

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 PRELIMINARY RESPONSE
UNDER 37 C.F.R. § 42.107(a)**

Mail Stop "PATENT BOARD"
Patent Trial and Appeal Board
U.S. Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450

TABLE OF CONTENTS

I.	INTRODUCTION	1
II.	PERSON OF ORDINARY SKILL IN THE ART (POSITA).....	2
III.	THE '631 PATENT	2
	A. Overview of the '631 Patent	2
	B. Prosecution History.....	5
IV.	CLAIM CONSTRUCTION	6
	A. “physical channel”	6
	B. “Means for” Limitations	7
	C. Additional District Court Constructions.....	7
V.	BINGHAM AND STROBEL DO NOT TEACH THE CLAIMED “PHYSICAL CHANNELS” UNDER PETITIONER’S PROPOSED CONSTRUCTION OR THE DISTRICT COURT’S CONSTRUCTION.....	8
	A. Ground 1 – Bingham does not teach first and second “physical channels”	9
	B. Grounds 2A-2D – Strobel does not teach first and second “physical channels”	13
VI.	STROBEL DOES NOT QUALIFY AS PRIOR ART	19
VII.	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.....	23
VIII.	CONCLUSION	26

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

The Board should deny the Petition because Petitioner has not met its burden to show a reasonable likelihood that any of claims 1, 3-68-9, 11-16, 22-25, and 33-37 (the “challenged claims”) of U.S. Patent No. 9,954,631 (“the ’631 patent”) are unpatentable. The Petition presents four invalidity grounds, none of which presents compelling reasons as to why any of the challenged claims of the ’631 patent should be found unpatentable.

First, in view of Petitioner’s proposed construction for the claimed first and second “physical channels” and the District Court’s construction, neither Bingham nor Strobel teach or suggest each and every feature recited in the challenged claims. Namely, Petitioner has argued that the claimed “physical channels” must be unidirectional and cannot be bidirectional in the Petition and before the District Court. Petitioner, however, then presents Bingham and Strobel, which only describe bidirectional channels. This clear inconsistency indicates that Petitioner has not demonstrated a reasonable likelihood of prevailing with respect to any of the challenged claims.

Second, the Petition also fails to establish a *prima facie* case of obviousness for Grounds 2A-2D due to its failure to sufficiently show that Strobel qualifies as prior art. Namely, Petitioner provides a flawed *Dynamic Drinkware* analysis and

fails to demonstrate that Strobel is entitled to the priority date of its relevant provisional applications. This is fatal to four out of five of the Petition's grounds.

For at least these reasons, Petitioner has not met—and cannot meet—its burden to show a reasonable likelihood that any of the challenged claims are unpatentable. Accordingly, the Board should deny institution of the Petition.

II. PERSON OF ORDINARY SKILL IN THE ART (POSITA)

For purposes of this Preliminary Response, Patent Owner applies Petitioner's level of skill for a person of ordinary skill in the art (POSITA). Pet., 16.

III. THE '631 PATENT

A. Overview of the '631 Patent

The '631 Patent describes a novel way of addressing “crosstalk” in the field of data transmissions and physical channels. EX1001, 18-20. For example, when a “channel uses a twisted pair of copper cables and both channels are in the same cable or cable binder,” the “multi-pair copper cables can generate crosstalk,” such as “Near-End Crosstalk (NEXT) 33 and Far-End Crosstalk (FEXT) 34” as depicted in Figure 3. *Id.*, 2:5-11.

