

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SAMSUNG ELECTRONICS CO., LTD.,
Petitioner

v.

WILUS INSTITUTE OF STANDARDS AND TECHNOLOGY INC.,
Patent Owner

Case IPR2025-01043
U.S. Patent No. 11,116,035

PETITIONER'S REPLY TO PATENT OWNER'S RESPONSE

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EXHIBITS

SAMSUNG-1001	U.S. Patent No. 11,116,035 to Ahn, et al. (“the ’035 Patent”)
SAMSUNG-1002	Excerpts from the Prosecution History of the ’035 Patent (“the Prosecution History”)
SAMSUNG-1003	Declaration and Curriculum Vitae of Dr. Matthew Valenti
SAMSUNG-1004	U.S. Pub. No.: 2017/0202023 (“Zhou”)
SAMSUNG-1005	Provisional Patent Application No. 62/278,268 (“Zhou-Prov”)
SAMSUNG-1006	U.S. Pub. No.: 2017/0325264 (“Cherian”)
SAMSUNG-1007	Provisional Patent Application No. 62/333,745 (“Cherian-Prov”)
SAMSUNG-1008	U.S. Pub. No.: 2018/0034595 (“Kim”)
SAMSUNG-1009	U.S. Pub. No.: 2018/0352572 (“Cariou”)
SAMSUNG-1010	U.S. Patent No.: 9,197,482 (“Bharghavan”)
SAMSUNG-1011	Complaint, Wilus Institute of Standards and Technology Inc., v. Samsung Electronics Co., Ltd., et al., 2-24-cv-00765 (EDTX) filed September 20, 2024
SAMSUNG-1012	IEEE-802.11-16/1180r0
SAMSUNG-1013	RESERVED
SAMSUNG-1014	ADS for Zhou-Prov Provisional Patent Application No. 62/278,268

SAMSUNG-1015	ADS for Cherian-Prov Provisional Patent Application No. 62/333,745
SAMSUNG-1016	CWAP: Certified Wireless Analysis Professional, Official Study Guide, McGraw Hill, 2004.
SAMSUNG-1017	802.11: Part 11: Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) Specifications Standard, IEEE Computer Society, 2012
SAMSUNG-1018	U.S. Pub. No.: 2010/0195664 (“Ho”)
SAMSUNG-1019	Patent Trial and Appeal Board (PTAB) Boardside Chat: Interim Processes Relating to institution in AIA Proceedings (Apr. 17, 2025)
SAMSUNG-1020	Coke Morgan Stewart, Interim Processes for PTAB Workload Management (Mar. 26, 2025)
SAMSUNG-1021	Stipulation
SAMSUNG-1022	IEEE 802.11-16/0024r1
SAMSUNG-1023-1100	[Reserved]
SAMSUNG-1101	Memorandum from Coke Morgan Stewart, Acting Dir., USPTO, to All PTAB Judges (Mar. 26, 2025), https://www.uspto.gov/sites/default/files/documents/InterimProcesses-PTABWorkloadMgmt-20250326.pdf
SAMSUNG-1102	<i>Taylor</i> , Samsung Semiconductor USA, https://semiconductor.samsung.com/us/sas/company/taylor/ (last visited May 24, 2025)
SAMSUNG-1103	<i>Samsung Electronics Unveils a US\$200bn Investment Plan in the U.S.</i> , Bus. Korea (July 25, 2022), https://www.businesskorea.co.kr/news/articleView.html?idxno=97177

SAMSUNG-1104	<i>Samsung Electronics to Receive up to \$6.4 Billion in Direct Funding under the CHIPS and Science Act</i> , Samsung Semiconductor USA (Apr. 14, 2024), https://semiconductor.samsung.com/us/sas/local-news/samsung-electronics-to-receive-up-to-6-4-billion-in-direct-funding-under-the-chips-and-science-act/
SAMSUNG-1105	<i>President Trump Says Samsung Is Planning a Massive Investment in the US, Calls It an Aftermath of His Tariff Policy</i> , wccftech (May 1, 2025), https://wccftech.com/president-trump-says-samsung-is-planning-a-massive-investment-in-the-us/
SAMSUNG-1106	Order Granting Stay in <i>Maxeon Solar PTE. LTD. v. Hanwha Solutions Corp.</i> , No. 2:24-CV-00262-JRG (E.D. Tex. May 5, 2025) (Gilstrap, J.)
SAMSUNG-1107	Order Granting Stay in <i>Cellspin Soft, Inc. v. Bytedance Ltd.</i> , No. 2:23-CV-00496-JRG-RSP (E.D. Tex. Jan. 26, 2025) (Payne, J.)
SAMSUNG-1108	Motion Success for Stay Pending IPR (Post-Institution) (E.D. Tex.), DocketNavigator (last visited August 27, 2025)
SAMSUNG-1109	LegalMetric, Individual Judge Report for Judge James Rodney Gilstrap Patent Cases December 2011 to January 2025
SAMSUNG-1110	Complaint, <i>Wilus Inst. of Standards and Tech. Inc., v. Samsung Elecs. Co., Ltd., et al.</i> , No. 2-25-cv-00070 (E.D. Tex filed January 23, 2025)
SAMSUNG-1111	U.S. District Court for the Eastern District of Texas Calendar Events Set for 6/1/2026 for Judge Rodney Gilstrap
SAMSUNG-1112	[Reserved]
SAMSUNG-1113	Wi-Fi 6 Patent Brochure, Sisvel (Mar. 21, 2025),

