

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

AT&T SERVICES, INC., AND NOKIA OF AMERICA CORP.,
Petitioner

v.

ADAPTIVE SPECTRUM AND SIGNAL ALIGNMENT, INC.,
Patent Owner

Case IPR2025-00451
U.S. Patent No. 9,954,631

PATENT OWNER'S DISCRETIONARY DENIAL BRIEF

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PATENT OWNER'S EXHIBIT LIST

Exhibit No.	Description
2001	Interim Processes for PTAB Workload Management Memorandum (March 26, 2025)
2002	First Amended Docket Control Order [131], <i>Adaptive Spectrum and Signal Alignment, Inc. v. AT&T Inc. et al.</i> , Case No. 2:24-cv-00029-JRG-RSP (E.D. Tex.) filed March 6, 2025
2003	Second Amended Docket Control Order [141], <i>Adaptive Spectrum and Signal Alignment, Inc. v. AT&T Inc. et al.</i> , Case No. 2:24-cv-00029-JRG-RSP (E.D. Tex.) filed March 28, 2025
2004	Order Accepting Joint Stipulation and Motion to Dismiss All Claims and Defenses [144], <i>Adaptive Spectrum and Signal Alignment, Inc. v. AT&T Inc. et al.</i> , Case No. 2:24-cv-00029-JRG-RSP (E.D. Tex.) filed April 14, 2025
2005	Complaint [1], <i>Adaptive Spectrum and Signal Alignment, Inc. v. AT&T Inc. et al.</i> , Case No. 2:24-cv-00029-JRG-RSP (E.D. Tex.) filed January 19, 2024
2006	Claim Construction Order [142], <i>Adaptive Spectrum and Signal Alignment, Inc. v. AT&T Inc. et al.</i> , Case No. 2:24-cv-00029-JRG-RSP (E.D. Tex.) filed April 1, 2025
2007	Canadian Publication No. CA2254807A1 to Sands et al. (“Canadian-Bingham”)
2008	U.S. Pub. No. 2004/0076174 to Baum (“Baum”)
2009	FAQs for Interim Processes for PTAB Workload Management, USPTO available at https://www.uspto.gov/patents/ptab/faqs/interim-processes-workload-management

I. INTRODUCTION

Pursuant to Acting Director Stewart’s March 26, 2025 Memorandum titled “Interim Processes for PTAB Workload Management” (the “PTAB Workload Management Memo”, EX2001), Patent Owner Adaptive Spectrum and Signal Alignment, Inc. (“Patent Owner” or “ASSIA”) respectfully requests that the Director exercise discretion and deny institution of the Petition for *inter partes* review of U.S. Patent No. 9,954,631 (“the ’631 patent”).

The Board should deny institution under 35 U.S.C. § 325(d) and *Advanced Bionics* because both Bingham and Strobel as applied in Grounds 1 and 2A-2D are cumulative with art and arguments that were already considered and found to be deficient during prosecution. Petitioner’s selected references reflect the epitome of redundancy because there are no substantial differences between the Petition’s grounds and those already considered and overcome during prosecution. For example, the Examiner already considered a Canadian patent to Bingham that fully incorporates the asserted Bingham by reference. Further, Petitioner has not even attempted to show material error by the Office. Because Grounds 1 and 2A-2D are cumulative and no material error has been shown, the Petition should be denied under 35 U.S.C. §325(d).

The Board should also deny institution of the Petition under 35 U.S.C. § 314(a) for a multitude of reasons. First, up until a mere four weeks ago, the ’631

patent was asserted in a co-pending litigation (*Adaptive Spectrum and Signal Alignment, Inc. v. AT&T Enterprises, LLC, AT&T Mobility LLC, AT&T Mobility II LLC, and AT&T Services, Inc.*, No. 2:24-cv-00029-JRG-RSP) that was scheduled to begin trial **more than 10 months before the projected FWD deadline here.**

EX2002, 1 (setting trial for September 22, 2025); EX2003, 1; EX2004, 1; EX1017,

1. While the parties just recently settled this litigation, the factors that would have otherwise resulted in the majority of the *Fintiv* factors strongly favoring denial should still strongly weigh in favor of denial in light of the considerations recently enumerated in the PTAB Workload Management Memo. Indeed, the parties' settlement means that there are now settled expectations between the parties that Patent Owner will no longer assert infringement of the '631 patent against Petitioner.

Second, several other considerations enumerated in the PTAB Workload Management Memo also weigh in favor of denying institution of the Petition. For example, the length of time that the claims of the '631 patent have been in force, the extent of the Petition's reliance on expert testimony, and compelling economic interests all strongly weigh in favor of discretionarily denying the Petition under § 314(a).

Finally, the merits of the Petition are weak as none of Petitioner's grounds presents compelling reasons as to why the claims of the '631 patent should be

found unpatentable. For example, Petitioner fails to show that Strobel qualifies as prior art, which is fatal to four out of five of the Petition's grounds. Additionally, in view of Petitioner's and the District Court's construction for the claimed first and second "*physical channels*" requiring **unidirectional channels**, neither Bingham nor Strobel teach or suggest each and every feature recited in the challenged claims because they only recite **bidirectional channels**. This clear inconsistency shows that Petitioner has not demonstrated a reasonable likelihood of prevailing with respect to any of the challenged claims.¹

Each of these reasons illustrates that instituting review would be wasteful of the Board's, and the parties' resources. As such, the Director should exercise discretion to deny institution of the Petition.

¹ In accordance with the Board's April 25, 2025 guidance, Patent Owner does "not repeat [its] merits arguments verbatim," and instead "briefly explain[s] why the merits are relevant [herein]." EX2009, FAQs for Interim Processes for PTAB Workload Management, FAQ 12. As additionally set forth in the Board's April 25, 2025 guidance, Patent Owner also requests that the Director "consider the merits in the [forthcoming] merits briefing" as part of discretionary denial analysis. *Id.*

II. THE BOARD SHOULD EXERCISE ITS DISCRETION TO DENY INSTITUTION UNDER *ADVANCED BIONICS* AND SECTION 325(D)

Grounds 1 and 2A-2D rely on art and arguments that are cumulative with art and arguments that were considered and overcome during prosecution. Namely, both Bingham (EX1004) and Strobel (EX1005) are cumulative with Canadian-Bingham (EX2007) and Baum (EX2008) respectively. Not only does Petitioner fail to even analyze these references—which were expressly considered by the Examiner—Petitioner also fails to allege that the Office made any error at all during prosecution. Pet., 77; EX1002, 374 (Examiner considering CA 2254807, Canadian-Bingham), 426 (Examiner considering U.S. Pub. No. 2004/0076174, Baum). The Board should accordingly deny institution under 35 U.S.C. § 325(d).

The Board has discretion to deny review where “the same or substantially the same prior art or arguments previously were presented to the Office.” 35 U.S.C. § 325(d). Under Section 325(d), the Board uses a two-part framework:

- (1) whether the same or substantially the same art previously was presented to the Office or whether the same or substantially the same arguments previously were presented to the Office; and
- (2) if either condition of first part of the framework is satisfied, whether the petitioner has demonstrated that the Office erred in a manner material to the patentability of challenged claims.

Advanced Bionics, LLC v. Med-El Elektromedizinische Geräte GMBH, IPR2019-

01469, Paper 6, 8 (P.T.A.B. Feb. 13, 2020) (precedential March 24, 2020). The Board explained that the policy undergirding “this framework reflects a commitment to defer to previous Office evaluations of the evidence of record unless material error is shown.” *Id.*, 9.

The Board will consider the *Becton, Dickinson* factors when applying the framework. *Id.* Those factors include:

- (a) the similarities and material differences between the asserted art and the prior art involved during examination;
- (b) the cumulative nature of the asserted art and the prior art evaluated during examination;
- (c) the extent to which the asserted art was evaluated during examination, including whether the prior art was the basis for rejection;
- (d) the extent of the overlap between the arguments made during examination and the manner in which a Petitioner relies on the prior art or a Patent Owner distinguishes the prior art;
- (e) whether Petitioner has pointed out sufficiently how the Examiner erred in its evaluation of the asserted prior art; and
- (f) the extent to which additional evidence and facts presented in the Petition warrant reconsideration of the prior art or arguments.

Becton, Dickinson & Co. v. B. Braun Melsungen AG, IPR2017-01586, Paper 8, 17-18 (P.T.A.B. Dec. 15, 2017) (informative).

As demonstrated below, the facts here support denial under 35 U.S.C.

§ 325(d) because both Bingham and Strobel—and the arguments with which they are applied in the Petition—are cumulative with Canadian-Bingham (EX2007) and Baum (EX2008) respectively. These references were expressly considered and overcome during prosecution, and Petitioner has not even attempted to identify any material error made by the Office during prosecution. Pet., 77.

A. Ground 1 – Bingham is substantially the same as Canadian-Bingham, which was considered during prosecution

Ground 1 relies solely on Bingham. Pet., 1. During prosecution, however, the Examiner considered Canadian-Bingham (CA 2254807), which lists the same inventor and fully incorporates Bingham by reference. EX1001, (56); EX2007, (72); EX1002, 374.

CROSS-REFERENCE TO RELATED APPLICATION

This application is related to (i) U.S. Application Serial No. 08/707,322 which is entitled “METHOD AND APPARATUS FOR CROSSTALK CANCELLATION” and (ii) U.S. Application Serial No. 08/501,250 which is entitled “TIME DIVISION DUPLEXED HIGH SPEED DATA TRANSMISSION SYSTEM AND METHOD,” and both of which are hereby incorporated by reference for all purposes.