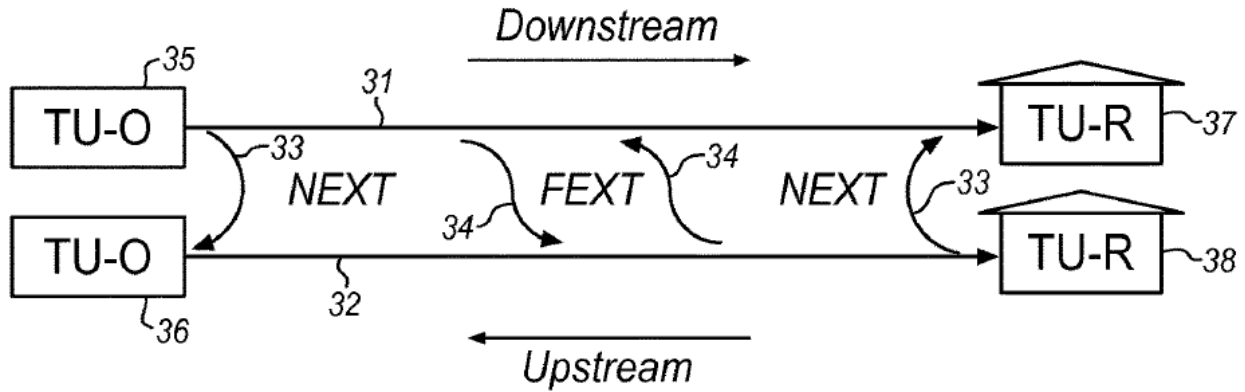


FIG. 3

EX1001, FIG. 3.

To address these crosstalk issues, the '631 patent provides a novel and flexible way of “scheduling time slot allocations for the physical channels so that upstream transmissions do not occur at the same time as downstream transmissions.” EX1001, 2:30-35. For example, the '631 patent explains that “enforcing perfect alignment of each slot in each frame” is not required to avoid NEXT. *Id.*, 4:4-7. That is, “some overlap between downstream and upstream time slots may be allowed.” *Id.*, 4:60-63. “This has the advantage that one line can transmit more data than other lines if it has high demand, while the other lines can be quiet and save power.” *Id.*, 4:8-10.

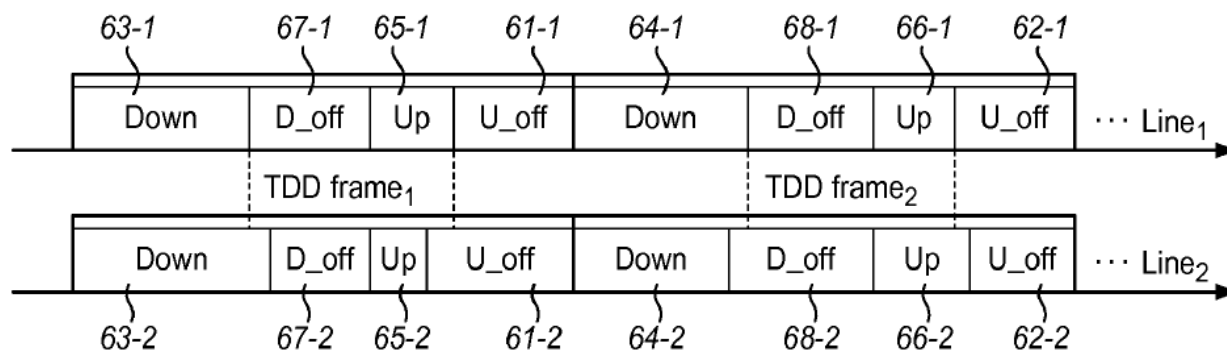


FIG. 6

EX1001, FIG. 6.

As seen in FIG. 6, “downstream off portions” and “upstream off portions” are not required to be aligned because “[w]hen a channel is off, then it is not generating any interference.” EX1001, 4:18-23. “Embodiments of the invention help to control the off periods and determine how to adapt the off periods for each channel to avoid NEXT and to minimize power usage.” *Id.*, 4:25-27. “The slot times are arranged in such a way as to avoid or reduce NEXT when possible... The slot times and off times may also be calculated to satisfy the traffic requested by subscribers, and can further minimize power usage by maximizing off times.” *Id.*, 5:62-6:2. In this manner, the ’631 patent provides a novel way of managing upstream and downstream communications to avoid or reduce NEXT while also minimizing power usage. *Id.*

The ’631 patent additionally supports embodiments where data is transmitted “in only one direction.” *Id.*, 4:56-59. For example, a particular channel may be set to “receive-only mode, with the transmitter turned off. This allows

power savings by turning off the transmitter.” *Id.*, 10:43-45. “The TDD management system may further coordinate off times by instructing one or more transceiver(s) to be in receive-only mode.” *Id.*, 17:53-57. In this manner, the ’631 patent also supports unidirectional channels and communications as an additional way of managing off times to avoid NEXT and minimize power usage.