https://www.sisvel.com/xlin7ipl485u/1kNkzUZptdvqKbYiX1DSfi/f518e18ee158be974d3c83f7cd7173be/Wi-Fi_6_Pool_patent_brochure.pdf

- SAMSUNG-1114 U.S. Pat. App. Pub. No. US 2015/0264617 A1 (“Choudhury US Publication”)
- SAMSUNG-1115 Woojin Ahn et al., *Clarification on applying MU EDCA parameter set* (Nov. 9, 2016) IEEE 802.11-16/1425r1
- SAMSUNG-1116 Osama Aboul-Magd, *TGax November 2016 Meeting Agenda* (Sep. 30, 2016) IEEE 802.11-16/1310r5
- SAMSUNG-1117 Letter from Kyung-rae Cho, Manager, Wilus Inst. of Standards. & Tech., Inc., to PatCom Administrator, IEEE-SA Standards Bd. Pat. Comm. (Jan. 15, 2021)
- SAMSUNG-1118 Yasuhiko Inoue, *IEEE 802.11 TGax November 2016 San Antonio Meeting Minutes* (Nov. 29, 2016) IEEE 802.11-16/1466r1
- SAMSUNG-1119 Abhishek Patil et al., *Proposed Resolution for CID 193 (BSS Color Disable Indication)* (Nov. 9, 2016) IEEE 802.11-16/1413r8
- SAMSUNG-1120 IEEE-SA Standards Board Bylaws, IEEE-SA Bd. Govs. (Nov. 2019)
- SAMSUNG-1121 IEEE-SA Standards Board Operations Manual, IEEE-SA Standards Bd. (Nov. 2019)
- SAMSUNG-1122 U.S. District Court – Judicial Caseload Profile (E.D. Tex), Admin. Off. U.S. Cts. (June 2025)
- SAMSUNG-1123 Osama Aboul-Magd, *TGax March 2017 Meeting Agenda* (Jan. 27, 2017) IEEE 802.11-17/0199r6
- SAMSUNG-1124 Yasuhiko Inoue, *IEEE 802.11 TGax March 2017 Vancouver Meeting Minutes* (Nov. 29, 2016) IEEE 802.11-17/0454r0
- SAMSUNG-1125 Transcript of Deposition of Dr. Zygmunt Haas

I. Introduction

The Petition established the unpatentability of the challenged claims. Patent Owner (“Wilus”) has failed to substantively rebut the Petition, relying instead on a series of legal and logical fallacies that ignore the technical reality of the prior art.

First, Wilus’s defense rests on improperly narrow claim construction arguments regarding “setting” a timer. Wilus’s construction is incorrect, but even if the Board were to adopt that construction, the combination of Zhou-Cherian-Kim renders the claims obvious.

Second, the Board should accord little, if any, weight to the declaration of Wilus’ expert, Dr. Haas, because, among other reasons, (i) by Dr. Haas’s own admission, his declaration relies heavily on a “presumption of validity” and the Examiner’s views set forth in the prosecution history, which have been established by the Board as materially erroneous, (ii) the Board’s review of a patent is *de novo*, meaning that no deference is to be accorded to the Examiner’s findings, especially since they are infected by material error, (iii) the Examiner never considered the combinations proposed in the Petition, (iv) because Dr. Haas is a non-attorney technical expert—not a legal expert—the conclusions of law in his declaration are meaningless, and (v) Wilus is effectively attempting to re-litigate the §325(d) discretionary denial issue, which was decided adversely to Wilus, making Wilus’

and Dr. Haas's file history based-arguments irrelevant and thus a waste of the Board's time and resources.