EX2007, 1:5-10 (annotated). In this manner and as further explained below, Canadian-Bingham encompasses all of Bingham’s content. At a minimum, this incorporation by reference demonstrates that the Examiner already considered Bingham and Bingham’s content during prosecution when analyzing Canadian-Bingham. EX1002, 374.

To further demonstrate that Bingham is cumulative, Bingham’s content—and especially the portions cited in the Petition for Claim 1—is substantially the same as Canadian-Bingham. Pet., 19-24. At the outset, both Canadian-Bingham and Bingham address crosstalk issues related to “twister pair” transmission lines or phone lines. EX2001, 5:1-10; EX1004, Abstract. For example, both references address the issue of “near-end crosstalk” interference and provide the same solution of applying “time division duplexing” with synchronization techniques. EX2007, 7:3-14, 12:27-35; EX1004, Title, 4:34-37. Specifically, both references apply synchronization techniques to downstream and upstream transmissions “such that periodic synchronized upstream and downstream communication periods do not overlap with one another.” EX2007, 4:19-27, 5:36-6:1; *see also* EX1004, Abstract. The Petition relies on these same cumulative teachings when applying Bingham to claim 1 of the ’631 patent. *See* Pet., 19-24.

As highlighted in the tables below, each of the Petition’s citations applying Bingham to claim 1 correspond to a substantially similar passage from Canadian-Bingham. For example, the following table compares the passages applied by the Petition against the preamble of claim. Pet., 19-20.

1[pre]: A method in a data communications system for managing multiple time division physical channels that are subject to crosstalk, the method comprising:	
Petition's Bingham Citation	Corresponding Canadian-Bingham Passage
"A method of coordinating very high speed bi-directional data transmissions between a central unit and a plurality of remote units over distinct twisted pair transmission lines that share a binder." EX1004, Abstract; Pet., 19.	"Bi-directional digital data transmission systems are presently being developed for high-speed data communications." EX2007, 1:18-19. "With this arrangement, all the very high speed transmissions within the same binder are synchronized and time division duplexed such that downstream communications are not transmitted at times that overlap with the transmission of upstream communications." EX2007, 4:25-27. "The twisted-pair phone lines are grouped in a binder." EX2007, 5:1.

	“A data transmission system normally includes a central office and a plurality of remote units. Each remote unit communicates with the central office over a data link (i.e., channel) that is established between the central office and the particular remote unit.” EX2007, 5:15-17. “Moreover, the invention provides techniques to synchronize transmissions at a central side (i.e., central unit). With synchronized transmissions at the central side, the NEXT interference is substantially eliminated, provided all lines of a binder offer the same level of service” EX2007, 21:1-4. “Bi-directional digital data transmission systems are presently
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	being developed for high-speed data communications. One standard for high-speed data communications over twisted-pair phone lines that has developed is known as Asymmetric Digital Subscriber Lines (ADSL).” EX2007, 1:18-21.
“One generally known bi-directional transmission approach contemplates a time division duplexed (i.e. “ping pong”) based data transmission scheme.” EX1004, 4:18-20; Pet., 19.	“This is also referred to as a (i.e. “ping pong”) based data transmission scheme.” EX2007, 4:27-28.
“The present invention overcomes the near end crosstalk problem by synchronizing time division duplexed transmissions for very high speed data transmissions that share a binder,” where a binder is a group of multiple physical. channels or lines. EX1004,	“However, within the binder, the twisted-pair phone lines induce electromagnetic interference on each other. This type of electromagnetic interference is generally known as crosstalk interference which includes near-end crosstalk (NEXT) interference

4:34-37, 8:65-66 (“lines that share the same binder”); Pet., 19-20.	and far-end crosstalk (FEXT) interference.” EX2007, 5:3-6. “With proper synchronization at a central unit (processing and distribution unit 204 or processing unit 302) and uniform superframe formats, synchronized transmissions of equal duration are provided for all lines within a binder. Accordingly, the NEXT interference problem is effectively eliminated. The synchronization of the central unit and the remote units is also important for accurate data recovery.” EX2007, 14:32-36.
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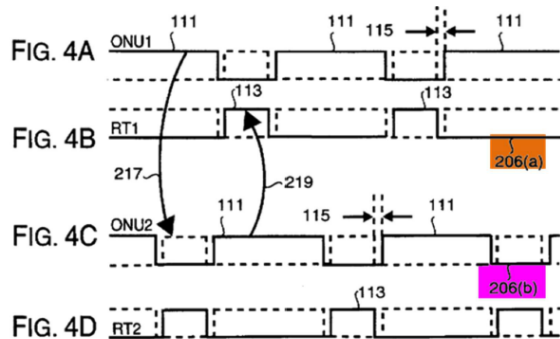
For claim elements 1[a] and 1[b], Canadian-Bingham also provides corresponding passages. Canadian-Bingham also describes the same scheduling and synchronizing of upstream and downstream communications that Bingham describes.

1[a]: scheduling upstream time slots for upstream transmission in a first physical channel;	
1[b]: scheduling downstream time slots for downstream transmission in a second physical channel;	
Petition's Bingham Citation	Corresponding Canadian-Bingham Passage
“To overcome this problem, all of the very high speed transmissions that share a binder are synchronized as is illustrated in FIGS. 5(a)-5(d). In the synchronized system, the downstream communication periods 111 all begin and end at the same times, and the upstream communication periods 113 all begin and end at the same time. Such synchronization of the upstream and downstream communication periods effectively eliminates the problems caused by near end crosstalk.” EX1004, 7:16-24; Pet., 20.	“That is, the upstream and downstream communication periods for all of the wires that share a binder are synchronized.” EX2007, 4:23-24. “FIG. 4 is a diagram illustrating an exemplary superframe format 400 in which a certain level of service is provided. The superframe format 400 is an asymmetric frame that includes a downstream portion 402, a quiet portion 404, an upstream portion 406, and a quiet portion 408.” EX2007, 14:22-25.

EX1004, FIGs. 5A-5D (annotated); Pet., 20, 22.	FIG. 4 EX2007, FIG. 4 (annotated). “With proper synchronization at a central unit (processing and distribution unit 204 or processing unit 302) and uniform superframe formats, synchronized transmissions of equal duration are provided for all lines within a binder. Accordingly, the NEXT interference problem is effectively eliminated. The synchronization of the central unit and the remote units is also important for accurate data recovery.” EX2007, 14:32-36.
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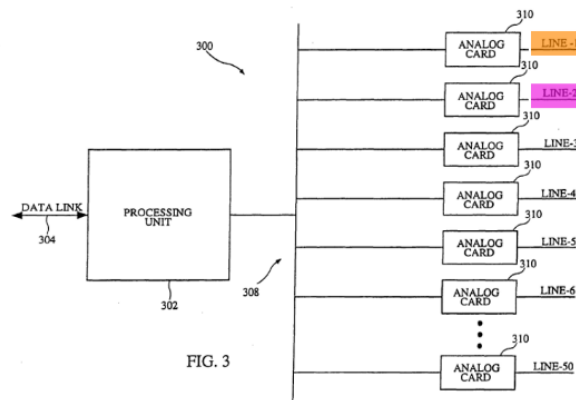
	“Hence, referring to the SDMT transmission system shown in FIG. 2, data transmissions over all lines 212 in the shielded binder 222 associated with the processing and distribution unit 204 need to be synchronized. As such, all active lines emanating from the processing and distribution unit 204 could be transmitting in the same direction (i.e., downstream or upstream) so as to substantially eliminate NEXT interference.” EX2007, 12:36-13:3.
“Similarly, the upstream transmitters RT(a) and RT(b) will cause (albeit somewhat reduced) near end cross talk into each other’s receivers. That is into the receivers at RT(b) and RT(a) respectively.” EX1004, 7:8-13; Pet., 21.	“In a data transmission system, downstream transmissions are from a central side transmitter to one or more remote side receivers and upstream transmissions are from one or more remote side transmitters to a central side receiver.” EX2007, 6:1-4.

“In the example shown, twisted pair transmission lines 206(a) and 206(b) both transmit time division duplexed discrete multi tone signals.” EX1004, 6:65-7:1; Pet., 21.



EX1004, FIGS. 4A-4D (annotated);
Pet., 21.

“Typically, all the lines for a given data transmission system 300 are bundled into a binder including about fifty (50) lines (LINE-I through LINE- 50). Hence, in such an embodiment, there are fifty (50) analog cards 310 respectively coupled to the fifty (50) lines. In one embodiment, the lines are twisted-pair wires.” EX2007, 13:20-23.



EX2007, FIG. 3 (annotated).