B. Prosecution History

As Petitioner noted, during prosecution, Applicant distinguished the Cioffi reference and stated that “Cioffi does not disclose having separate channels for upstream and downstream. Instead, the alleged lines [in] Cioffi appear to be bi-directional. Therefore, Cioffi does not have the need for having separate channels for upstream and downstream.” EX1002, 390; Pet., 4-5. Petitioner argues that this amounts to a disavowal of claim scope, which excludes bidirectional physical channels from the claims. Pet., 6-8.

While Patent Owner takes no position on this construction or on claim scope disclaimer, the asserted Bingham and Strobel references are both cumulative with Cioffi and similarly deficient under Petitioner’s interpretation of the claims and prosecution history. As explained in Section V, both Bingham and Strobel exclusively recite bidirectional channels and therefore fail to teach the claimed first and second physical channels under Petitioner’s interpretation of the claims or the District Court’s. Thus, under Petitioner’s interpretation of the prosecution history,

both Bingham and Strobel—which serve as the basis for Grounds 1 and 2A-2D respectively—are deficient for failing to disclose the claimed first and second “*physical channels*.”

IV. CLAIM CONSTRUCTION

For purposes of this Preliminary Response, Patent Owner agrees the *Phillips* standard applies. Without taking a position on Petitioner’s proposed constructions for “physical channel” and the “means for” limitations, this Preliminary Response analyzes the Petition’s positions using these constructions. Pet., 6-9. This Preliminary Response also addresses the District Court’s Claim Constructions. EX2006, 21-47. Patent Owner, however, reserves the right to contest these constructions during the proceeding.

A. “physical channel”

Petitioner argues that “physical channel” should be construed as “a physical channel that transmits in only the upstream or the downstream, not both.” Pet., 8. The District Court has similarly construed this term to mean “a channel that can be used for communications in either an upstream direction or a downstream direction, but not both.” EX2006, 33.

While Patent Owner currently takes no position on this construction, Patent Owner applies both constructions in analyzing the Petition’s Grounds for the purpose of this Preliminary Response. As further explained below, Bingham and

Strobel as applied in Grounds 1 and 2A-2D fail to teach or otherwise render obvious the claimed first and second “physical channels” under either Petitioner’s or the District Court’s construction of the term. Section V. Because the Petition fails to demonstrate why the art discloses the claimed first and second “physical channels” under Petitioner’s own construction or the District Court’s, the Petition is fatally flawed and the Board should deny institution.

B. “Means for” Limitations

Regarding independent claim 37, Petitioner cites several passages from the ’631 patent’s specification to allegedly identify structure and function. Pet., 8-9. The District Court also provided constructions for these terms. EX2006, 46-47. Patent Owner currently takes no position on these constructions.

C. Additional District Court Constructions

The District Court additionally analyzed the term “substantially not simultaneous” and indicated that the term was not indefinite and is construed to have its plain meaning. EX2006, 27. Patent Owner agrees with the District Court’s construction and analysis.

The District Court also construed “machine-readable medium” to mean “transitory or non-transitory machine-readable medium.” EX2006, 40. Patent Owner currently takes no position on this construction.

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

Claim 1 recites “*scheduling upstream time slots for upstream transmission in a first physical channel*” and “*scheduling downstream time slots for downstream transmission in a second physical channel.*” Independent claims 34 and 37 recite similar features. Petitioner fails to demonstrate that Bingham or Strobel as applied in Grounds 1 and 2A-2D teach the claimed *first and second physical channels* under Petitioner’s own construction or the District Court’s construction.

Petitioner argues that the term “*physical channel*” should be construed to mean “a physical channel that transmits in only the upstream or the downstream, not both.” Pet., 8. Petitioner further argues that “bidirectional physical channels” should be excluded from the scope of the claims. Pet., 6. The District Court construed the term “physical channel” to similarly mean “a channel that can be used for communications in either an upstream direction or a downstream direction, but not both.” EX2006, 27-33.