Third, the Petition demonstrates that the "when" clauses and "access category" limitations are simply applications of procedures known in the prior art. As detailed herein, the combination of Zhou-Cherian-Kim teaches these features by disclosing predictable timer triggers. Wilus's attempts to distinguish the prior art rely on an artificial dichotomy between "setting" and "resetting" that ignores the technical reality of timer functionality. Furthermore, the prior art describes the routine use of EDCA parameter timers configured for traffic access categories, rendering the claims obvious.

Fourth, Wilus fails to refute the technical motivation to combine the asserted references. Wilus's insistence that the Petition's combination is "hindsight" because the prior art authors did not explicitly document it is contrary to established law. *In re Fulton*, 391 F.3d 1195, 1200 (Fed. Cir. 2004) ("our case law does not require that a particular combination must be the preferred, or the most desirable, combination described in the prior art in order to provide motivation for the current invention."); *see also KSR*, 417 ("If a [POSITA] can implement a predictable variation, and would see the benefit of doing so, § 103 likely bars its patentability.").

In sum, Wilus's defense is built on an overly restrictive claim construction and an expert whose testimony is a rehash of the prosecution history rather than an

independent technical analysis. By failing to provide any substantive technical justification to distinguish the claimed conditional triggers from the routine optimizations taught by the prior art, Wilus has failed to rebut the case of obviousness. The record remains devoid of any factual evidence suggesting that the claims require more than the ordinary skill and common sense applied to the 802.11 architecture, and thus the Board should find all challenged claims unpatentable.

II. Wilus's Claim Construction Improperly Narrows the Claims and is Irrelevant Because the Petition Renders the Claims Obvious Under Either Construction

Samsung's position is that the claim term "setting a timer" does not also require "starting" that timer. In contrast, Wilus's position, also adopted by the District Court, is that the claim term "set" requires both "setting" a time, and "starting" that timer. This Reply discusses both competing constructions under the assumption that each finds at least some support in the record.

A. The Plain Meaning of "Set" Should be Applied Without Importing a "Starting" Limitation.

The specification does not redefine the plain meaning of "setting" to require "starting." Notably, the specification demonstrates the patentee knew how to explicitly require "starting" a timer but did not claim "starting." For example, the flowcharts in Figures 16 and 18 instruct the terminal to "Start MU EDCA timer."

SAMSUNG-1001, FIG. 16, 18, 26:3-5. In contrast, the challenged claims recite only “set[ting] a second parameter set timer,” with no mention of “starting.”

Furthermore, the specification repeatedly uses the word “set” to simply mean assigning a value without initiating any running clock, such as instructing the processor to “set the value of the CW to the CWmax” or “set the value of the backoff timer.” SAMSUNG-1001, 28:19-30, 47-50. “Setting” is claimed and the Board need not rewrite the claim to include the distinct action of “starting” simply to make the claims narrower or more functional. In *Chef America, Inc. v. Lamb-Weston, Inc.*, the Federal Circuit held that a claim must be construed as written, not as it should have been written, and a tribunal may not redraft claims “whether to make them operable or to sustain their validity.” 358 F.3d 1371, 1374 (Fed. Cir. 2004).

“A claim is not defective when it states fewer than all of the steps that may be performed in practice of an invention.” *Smith & Nephew, Inc. v. Ethicon, Inc.*, 276 F.3d 1304, 1311 (Fed. Cir. 2001). Because the term “setting” is not ambiguous, the distinct operational step of “starting” the timer does not need to be claimed, nor can it be improperly imported into the claim language. Even if “starting” the timer happens in practicing the claims, it remains a distinct operational step that the patentee simply did not claim.

While so called “common sense” analogies (discussed below) regarding kitchen ovens have specious appeal, the Federal Circuit is clear: “[w]hile we

construe the claims in light of the specification, limitations discussed in the specification **may not** be read into the claims.” *3M Innovative Props. Co. v. Tredegar Corp.*, 725 F.3d 1315 (Fed. Cir. 2013) (emphasis added). Here, the drafter claimed “setting” and omitted “starting.” When a POSITA would have understood a term within the claim, “our cases do not support prescribing a more particularized meaning unless a narrower construction is required by the specification or prosecution history.” *Id.*, 1329. Further, when the ordinary meaning of a claim term is readily apparent, “claim construction in such cases involves little more than the application of the widely accepted meaning of commonly understood words” and does “not require elaborate interpretation.” *Phillips*, 1314. There is no genuine ambiguity regarding the meaning of the word “setting” and Wilus cannot manufacture a dispute to force a narrower “set and start” construction. *Id.*, 1327 (a tribunal cannot adopt a narrowing construction where “the claim term at issue is not ambiguous”).