“Transmission rates under the ADSL standard are intended to facilitate the transmission of information at rates of up to 8 million bits per second (Mbits/s)

	over twisted-pair phone lines. The standardized system defines the use of a discrete multi tone (DMT) system that uses 256 ‘tones’ or ‘sub-channels’ that are each 4.3125 kHz wide in the forward (downstream) direction.” EX2007, 1:33-2:1. “That is, the upstream and downstream communication periods for all of the wires that share a binder are synchronized. With this arrangement, all the very high speed transmissions within the same binder are synchronized and time division duplexed such that downstream communications are not transmitted at times that overlap with the transmission of upstream communications. This is also referred to as a (i.e. "ping pong")
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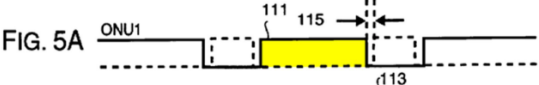
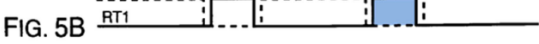
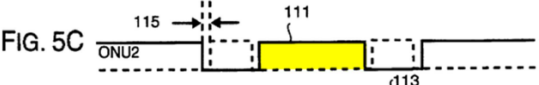
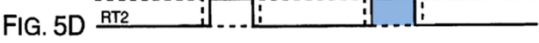
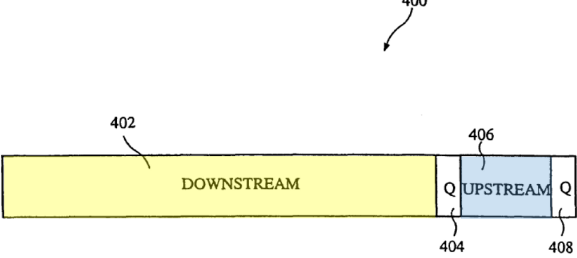
	based data transmission scheme. Quiet periods, during which no data is transmitted in either direction, separate the upstream and downstream communication periods. When the synchronized time division duplexed approach is used with DMT it is often referred to as synchronized DMT (SDMT).” EX2007, 4:23-31.
“In the embodiment shown, the synchronization is effected by a master clock unit in the central unit (or ONU) that supplies a super-frame clock to all of the central unit transmitters 209.” EX1004, 7:27-30; Pet., 22.	“Conventionally, the various transmitters at the central side can synchronize with one another by all using a common master clock supplied to the central side.” EX2007, 23:12-13. “In a data transmission system, downstream transmissions are from a central side transmitter to one or more remote side receivers and upstream transmissions are from one or more

	remote side transmitters to a central side receiver.” EX2007, 6:1-4.
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As seen from this comparison with the cited passages from the Petition, Bingham is cumulative with Canadian-Bingham. Pet., 20-23. Both references recite conventional techniques for scheduling upstream and downstream transmissions, which the Examiner did not find sufficient to teach the claims. Further, as elaborated upon in Patent Owner’s Preliminary Response, Petitioner also fails to demonstrate that this common disclosure renders obvious the claimed first and second physical channels under Petitioner’s proposed claim construction.

Lastly, the portions of Bingham as applied to claim element 1[c] are also cumulative with Canadian-Bingham. That is, Canadian-Bingham also describes upstream and downstream communication periods that do not overlap. EX2007, 4:19-27.

1[c]: wherein transmission in the upstream time slots is substantially not simultaneous with transmission in the downstream time slots.

Petition's Bingham Citation	Corresponding Canadian-Bingham Passage
FIG. 5A  FIG. 5B  FIG. 5C  FIG. 5D  EX1004, FIGs. 5A-5D (annotated); Pet., 23. “With this arrangement, all of the very high speed transmissions within the same binder are synchronized and time division duplexed such that downstream communications are not transmitted at times that overlap with the transmission of upstream communications.” EX1004, Abstract; Pet., 24.	 FIG. 4 EX2007, FIG. 4 (annotated). “When a data transmission system is operating in a time-division duplexed (TDD) manner, the transmitters and receivers of the central office and remote units must be synchronized in time so that transmission and reception do not overlap in time.” EX2007, 5:36-6:1. “On the other hand, one particular proposed VDSL/FTTC transmission

	scheme uses time division duplexing (TDD) of the upstream and downstream signals. More particularly, the time division duplexing is synchronized in this case such that periodic synchronized upstream and downstream communication periods do not overlap with one another. That is, the upstream and downstream communication periods for all of the wires that share a binder are synchronized. With this arrangement, all the very high speed transmissions within the same binder are synchronized and time division duplexed such that downstream communications are not transmitted at times that overlap with the transmission of upstream communications.” EX2007, 4:19-27.
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As seen from these comparisons, Canadian-Bingham is substantially the same as Bingham. This is further demonstrated by the fact that Canadian-Bingham incorporates Bingham in its entirety. EX2007, 1:5-10. Petitioner has not addressed the cumulative nature of Bingham at all and that the Examiner already considered the same or substantially similar content during prosecution. Pet., 76-77.

Petitioner's conclusory statements regarding the first prong of the *Advanced Bionics* framework are therefore incomplete and erroneous. *Id.*

Thus, despite Petitioner's statements to the contrary, because Bingham is cumulative with at least Canadian-Bingham, which was already considered by the Office during prosecution, the Board should find the first prong of the *Advanced Bionics* satisfied with respect to Ground 1.

B. Grounds 2A-2D – Strobel is substantially the same as Baum, which was considered during prosecution

Ground 2A relies only on Strobel to allegedly teach independent claims 1, 34, and 37. Pet., 1. Grounds 2B-2D combine additional references with Strobel to address other dependent claims. Pet., 1-2. Strobel, however, is cumulative with Baum (U.S. Patent Pub. 2004/0076174), which the Examiner already considered during prosecution. EX1002, 426.

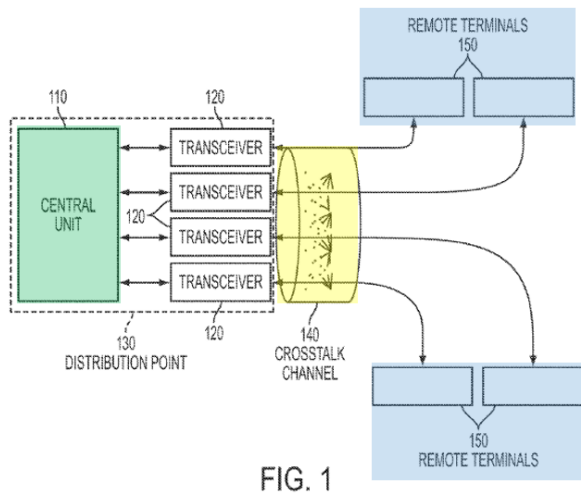
At the outset, both Strobel and Baum address the issue of crosstalk in “Digital Subscriber Line (DSL)” systems. EX1005, 1:17-30, 1:63-2:16, 2:44-45,

38:7-24; EX2008, Title, ¶¶1, 4-7. Both additionally describe addressing crosstalk in the context of a multi-dwelling unit (MDU). EX1005, 2:2-7, 2:21-27; EX2008, ¶41. Baum refers to this as an “MxU,” which may be an “apartment building, a condominium complex, a hotel,” or a number of other examples. EX2008, ¶41. To address the issue of crosstalk, both references also describe using time division techniques and scheduling upstream and downstream transmissions in different time slots. EX1005, Abstract, 1:17-23, 2:44-45, 8:43-49; EX2008, ¶¶1, 4, 6, 56-57. The Petition relies on these same cumulative teachings when applying Strobel to claim 1 of the ’631 patent. Pet., 41-47.

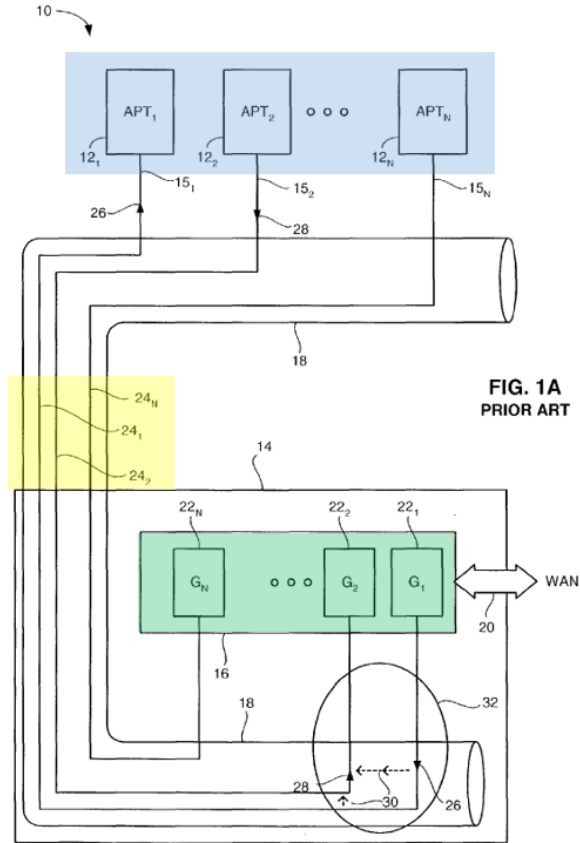
As highlighted in the table below, each of the Petition’s citations applying Strobel to the preamble of claim 1 corresponds to a substantially similar passage from Baum. Pet., 41-42.

1[pre]: A method in a data communications system for managing multiple time division physical channels that are subject to crosstalk, the method comprising:	
Petition’s Strobel Citation	Corresponding Baum Passage
“Various embodiments are presented of a time sharing electronic communication system, including a central unit, a crosstalk channel, and communication units such as	“The disclosed technique relates to communication networks in general, and to methods and systems for reducing near-end crosstalk in MxU networks, in particular.” EX2008, ¶1.

transceivers and remote terminals. Also presented are various methods for configuring and operating the elements of such a system to enhance communication between communication units within the system.” EX1005, Abstract; Pet., 41.



EX1005, FIG. 1 (annotated).



EX2008, FIG. 1A (annotated).