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

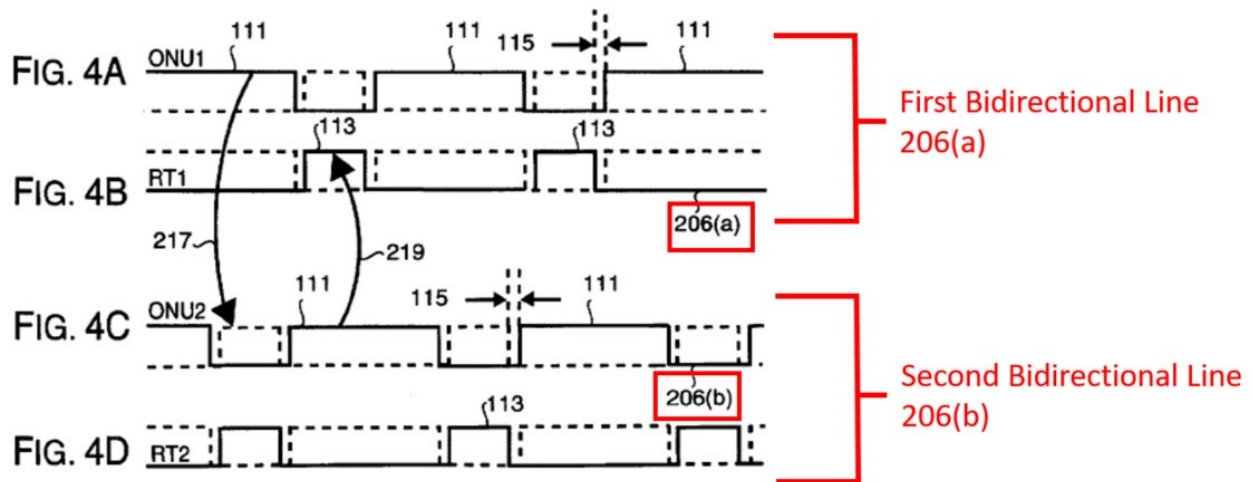
construction of “a physical channel that transmits in only the upstream or the downstream, ***not both***.” Pet. 8 (emphasis added); *see also* EX2006, 33 (District Court construing the term to mean “a channel that can be used for communications in either an upstream direction or a downstream direction, but not both”).

Petitioner also fails to establish why a POSITA would have found this obvious or why a POSITA would have been motivated to modify Bingham or Strobel to operate in this manner. Pet., 18-19, 34-35.

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.

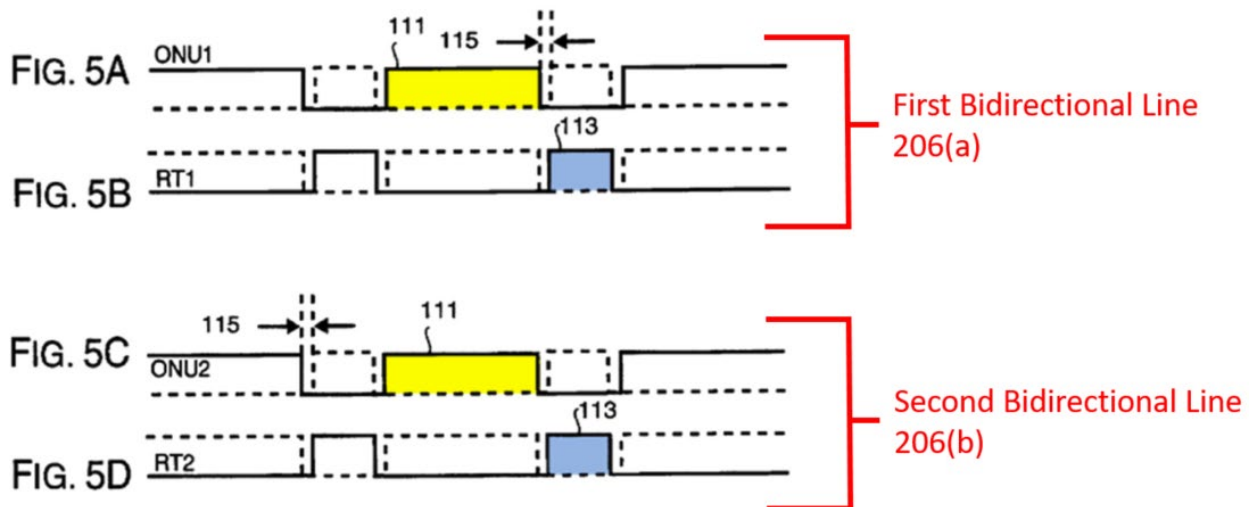
A. Ground 1 – Bingham does not teach first and second “physical channels”

In applying Bingham to claim elements 1[a] and 1[b], Petitioner first cites Bingham’s upstream and downstream communications as depicted in Figures 4A-4D and Figures 5A-5D. Pet., 20-21. As seen from Figures 4A-4D, Bingham describes two bidirectional lines 206(a) and 206(b) that are arranged into a twisted pair. EX1004, 6:65-7:1.



