler.com

With a courtesy copy sent to:

Joseph L Vilella
joevilella@gmail.com

Tom Zuber
tzuber@zuberlawler.com

Jeff Zuber
jzuber@zuberlawler.com

James Lawrence
rlawrence@zuberlawler.com

Date: November 26, 2025

By: / Christopher TL Douglas /
Christopher TL Douglas