“With reference to FIG. 1A, apartment building network 10 includes intra-apartment networks APT₁ (referenced 121), APT₂ (referenced 122) and APT_N (referenced 12N), gateways G1 (referenced 221), G2 (referenced 222) and GN (referenced 22N), and telephone twisted-pair wires 24₁, 24₂

	and 24_N. A telephone wire binder 18 runs from a basement 14 of the apartment building, to the vicinity of intra-apartment networks 12₁, 12₂ and 12_N. A platform 16 is located in basement 14. Gateways 22₁, 22₂ and 22_N are mounted on platform 16. A broadband source 20 couples each of gateways 22₁, 22₂ and 22_N with a wide area network (WAN) such as the Internet, via a broadband link such as xDSL, cable, fiber-optic, satellite, Local Multipoint Distribution System (LMDS), and the like” EX2008, ¶9.
“In many communication transmission systems, there are multiple parallel transmissions bound together which can cause crosstalk between the lines. This results in a coupling between the	“A common problem in communication networks in general and MxU networks in particular, is interference between signals transmitted on adjacent communication

achievable data rates of the lines within the binder, which means that increasing the transmit power, and thus the rate, of one link, may reduce the data rates of the other links.” EX1005, 1:17-23; Pet., 41.	lines, also known as crosstalk. Crosstalk is especially problematic when it is induced by a transmitter, transmitting over a communication line, to a nearby receiver which receives signals from an adjacent communication line. This type of crosstalk is known as near-end crosstalk (NEXT).” EX2008, ¶4. “In accordance with another aspect of the disclosed technique, there is provided a method of reducing NEXT in an HPNAMxU network.” EX2008, ¶24. “With reference to FIG. 1A, apartment building network 10 includes intra-apartment networks APT₁ (referenced 121), APT₂ (referenced 122) and APT_N (referenced 12N), gateways G1
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	(referenced 221), G2 (referenced 222) and GN (referenced 22N), and telephone twisted-pair wires 24₁, 24₂ and 24_N. A telephone wire binder 18 runs from a basement 14 of the apartment building, to the vicinity of intra-apartment networks 12₁, 12₂ and 12_N.” EX2008, ¶9. “Each combination of one of the gateways 22₁, 22₂ and 22_N, the respective one of the telephone wires 24₁, 24₂ and 24_N, and the respective one of intra-apartment networks 12₁, 12₂ and 12_N, together form a respective one of local-area networks (LANs) 15₁, 15₂ and 15_N. Telephone wires 24₁, 24₂ and 24_N are bound together in binder 18.” EX2008, ¶10.
“a first approach that uses time division	“Time division multiplexing (TDM) is

duplexing between upstream and downstream;” EX1005, 2:44-45; Pet.,

41.

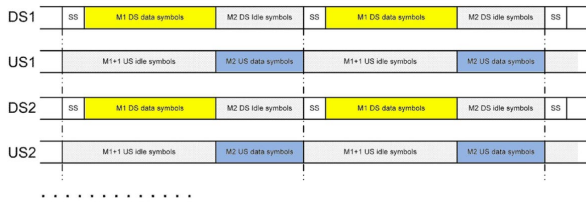


FIG. 16

EX1005, FIG. 16 (annotated); Pet., 42.

a method, known in the art for preventing crosstalk between two different services (e.g., ISDN and ADSL).” EX2008, ¶6.

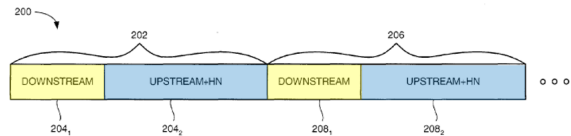


FIG. 5A

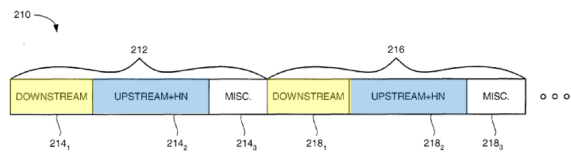


FIG. 5B

EX2008, FIGs. 5A-5B (annotated).

“Reference is now made to FIG. 5A, which is a schematic illustration of a timeslot scheme sequence 200...

Timeslots 204₁ and 208₁, are allocated for downstream communication.

Timeslots 204₂ and 208₂, are allocated for upstream communication and HN communication.” EX2008, ¶56.

“Sequence 210 includes repeating

	timeslot schemes, of which two schemes 212 and 216 are shown. Timeslot scheme 212 includes timeslots 214₁, 214₂ and 214₃. Timeslot scheme 216 includes timeslots 218₁, 218₂ and 218₃. Timeslots 214₁ and 218₁, are allocated for downstream communication. Timeslots 214₂ and 218₂, are allocated for upstream communication and HN communication (also referred to as upstream+HN).” EX2008, ¶60.
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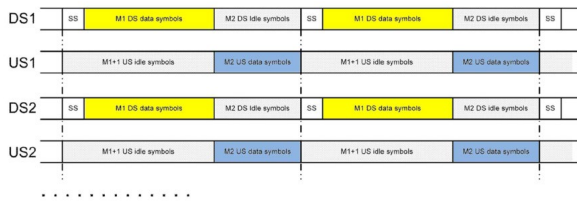
For claim elements 1[a] and 1[b], Baum also provides corresponding passages. Baum also describes the same scheduling of upstream and downstream time slots that Strobel describes.

1[a]: scheduling upstream time slots for upstream transmission in a first physical channel;

1[b]: scheduling downstream time slots for downstream transmission in a second physical channel;

Petition's Strobel Citation

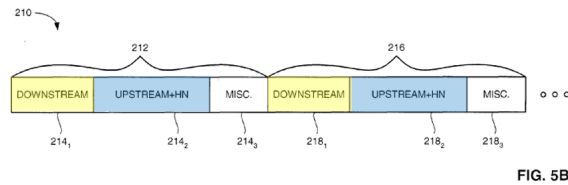
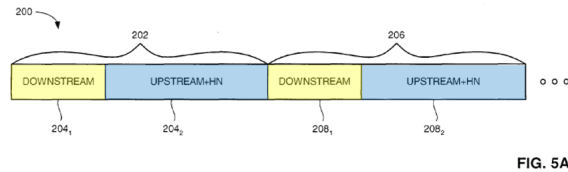
Corresponding Baum Passage



EX1005, FIG. 16 (annotated); Pet., 42, 44-45.

“In an embodiment **transmission time slots (TS)** are used to assign the particular transmission time (or transmission opportunity time) for a specific line in **upstream** and/or **downstream direction** (TS_{DS-k} , TS_{US-k} denote time slots for **upstream** and **downstream transmission** for line k).

In an embodiment all TS shall have



EX2008, FIGs. 5A-5B (annotated).

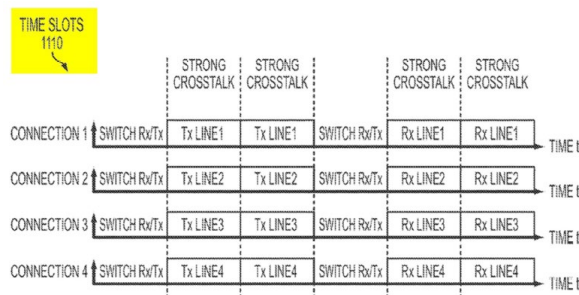
“Reference is now made to FIG. 5A, which is a schematic illustration of a timeslot scheme sequence 200...

Timeslots 204₁ and 208₁, are allocated for downstream communication.

Timeslots 204₂ and 208₂, are allocated for upstream communication and HN communication.” EX2008, ¶56.

duration that is an integer number of symbols.” EX1005, 31:40-46; Pet., 43.

“In an embodiment, the symbols allocated for upstream transmission have an associated time position for actual upstream transmission. In an embodiment, the symbols allocated for downstream transmission have an associated time position for actual downstream transmission. In an embodiment, the two associated time positions are different.” EX1005, 8:43-49; Pet., 43.



EX1005, FIG. 11 (annotated); Pet., 43-

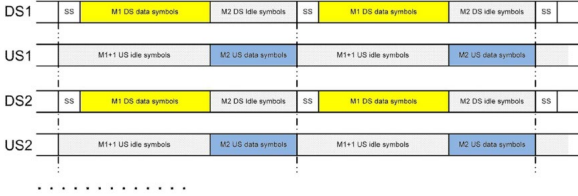
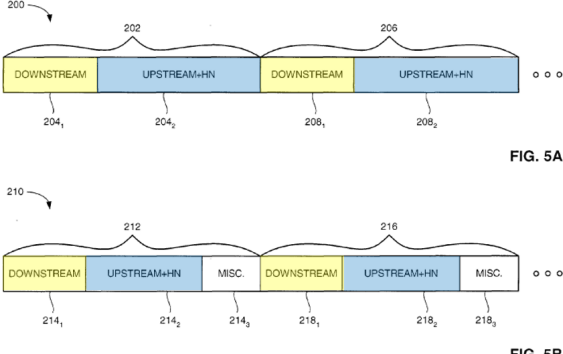
“Sequence 210 includes repeating timeslot schemes, of which two schemes 212 and 216 are shown. Timeslot scheme 212 includes timeslots 214₁, 214₂ and 214₃. Timeslot scheme 216 includes timeslots 218₁, 218₂ and 218₃. Timeslots 214₁ and 218₁, are allocated for downstream communication. Timeslots 214₂ and 218₂, are allocated for upstream communication and HN communication (also referred to as upstream+HN).” EX2008, ¶60; *see also id.*, ¶57 (indicating that downstream timeslots are “are allocated for downstream communication only” and similarly allowing upstream transmissions only during upstream timeslots).