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

Bingham explains that “[e]ach line provides a sixteen symbol downstream communication period 111 [and] a two symbol upstream communication period 113....” EX1004, 7:1-4; *see also id.*, 7:5-9 (describing both lines facilitating downstream and upstream transmissions). Bingham applies this same bidirectional line configuration to FIGs. 5A-5D:



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. Namely, Petitioner's proposed construction is that the claimed "physical channel" **cannot** be bidirectional. Pet., 6; EX2006, 28. While Petitioner argues that "Figure 5B depicts a first physical channel and Figure 5C depicts a second physical channel," this statement does not address Bingham's explanation that Figures 5B and 5C still use bidirectional lines. EX1004, 7:1-9, 7:16-24; Pet., 21, 23. Thus, Petitioner fails to demonstrate that Bingham 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. Pet., 18-19. But Petitioner fails to adequately demonstrate why a POSITA would have been motivated to modify Bingham to use unidirectional channels beyond mere conclusory statements. *Id.*

For example, Petitioner argues that a unidirectional system would be "less complex from a management perspective" because unidirectional systems would not include a "turnaround time" that occurs in bidirectional channels. Pet., 18-19. But Petitioner has provided no compelling evidence to support this assertion.

First, Petitioner cites the following passage from Strobel (EX1005), but this passage does not provide any motivation to use unidirectional channels instead of

bidirectional channels:

To reduce hardware complexity and cost, *parts of the communication unit hardware are shared for uplink and downlink transmission.*

Although sharing reduces complexity and cost, it also has a disadvantage in that turnaround time is required to switch between uplink and downlink, and vice versa. Turnaround time reduces the rate efficiency.

EX1005, 21:3-9.

This passage does not mention unidirectional channels at all and accordingly provides no motivation to use unidirectional channels over bidirectional channels. Further, the mere mention of sharing “hardware” for uplink and downlink transmissions provides no specificity regarding bidirectional or unidirectional channels and therefore no motivation for using unidirectional channels either. Thus, Petitioner’s lone citation to this passage provides little to no evidence for its alleged motivation to modify Bingham to use unidirectional channels. 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 re-asserts that the claimed physical channel should exclude bidirectional channels. EX1003, ¶¶127, 135-136, 218. Petitioner’s declarant then repeats the Petition’s arguments and citation to Strobel, but adds one additional citation to the entirety of the book *Broadband Access Networks*

(EX1028). *See* EX1003, ¶218. Petitioner’s declarant then provides the following conclusory 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.” *Id.* 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 instead of bidirectional channels. Thus, Petitioner’s declarant also does not provide any compelling supporting evidence, and the Board should give this testimony “little or no weight.” *TikTok Inc. v. NTech Properties, Inc.*, IPR2024-01339, Paper 9, 16 (P.T.A.B. Feb. 25, 2025); *cxLoyalty, Inc. v. Maritz Holdings Inc.*, 986 F.3d 1367, 1378 (Fed. Cir. 2021); 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.”).

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 Figure 1, Strobel’s

system employs “transceivers” to facilitate bidirectional communications between a central unit and remote terminals. EX1005, 13:34-52, FIG. 1.

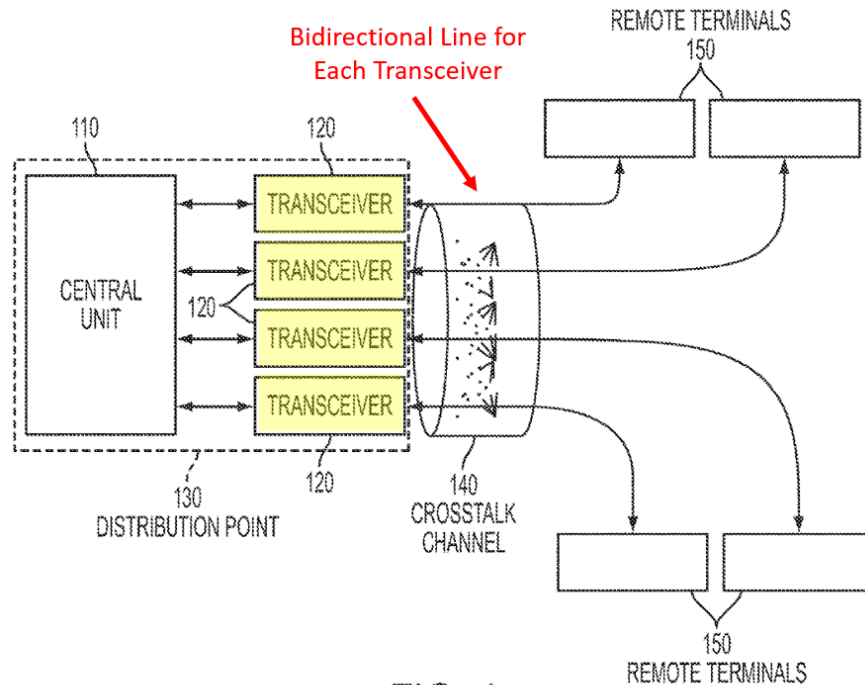


FIG. 1

EX1005, FIG. 1 (annotated).

Strobel explains:

“The central unit 110 manages the system, communicating directly with transceivers 120. ... The central unit 110 may transmit to or receive from the transceivers 120. The transceivers 120 may *transmit to either the central unit 110 or through the crosstalk channel 140 to the remote terminals 150*, in which case the transceivers 120 are acting as transmitters. The transceivers 120 may *receive from either the central unit 110 or through the crosstalk channel 140 from the remote terminals 150*, in which case the transceivers 120 are acting as receivers.”

EX1005, 13:35-46. As seen from this description, Strobel’s “transceivers” facilitate bidirectional communications between the central unit 110 and remote terminals 150. *Id.*

The Petition’s cited portions of Strobel support this understanding as well. In applying Strobel to claim elements 1[a] and 1[b], Petitioner cites Strobel’s upstream and downstream communications as depicted in Figure 11 and Figure 16. Pet., 42-45.

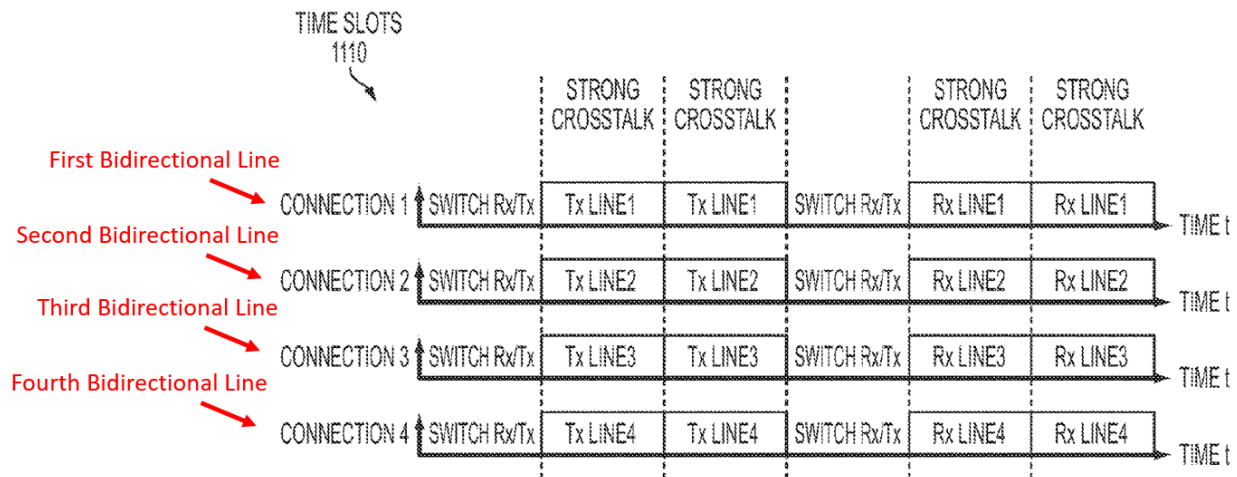


FIG. 11

EX1005, FIG. 11 (annotated).