45. “FIG. 11 is an illustration of a possible allocation of time slots 1110 for uplink and downlink transmission in TDD System, according to the alternative embodiments.” EX1005, 22:5-7; Pet., 43-44.	
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As seen from this comparison with the cited passages from the Petition, Strobel is cumulative with Baum. Pet., 42-45. Both references recite conventional techniques for scheduling upstream and downstream timeslots, which the Examiner did not find sufficient to teach the claims. Further, as elaborated upon in Patent Owner’s Preliminary Response, Petitioner also fails to demonstrate that this common disclosure renders obvious the claimed first and second physical channels under Petitioner’s proposed claim construction.

Lastly, the portions of Strobel as applied to claim element 1[c] are also cumulative with Baum. That is, Baum also describes upstream and downstream communication periods that do not overlap. EX2008, ¶¶40, 56-57, 60.

1[c]: wherein transmission in the upstream time slots is substantially not simultaneous with transmission in the downstream time slots.

Petition's Strobel Citation	Corresponding Baum Passage
 FIG. 16	 FIG. 5A FIG. 5B
EX1005, FIG. 16 (annotated); Pet., 45-46. “In an embodiment, the symbols allocated for upstream transmission have an associated time position for actual upstream transmission. In an embodiment, the symbols allocated for downstream transmission have an associated time position for actual downstream transmission. In an embodiment, the two associated time positions are different.” EX1005, 8:39-	EX2008, FIGs. 5A-5B (annotated). “Reference is now made to FIG. 5A, which is a schematic illustration of a timeslot scheme sequence 200... Timeslots 204₁ and 208₁, are allocated for downstream communication. Timeslots 204₂ and 208₂, are allocated for upstream communication and HN communication.” EX2008, ¶56. “Sequence 210 includes repeating timeslot schemes, of which two

49, FIG. 16; Pet., 46.	schemes 212 and 216 are shown. Timeslot scheme 212 includes timeslots 214₁, 214₂ and 214₃. Timeslot scheme 216 includes timeslots 218₁, 218₂ and 218₃. Timeslots 214₁ and 218₁, are allocated for downstream communication. Timeslots 214₂ and 218₂, are allocated for upstream communication and HN communication (also referred to as upstream+HN).” EX2008, ¶60. “The disclosed technique overcomes the disadvantages of the prior art by providing a synchronous MxU network, which assigns different timeslots for upstream and downstream communication.” EX2008, ¶40. “In the example set forth in FIG. 2, synchronizer 126 instructs gateways
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	122₁, 122₂ and 122_N and the nodes of their respective LANs that timeslots 204₁ and 208₁ are allocated for downstream communication only. ... Synchronizer 126 further instructs gateways 122₁, 122₂ and 122_N and the nodes of their respective LANs, that timeslots 204₂ and 208₂ are allocated for upstream and HN communication only.” EX2008, ¶57.
“In one embodiment, if DP or CPE has no data to transmit during all the symbols allocated for transmission, it may transmit idle symbols (e.g., loaded by a pseudo-random signal instead of data). In another embodiment, symbols may not be transmitted at all (quiet periods).” EX1005, 30:41-46; Pet., 46-47.	FIG. 5B EX2008, FIG. 5B (annotated). “In the example set forth in FIG. 2, during timeslots 214₃ and 218₃, synchronizer 126 instructs gateways 122₁, 122₂ and 122_N and the nodes of their respective LANs, not to generate

	upstream, downstream, or HN data signals.” EX2008, ¶61.
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As seen from these comparisons, Baum is substantially the same as Strobel. Petitioner has not addressed the cumulative nature of Strobel at all and that the Examiner already considered the same or substantially similar content during prosecution. Pet., 76-77. Petitioner’s conclusory statements regarding the first prong of the *Advanced Bionics* framework are therefore incomplete and erroneous. *Id.*

Thus, despite Petitioner’s statements to the contrary, because Strobel is cumulative with at least Baum, which was already considered by the Office during prosecution, the Board should find the first prong of the *Advanced Bionics* satisfied with respect to Grounds 2A-2D.

C. Petitioner Neglected to Address Prong Two of the *Advanced Bionics* Analysis At All

As previously explained, Petitioner failed to adequately review and analyze the references considered by the Examiner and therefore arrived at erroneous *Advanced Bionics* Prong One conclusions. Pet., 76-77. Under Prong Two, Petitioner does not even attempt to argue or explain how the Office previously erred during examination at all. *Id.* Petitioner instead alleges that the “Board need not move to the second prong,” without demonstrating any error or even asserting

that the Office erred. Pet., 77. This silence fails to acknowledge the Board’s “commitment to defer to previous Office evaluations of the evidence of record ***unless material error is shown.***” *Advanced Bionics*, IPR2019-01469, Paper 6 at 9 (emphasis added).

Thus, Petitioner’s silence and lack of demonstrating any error indicates that Prong Two—and indeed the entirety of the *Advanced Bionics* analysis—weighs in favor of discretionary denial under § 325(d).

III. THE PETITION SHOULD BE DENIED UNDER 35 U.S.C. § 314(A)

On March 26, 2025, Acting Director Stewart issued a Memorandum titled “Interim Processes for PTAB Workload Management” (the “PTAB Workload Management Memo”, EX2001). The PTAB Workload Management Memo enumerated a number of “relevant considerations” for the parties to address when arguing for or against discretionary denial. These factors include:

- Whether the PTAB or another forum has already adjudicated the validity or patentability of the challenged patent claims;
- Whether there have been changes in the law or new judicial precedent issued since issuance of the claims that may affect patentability;
- The strength of the unpatentability challenge;
- The extent of the petition’s reliance on expert testimony;
- Settled expectations of the parties, such as the length of time the claims have been in force;

- Compelling economic, public health, or national security interests;
and
- Any other considerations bearing on the Director’s discretion.

Several of these considerations—including the settled expectations of the parties, the extent of the Petition’s reliance on expert testimony, and certain compelling economic interests support discretionary denial under 35 U.S.C. § 314(a). In fact, the Petition represents a prime example of when discretionary denial should be used to meet the goals articulated in the PTAB Workload Management Memo: to “improve PTAB efficiency, maintain PTAB capacity to conduct AIA proceedings, ... and promote consistent application of discretionary considerations in the institution of AIA proceedings.” EX2001, 3.

A. Settled expectations of the parties

There are several developments that have transpired, both during and outside of litigation, that have led to the parties having settled expectations for the ’631 patent. As articulated in the PTAB Workload Management Memo, these settled expectations weigh in favor of the Director exercising discretion to deny the Petition.

1. Settled expectation that Patent Owner will no longer assert infringement of the ’631 patent against Petitioner

Up until about four weeks ago, the ’631 patent was asserted in a co-pending litigation (*Adaptive Spectrum and Signal Alignment, Inc. v. AT&T Enterprises,*

LLC, AT&T Mobility LLC, AT&T Mobility II LLC, and AT&T Services, Inc., No.

2:24-cv-00029-JRG-RSP) that was scheduled to begin trial **more than 10 months before the projected FWD deadline here**. EX2003, 1 (setting trial for September 22, 2025); EX1017, 1. While the parties just recently settled this litigation, the factors that would have otherwise resulted in the majority of the *Fintiv* factors strongly favoring denial should still strongly weigh in favor of denial in light of the considerations recently enumerated in the PTAB Workload Management Memo. EX2001, 2-3.

Indeed, the parties' settlement means that there are now settled expectations between the parties that Patent Owner will no longer assert infringement of the '631 patent against Petitioner. *See* Pet., 80 (indicating that ASSIA's AT&T infringement theories are based on Nokia products).²

Thus, the well-settled expectation that Patent Owner will no longer assert infringement of the '631 patent against Petitioner warrants discretionary denial of

² Despite the parties settlement of the co-pending litigation, and the settled expectations of what the settlement entails, Petitioner has refused Patent Owner's requests to move for termination of this proceeding. Petitioner's refusal evidences its disregard for the Board's resources that would be required to continue this proceeding despite the underlying dispute being resolved.

the Petition. Indeed, denial of the Petition will help “improve PTAB efficiency, maintain PTAB capacity to conduct AIA proceedings, ... and promote consistent application of discretionary considerations in the institution of AIA proceedings.” EX2001, 3.

2. Length of time the claims were in force, and Petitioner’s prolonged and unexplained delay

A further relevant consideration identified in the PTAB Workload Management Memo was “[s]ettled expectations of the parties, such as the length of time the claims have been in force.” EX2001, 2. Here, the claims of the ’631 patent have been in force for over seven years. EX1001, (45). Petitioner was also provided with actual notice of the ’631 patent and Patent Owner’s infringement allegations relating thereto over a year and half ago. EX2005, ASSIA-AT&T Complaint, ¶¶42, 59-66. Despite this notice, Petitioner **waited nearly a year** after the filing of the district court complaint in the previously co-pending litigation (and a mere two days before the statutory bar date under 35 U.S.C. § 315(b)), and **over eight months** after infringement contentions were served in the previously co-pending litigation. Petitioner make no mention of this delay in its Petition.

Waiting nearly a year from the filing of the district court complaint to challenge a reasonable number of claims—20 total claims, with 18 unique claims—is not diligent. This is even truer considering the fact that all of Petitioner’s grounds rely on primary references that are cumulative with those cited

during prosecution. *See* Section II, *supra*. Petitioner does not provide any explanation for its delay in filing the Petition

Under these circumstances, the Petitioner’s delay in filing this IPR is a further factor that favors discretionary denial. *Cf. Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 11, 11 (PTAB Mar. 20, 2020) (“If the evidence shows that the petitioner filed the petition expeditiously, such as promptly after becoming aware of the claims being asserted, this fact has weighed against exercising the authority to deny institution under *NHK*.”); *Hulu, LLC v. Piranha Media Distribution, LLC*, IPR2024-01252, Paper 27, 3 (PTAB Apr. 17, 2025) (even when “the *Fintiv* framework does not fit neatly with the circumstances of [the] case, ... the *Fintiv* framework emphasizes efficiency concerns, and *Fintiv* encourages the parties to explain the impact of other facts and circumstances that exist in their proceeding on efficiency and integrity of the patent system”).

B. Extent of the Petition’s reliance on expert testimony

Another basis for discretionary denial is that Petitioner’s expert declaration largely parrots the Petition without providing any additional compelling analysis or corroborating evidence, and thus does nothing to overcome the weak merits of the Petition. *Xerox Corp. et al. v. Bytemark*, IPR2022-00624, Paper 9, 15 (PTAB Aug. 24, 2024) (precedential) (according “little weight” to declaration testimony that contains a verbatim restatement of a petition’s conclusory assertions without

additional supporting evidence or reasoning); *Facebook, Inc. v. Windy City Innovations, LLC*, 973 F.3d 1321, 1340–41 (Fed. Cir. 2020) (affirming Board decision giving no weight to expert testimony that “merely repeated Petitioner’s argument, nearly verbatim, without citation to the basis for his testimony”); *see* Section V, *infra*. This practice raises concerns under 37 C.F.R. § 42.65(a). *See* 37 C.F.R. § 42.65(a) (“Expert testimony that does not disclose the underlying facts or data on which the opinion is based is entitled to little or no weight.”).

In the few instances where the expert declaration does provide additional argument beyond the Petition, such arguments are conclusory, and again provide little to no compelling technical explanation or evidence to support the conclusions. *SFC Co., Ltd. v. LG Chem, Ltd.*, IPR2020-00178, Paper 16, at 37-39 (May 29, 2020); *TRW Automotive US LLC v. Magna Elecs. Inc.*, IPR2014-00258, Paper 16, at 19-23 (PTAB. Jun. 26, 2014) (rejecting obviousness analysis that failed to support rationale with supporting evidence and technical reasoning).

This is clear with Petitioner’s attempt to apply the Bingham and Strobel references to the claims under Petitioner’s and the District Court’s claim construction for “*physical channels*.” Pet., 8; EX2006, 33. For example, in an attempt to address Bingham’s and Strobel’s failure to teach the claimed “*physical channels*” limitation and argue that modifying the references to use unidirectional channels was obvious, Petitioner’s expert cites **the entirety of a book** without

explaining its applicability or why its quoted passage has any relevance to the claim term or to the asserted references. EX1003, ¶¶218, 279 (citing EX1028); Section V, *infra*. Rather, Petitioner's expert simply cites the book and restates the Petition's Bingham and Strobel conclusions without providing any additional useful explanation. Section V, *infra*. Such conclusory statements fail to explain why a POSITA would have been motivated to modify Bingham or Strobel and demonstrate that the testimony is entitled little to no weight.

As such, Petitioner's improper use of expert testimony further supports discretionary denial under 35 U.S.C. § 314(a).

C. Compelling economic interests

Compelling economic interests further weigh in favor of the Director exercising discretion to deny the Petition. For example, the parties and the district court already made significant economic investment in the previously co-pending litigation before it was settled just four weeks ago. Specifically, the district court already conducted a Claim Construction Hearing on March 19, 2025 and issued a Claim Construction Order on April 1, 2025, the parties already exchanged invalidity and infringement contentions, and were merely days away from the completion of fact discovery on May 13, 2025 before reaching a settlement. EX2002, 4; EX2003, 4; EX2006, 54.

Additionally, the parties expended significant economic investment in their

ultimately successful efforts to reach a settlement agreement. These investments, and the fact that the parties were able to resolve their dispute prior to the institution deadline for this proceedings should not be diminished, nor should such efforts to reach a settlement be deterred.

Therefore, the significant investments by the parties and the district court to-date represent compelling economic interests that weigh in favor of discretionarily denying the Petition.

IV. STROBEL DOES NOT QUALIFY AS PRIOR ART

The Board should deny institution because the Petition fails to demonstrate that Strobel (EX1005) qualifies as prior art.³ Specifically, Petitioner fails to establish that Strobel is entitled to the benefit of the two provisional applications cited in the Petition (i.e., EX1006 and EX1007 or the “Strobel Provisionals”). Pet., 10-13. Because this impacts four out of the five grounds presented in the Petition,

³ In accordance with the Board’s April 25, 2025 guidance, Patent Owner does “not repeat [its] merits arguments verbatim,” and instead “briefly explain[s] why the merits are relevant [herein].” EX2009, FAQs for Interim Processes for PTAB Workload Management, FAQ 12. As additionally set forth in the Board’s April 25, 2025 guidance, Patent Owner also requests that the Director “consider the merits in the [forthcoming] merits briefing” as part of the discretionary denial analysis. *Id.*

the Board should not waste resources and should deny institution. *See* Section VI, *infra*; EX2001, 3.

While Petitioner bears the burden of demonstrating that Strobel is entitled to the priority dates of the relied upon provisional applications, Petitioner has not met its burden. *Dynamic Drinkware, LLC v. Nat’l Graphics, Inc.*, 800 F.3d 1375, 1380 (Fed. Cir. 2015). The Petition argues that the Strobel Provisionals provide written description support for Strobel’s claim 4. Pet., 10-12. But Petitioner fails to show that the Strobel Provisionals support a “*plurality of power level configurations correspond[ing] to a non-zero data rate on the multiple electronic communication lines.*” EX1005, Claim 4. As seen from the plain language of claim 4, this claim element requires multiple power level configurations that all correspond to a single “non-zero data rate.” The Strobel ’943 Provisional provides no such disclosure.

As seen from the Petition’s chart, no cited passage describes multiple power level configurations that all correspond to a single non-zero data rate. Pet., 11.

wherein the system is configured to compute a plurality of power level configurations, wherein the plurality of power level configurations corresponds to a non-zero data rate on the multiple electronic communication lines, store in memory data about said configurations, process said data into time sharing information comprised in a medium access plan,	• “[T]he system may be configured to compute locally optimal communication configurations, store in memory data about said configurations, process said data into time sharing information, convey such time sharing information to the transceivers and the remote terminals.” Ex-1006, 24:24-25. • “‘Local optimization’ is the process of finding transmission power levels for two communication units, and the corresponding data rate for each such unit.” Ex-1006, 6:1-6. • “One solution is a transceiver system that services multiple electronic communication lines.” Ex-1006, 24:30-31. • “A media access plan message contains the information about what configuration is to be used at which particular time.” Ex-1006, 15:10-11.
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Petition, 11 (excerpted, annotated).

For example, Petitioner cites the following statement from the Strobel ’943

Provisional:

“‘Local optimization’ is the process of finding transmission power levels for two communication units, and the corresponding data rate for each such unit.”

EX1006, 6:1-6.

This statement, however, simply states that transmission power levels are determined for different communication units. *Id.* This does not describe or suggest computing a plurality of power level configurations that all correspond to a single

“*non-zero data rate*” as recited in Claim 4. Petitioner’s other citations provide no better disclosure. Pet., 11 (citing EX1006, 15:10-11, 24:24-25, 24:30-31).

Additionally, Petitioner alleges that “claim 1 disclosed in the ’943 Provisional almost entirely discloses claim 4 word for word,” but this is also untrue. Pet., 12.

Indeed, Claim 1 lacks the same feature referenced above. *See* EX1006, Claim 1. In summary, Petitioner has failed to demonstrate that the Strobel Provisionals provide adequate written description support for claim 4 in compliance with *Dynamic Drinkware*. Accordingly, Petitioner has failed to demonstrate that Strobel is entitled to either of the Strobel Provisionals’ filing dates, and fails to show that Strobel qualifies as prior art. Because four out of five of the Petition’s grounds rely on Strobel, the Board should deny institution to conserve the Board’s resources.

Pet., 1-2; Section VI, *infra*.

V. BINGHAM AND STROBEL DO NOT TEACH THE CLAIMED “PHYSICAL CHANNELS” UNDER PETITIONER’S PROPOSED CONSTRUCTION OR THE DISTRICT COURT’S CONSTRUCTION

In view of Petitioner’s and the District Court’s proposed construction for the claimed first and second “*physical channels*” requiring **unidirectional channels**, neither Bingham nor Strobel teach or suggest each and every feature recited in the challenged claims because they only recite **bidirectional channels**. This clear inconsistency shows that Petitioner has not demonstrated a reasonable likelihood of prevailing with respect to any of the challenged claims under any of Grounds 1

and 2A-2D.⁴

While Patent Owner currently takes no position on this construction, Petitioner fails to explain why Bingham and Strobel teach the claimed first and second “physical channels” under Petitioner’s express construction of the term or the District Court’s construction. Namely, Petitioner relies on Bingham’s and Strobel’s disclosure of *bidirectional channels*, which conflicts with Petitioner’s and the District Court’s constructions. Pet. 8; EX2006, 33.