As seen in FIG. 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 11 and the corresponding description also indicate that there are time slots for both uplink and downlink transmissions on each individual line, which further demonstrates bidirectional capabilities. *Id.* Figure 16 also

supports this understanding.

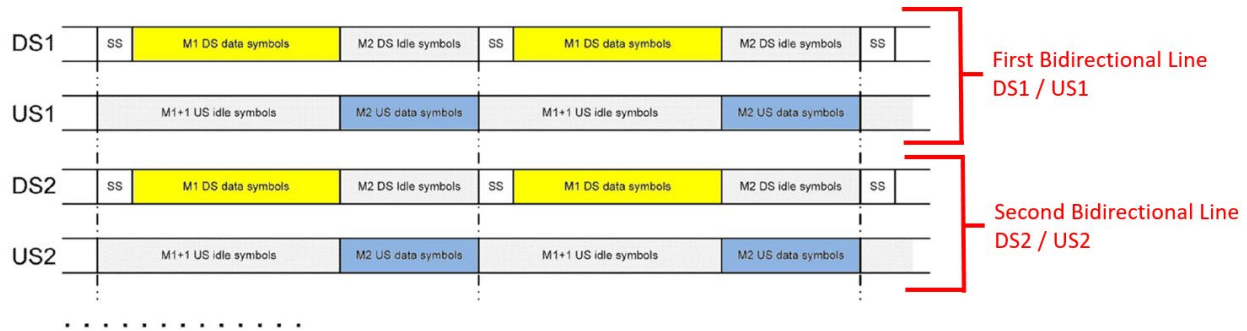


FIG. 16

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. This switch time and switching functionality again underscore that each line and transceiver facilitate bidirectional communications. *Id.*

With this understanding, Strobel explicitly describes bidirectional lines, which does not disclose the claimed *first and second physical channels* under Petitioner’s proposed construction. Namely, Petitioner’s proposed construction is that the claimed “physical channel” **cannot** be bidirectional. Pet., 6; EX2006, 28. While Petitioner argues that “M2 US” from Figure 16 corresponds to the “first physical channel” and that “M1 DS” corresponds to the “second physical channel,” this is erroneous for the reasons previously presented. Pet., 42, 44. Namely, “M2

US” and “M1 DS” are simply upstream and downstream communications that occur over their respective bidirectional communication lines. EX1005, 30:11-32, 31:40-44. This is again evidenced by Strobel’s Figure 16 discussion of switching between transmitting and receiving functionality. *Id.*, 30:25-32; *see also id.*, 13:35-46. Petitioner’s citations therefore do not address Strobel’s use of bidirectional transceivers for each line and connection—including those depicted in Figures 11 and 16. Pet., 42-45; EX1005, 13:34-52, 22:11-23, 30:25-32. 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. 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.

For example, Petitioner cites the same passage from Strobel and argues that a unidirectional system would be “less complex from a management perspective” because unidirectional systems would not include a “turnaround time” that occurs in bidirectional channels. Pet., 34-35 (citing EX1005, 21:6-9). But like Ground 1, Petitioner has provided no compelling evidence to support this assertion. Section

V.A.

First, the passage from Strobel does not mention unidirectional channels at all and therefore provides no motivation to use unidirectional channels over bidirectional channels. Section V.A. The description of sharing “hardware” for uplink and downlink transmissions provides no specificity or motivation for using unidirectional channels. *Id.*

Second, 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. For example, Petitioner’s declarant again cites EX1028 without providing any clear indication that (1) using unidirectional channels was well-known or (2) that a POSITA would have been motivated to modify Strobel to use unidirectional channels instead of bidirectional channels. EX1003, ¶279. Thus, Petitioner’s declarant also does not provide any compelling supporting evidence, and the Board should give this testimony “little or no weight.” 37 C.F.R. § 42.65(a).