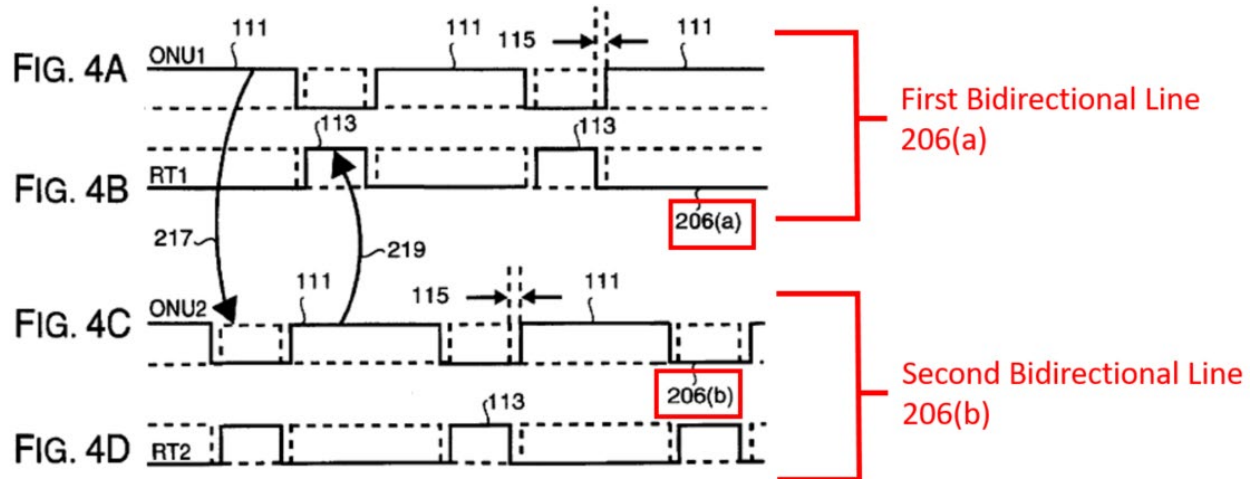
Because the Petition fails to demonstrate why the art discloses the first and second “*physical channels*” under Petitioner’s own proposed construction or the District Court’s construction, the Petition is fatally flawed and the Board should deny institution.

A. Ground 1 – Bingham does not teach first and second “physical channels”

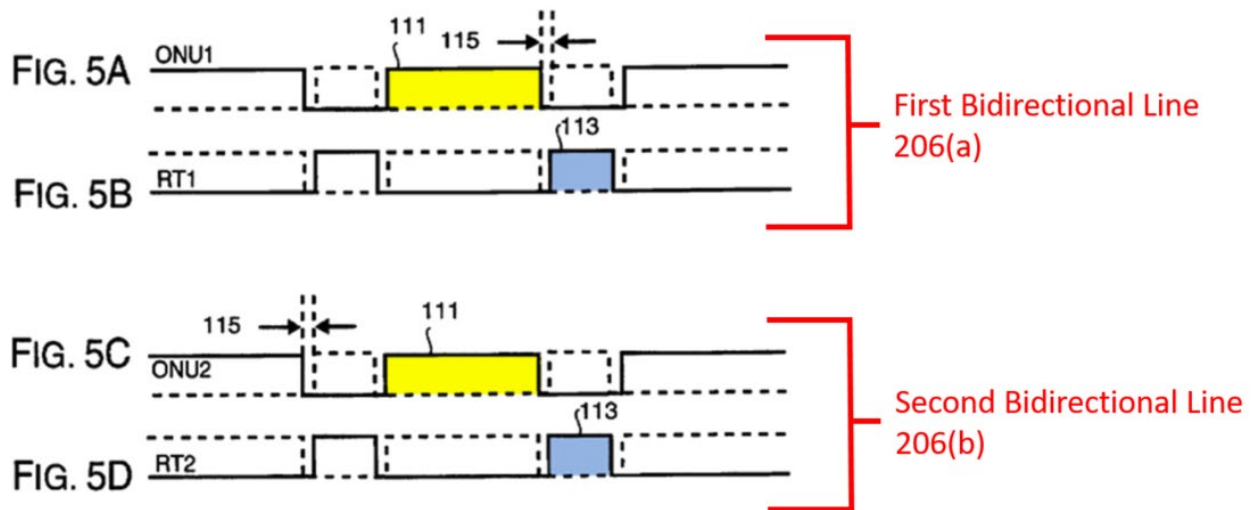
In applying Bingham to claim elements 1[a] and 1[b], Petitioner relies on

⁴ In accordance with the Board’s April 25, 2025 guidance, Patent Owner does “not repeat [its] merits arguments verbatim,” and instead “briefly explain[s] why the merits are relevant [herein].” EX2009, FAQs for Interim Processes for PTAB Workload Management, FAQ 12. As additionally set forth in the Board’s April 25, 2025 guidance, Patent Owner also requests that the Director “consider the merits in the [forthcoming] merits briefing” as part of the discretionary denial analysis. *Id.*

Bingham's bidirectional communication channels depicted in FIGs. 4A-4D and FIGs. 5A-5D. Pet., 20-21; EX1004, 6:65-7:9.



EX1004, FIGs. 4A-4D (annotated).



EX1004, FIGs. 5A-5D (annotated); Pet., 20, 22.

With this understanding, Bingham explicitly describes bidirectional lines, which do not disclose the claimed *first and second physical channels* under Petitioner's proposed construction.

Additionally, Petitioner fails to adequately demonstrate why a POSITA would have been motivated to modify Bingham to use unidirectional channels beyond mere conclusory statements. *Id.* Despite alleging that unidirectional systems would be “less complex from a management perspective,” Petitioner provides no compelling evidence to support this assertion. Pet., 18-19. First, Petitioner cites a passage from Strobel stating that “*parts of the communication unit hardware are shared for uplink and downlink transmission,*” but this passage does not provide any motivation to use unidirectional channels instead of bidirectional channels. EX1005, 21:3-9; Pet., 18-19.

Second, Petitioner’s declarant largely parrots the same conclusions in the Petition without providing any compelling supporting evidence either. EX1003, ¶¶218-220. Petitioner’s declarant cites the entirety of the book *Broadband Access Networks* (EX1028) and provides the following quotation and statement: “‘HDSL requires two or three pairs for symmetric 2 Mbit/s transmission over 2.5km’ and a POSITA would have understood that each pair could be unidirectional.” EX1003, ¶218. But this statement also provides no clear evidence that (1) using unidirectional channels was well-known or (2) that a POSITA would have been motivated to modify Bingham to use unidirectional channels. Because Petitioner’s declarant does not provide any compelling supporting evidence, the Board should give this testimony “little or no weight.” *TikTok Inc. v. NTech Properties, Inc.*,

IPR2024-01339, Paper 9, 16 (PTAB Feb. 25, 2025); 37 C.F.R. § 42.65(a).

Thus, Petitioner has not demonstrated that Bingham discloses or otherwise renders obvious the claimed *first and second physical channels* recited in independent claims 1, 34, and 37 under Petitioner’s own proposed construction of “physical channel” or the District Court’s construction. Ground 1 therefore fails to demonstrate that any claims are unpatentable.

B. Grounds 2A-2D – Strobel does not teach first and second “physical channels”

Strobel also uses bidirectional channels. As depicted in FIG. 1, Strobel’s system employs “transceivers” to facilitate bidirectional communications. EX1005, 13:34-52, FIG. 1.

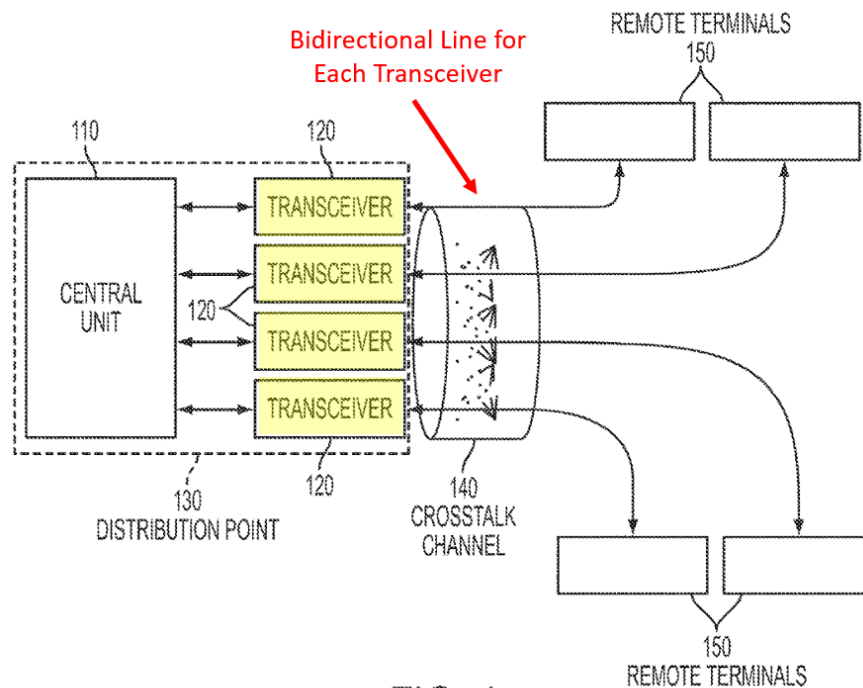
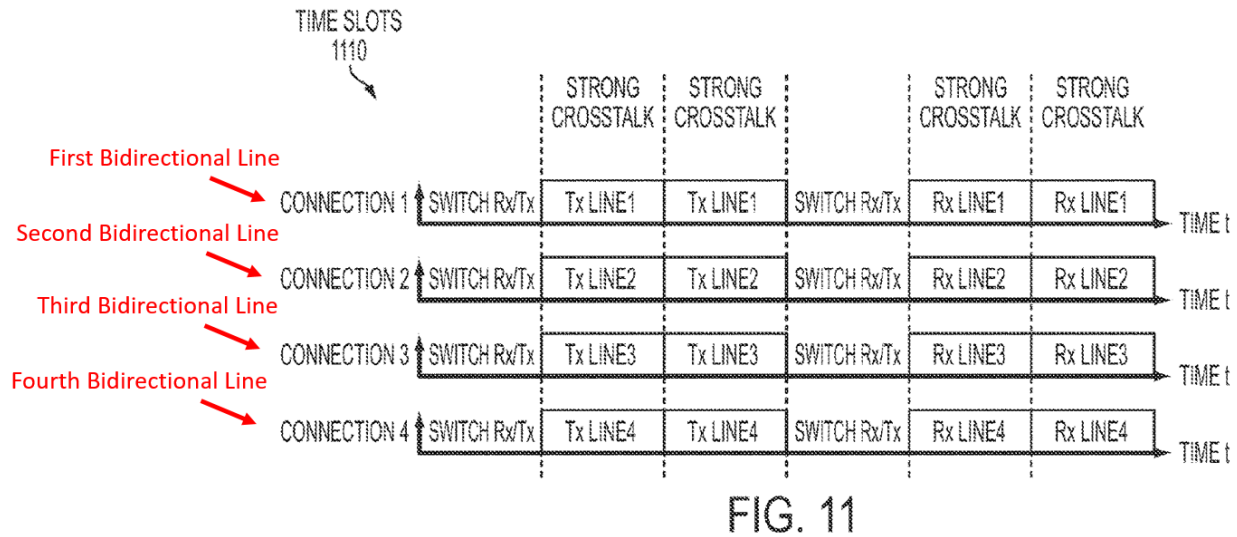


FIG. 1

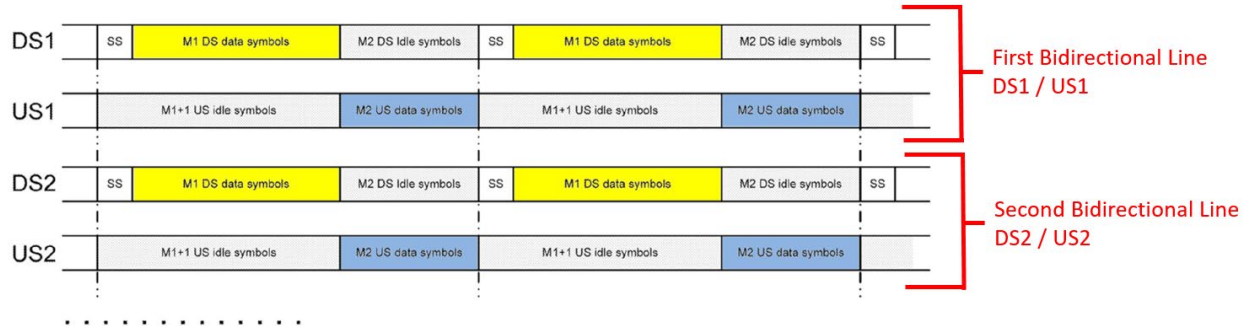
EX1005, FIG. 1 (annotated).

The Petition's reliance on FIG. 11 and FIG. 16 support this understanding as well. Pet., 42-45.



EX1005, FIG. 11 (annotated).

As seen in Figure 11, each line or connection is capable of switching between receiving and transmitting (“Rx/Tx”), which means that the lines are bidirectional. EX1005, 22:11-23. Figure 16 also supports this understanding.



EX1005, FIG. 16 (annotated).

As seen from FIG. 16, bidirectional lines support both upstream and

downstream transmissions. EX1005, 30:11-32, 31:40-44. To accommodate both types of transmissions, the timing on each line includes “switch times” where a “transceiver switches from receipt to send” or from “send to receipt.” *Id.*, 30:25-32. Strobel therefore does not teach the claimed “physical channels” under Petitioner’s and the District Court’s constructions which do not allow for bidirectional functionality. Pet., 6; EX2006, 28. Thus, Petitioner fails to demonstrate that Strobel discloses the claimed physical channels under Petitioner’s own proposed construction.

Seeming to recognize these shortcomings, Petitioner argues that a POSITA would have found the use of a “unidirectional system” to be obvious by repeating the same argument presented in Ground 1. Pet., 34-35. Petitioner’s declarant also repeats the same argument from Ground 1 and largely parrots the same conclusions without providing any compelling supporting evidence either. EX1003, ¶¶279-281; Section V.A, *supra*. For the same reasons, however, Petitioner again fails to adequately demonstrate why a POSITA would have been motivated to modify Strobel to use unidirectional channels beyond mere conclusory statements. *Id.*; Section V.A, *supra*.

Thus, Petitioner has not demonstrated that Strobel discloses or otherwise renders obvious the claimed *first and second physical channels* recited in independent claims 1, 34, and 37 under Petitioner’s own proposed construction of

“physical channel” or the District Court’s construction. Grounds 2A-2D therefore fail to demonstrate that any claims are unpatentable.

VI. EVEN IF PETITIONER FAILS TO MEET ITS BURDEN FOR LESS THAN ALL OF THE CHALLENGED CLAIMS AND/OR PROPOSED GROUNDS, THE BOARD SHOULD STILL DENY THE PETITION

As explained herein, Patent Owner has identified several deficiencies in Petitioner’s arguments, each of which should prove fatal to the Petition. Nonetheless, should the Board ultimately determine that Petitioner met its burden for some claims, but has failed to meet its burden of establishing unpatentability for fewer than all of the challenged claims of the ’631 patent, the Petition should still be denied in order to conserve the Board’s valuable time and resources. *See* PTAB Workload Management Memo, EX2001, 3; EX2009, FAQ 11; *Chevron Oronite Co. v. Infineum USA L.P.*, Case IPR2018-00923, Paper 9 at 10–11 (P.T.A.B. Nov. 7, 2018). The same holds true should the Board ultimately determine that Petitioner met its burden for one, but not both of its proposed sets of invalidity grounds.

Pursuant to 35 U.S.C. § 314(a), an *inter partes* review may not be instituted “unless ... the information presented in the petition ... and any response ... shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” But even when a petitioner demonstrates a reasonable likelihood of prevailing with respect to one or more

claims, institution of review remains discretionary. *SAS Inst. Inc. v. Iancu*, 138 S.

Ct. 1348, 1356 (2018) (“[Section] 314(a) invests the Director with discretion on

the question whether to institute review” (emphasis omitted)); *Harmonic Inc.*

v. Avid Tech., Inc., 815 F.3d 1356, 1367 (Fed. Cir. 2016) (“[T]he PTO is permitted,

but never compelled, to institute an IPR proceeding.”). 35 U.S.C. § 316(b) also

provides that, when determining whether to exercise its discretion, the Board

should consider the effect of any regulations on “the efficient administration of the

Office [and] the ability of the Office to timely complete proceedings.”

Additionally, 37 C.F.R. § 42.1(b) provides that the Board should also take into

account the requirement to construe the rules to “secure the just, speedy, and

inexpensive resolution of every proceeding.” Office guidance, published

November 20, 2019, also explains that the Board may consider the number of

claims and grounds that meet and do not meet the reasonable likelihood standard

when deciding whether to institute *inter partes* review under 35 U.S.C. § 314(a).

Patent Trial and Appeal Board Consolidated Trial Practice Guide November 2019,

p. 64 (Nov. 20, 2019), available at

<https://www.uspto.gov/TrialPracticeGuideConsolidated> (“2019 Office Guidance”)

(“[T]he panel will evaluate all the challenges and determine whether, in the

interests of efficient administration of the Office and integrity of the patent system,

the entire petition should be denied.”).

Here, should the Board determine that Petitioner has failed to meet its burden of establishing unpatentability for some but fewer than all of the challenged claims of the '631 patent as discussed in Sections IV and V, the Petition should still be denied in order to conserve the Board's valuable time and resources.

EX2001, 3; *Deeper, UAB. v. Vexilar, Inc.*, IPR2018-01310, Paper 7 at 43 (P.T.A.B. Jan. 24, 2019) (finding that because Petitioner only demonstrated a reasonable likelihood of prevailing with respect to a subset of the 23 challenged claims, "instituting a trial with respect to all twenty-three claims ... would not be an efficient use of the Board's time and resources."). Similarly, should the Board determine that Petitioner has failed to meet its burden of establishing unpatentability for some but not all grounds, the Petition should again be denied in order to conserve the Board's valuable time and resources. EX2001, 3; 2019 Office Guidance, p. 64; 35 U.S.C. § 316(b); 37 C.F.R. § 42.1(b).

VII. CONCLUSION

Each of the issues discussed above independently supports discretionary denial. Considered together, they present a compelling case for the Director to exercise discretion and deny institution of this untimely and inefficient Petition in accordance with § 314(a). Accordingly, Patent Owner respectfully requests that the Director discretionarily deny institution of the Petition.

Respectfully submitted,

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

1. This Patent Owner's Discretionary Denial Brief complies with the type-volume limitation of 14,000 words, comprising 8,654 words, excluding the parts exempted by 37 C.F.R. § 42.24(a)(1).

2. This Patent Owner Preliminary Response 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
DISCRETIONARY DENIAL BRIEF** and associated Exhibits 2001-2009 were served in their entireties on May 12, 2025, upon the following parties via electronic mail:

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