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. 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. Specifically, Petitioner fails to establish that Strobel is entitled to the benefit of a February 22, 2012 priority date because the two provisional applications cited in the Petition (i.e., EX1006 and EX1007 or the “Strobel Provisionals”) do not provide adequate written description support for Strobel’s Claim 4. Pet., 10-13. Because this impacts four out of the five grounds presented in the Petition, the Board should not waste resources and should deny institution. *See* Section VII.

Under *Dynamic Drinkware*, Petitioner bears the burden of demonstrating that Strobel is entitled to the priority dates of the relied upon provisional applications. *Dynamic Drinkware, LLC v. Nat’l Graphics, Inc.*, 800 F.3d 1375, 1380 (Fed. Cir. 2015). Petitioner must show that the Strobel Provisionals provide sufficient support for at least one claim from Strobel. *Id.*, at 1382. Petitioner has not met its burden.

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. Petitioner only cites the Strobel ’943 Provisional

(EX1006) for this claim limitation and does not rely on the Strobel '270

Provisional (EX1007). But the Strobel '943 Provisional fails to adequately provide support for this claim limitation. As seen from the plain language of claim 4, a “*plurality of power level configurations correspond[ing] to a non-zero data rate*” 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.
---	--

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).

In a final effort to identify written description support, Petitioner alleges that “claim 1 disclosed in the ’943 Provisional almost entirely discloses claim 4 word for word.” Pet., 12. As seen from the table comparing the relevant claim limitations below, however, Petitioner severely overstates this comparison—especially with respect to the claim limitation identified above:

Strobel (EX1005), Claim 4	Strobel ’943 Provisional (EX1006), Claim 1 (Page 36)
“wherein the system is configured to compute <u>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</u> , store in memory data about said configurations, process	“wherein the system is configured to compute <u>locally optimal communication configurations</u> , 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,

said data into time sharing information comprised in a medium access plan, the time sharing information specifying, for each one of the multiple electronic communication lines, when to switch between the respective plurality of power level configurations, and to convey the medium access plan to the transceivers, wherein the medium access plan includes all downstream and upstream transmissions over all active transmission media.”	wherein such transceivers and remote terminals later transmit in accordance with such time sharing information.”
--	--

As seen from this table, claim 1 from the Strobel ’943 Provisional refers generally to “locally optimal communication configurations,” which is a different limitation with an entirely different claim scope. EX1004, 36 (claim 1). Claim 1 from the Strobel ’943 Provisional therefore does not support a “*plurality of power level configurations correspond[ing] to a non-zero data rate*” as recited in claim 4 from Strobel.

In summary, Petitioner has failed to demonstrate that the Strobel Provisionals provide adequate written description support for the full scope of 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 Strobel therefore does not qualify 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 VII.

VII. 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; *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).

VIII. CONCLUSION

Because the Petition fails to show a reasonable likelihood that any of the challenged claims are unpatentable as obvious in view of the cited art, the Board must deny institution.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX PLLC

/Michael D. Specht/

Michael D. Specht
Registration No. 54,463
Attorney for Patent Owner

Date: May 12, 2025

1101 K Street, NW, 10th Floor
Washington, DC 20005
(202) 371-2600

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

1. This Patent Owner Preliminary Response complies with the type-volume limitation of 14,000 words, comprising 4,556 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.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX PLLC

/Michael D. Specht/

Michael D. Specht
Registration No. 54,463
Attorney for Patent Owner

Date: May 12, 2025

1101 K Street, NW, 10th Floor
Washington, DC 20005
(202) 371-2600

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

I certify that the above-captioned **PATENT OWNER PRELIMINARY
RESPONSE UNDER 37 C.F.R. § 42.107(a)** and associated Exhibits 2001-2009
were served in their entireties on May 12, 2025, upon the following parties via
electronic mail:

M. Scott Stevens (Lead Counsel)
Christopher TL Douglas (Back-up Counsel)
Nicholas C. Marais (Back-up Counsel)
ALSTON & BIRD LLP
scott.stevens@alston.com
christopher.douglas@alston.com
nic.marais@alston.com

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX PLLC

/Michael D. Specht/

Michael D. Specht
Registration No. 54,463
Attorney for Patent Owner

Date: May 12, 2025

1101 K Street, NW, 10th Floor
Washington, DC 20005
(202) 371-2600