The Petition correctly mapped the art to the plain language of the claims. The Zhou-Cherian combination teaches “resetting” a timer/counter to zero (i) after a station transmits an uplink transmission or (ii) receives an ACK message. Pet, 46-48. A POSITA would have understood that Zhou’s disclosure of setting a timer as not necessarily also starting that timer. Under the plain meaning, Zhou’s action of

resetting the timer establishes a time value at the claimed conditional trigger points (e.g., when the transmission ends or when an immediate response is received).

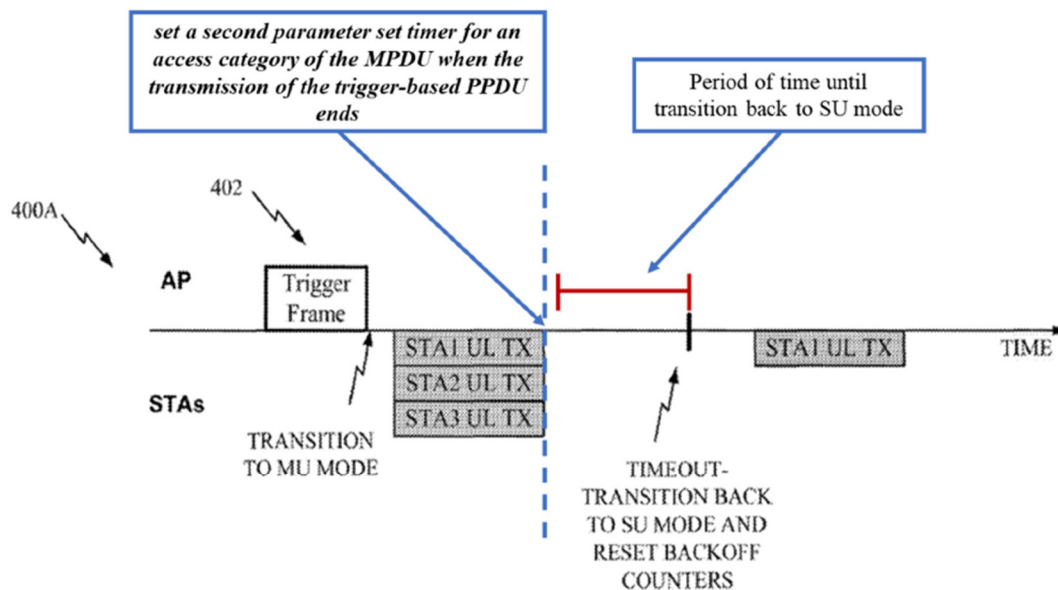
B. Even if the Board adopts Wilus’s construction, the prior art satisfies all claim limitations.

Wilus proposes that “set[ting] [a/the] . . . timer” means “assign[ing] a duration to and start[ing] [a/the] . . . timer,” (POR, 14-15) a construction the district court found not “unreasonable” based on everyday analogies like setting a timer for a kitchen oven or a lawn sprinkler. EX-2017, 10-11. However, Wilus’s attempt to read “starting” into the claim to *defeat* the prior art mapping fails because, if the specification and common knowledge inform the meaning of the claims, as Wilus alleges, they equally inform the POSITA’s understanding of the prior art. Wilus cannot imbue the claim with so called “common knowledge” while simultaneously stripping that same knowledge away from the prior art analysis to avoid a finding of obviousness.

Notably, Dr. Haas did not consider the claims under any construction other than the district court construction, stating “[i]f the board adopts a different construction for this claim . . . then I would need to look at my opinions and see whether my opinions remain the same or not.” SAMSUNG-1125, 90:2-6.

Applying Wilus’s own so called “common sense” logic, a POSITA reading Zhou and Cherian’s disclosure of resetting a timer arguably could have understood

that timer to have also started, just as one who sets an oven is understood to have started the baking process. Specifically, Cherian describes an EDCA parameter timer covering a “duration of time” during which the parameters are used after which “each STA transitions back to an SU mode.” Pet, 46-48.



SAMSUNG-1006, FIG. 4(a).

Pet, 47.

The Board agreed that Zhou describes the various conditional timing triggers to set or reset or “start” the timer. Pet, 46-48; ID, 13 (“We find sufficiently persuasive Petitioner’s explanation that ‘after’ in Zhou means after the transmission ends if an ACK is not requested; in the case of an ACK, Zhou expressly discloses starting the timer after receiving the ACK.”) (emphasis added); SAMSUNG-1005,

¶81. The Board also found that Zhou “discloses a timer to determine when to transition back to legacy EDCA parameters.” ID, 12 (citing SAMSUNG-1005, ¶79).

By modifying Cherian’s MU EDCA timer to start at Zhou’s conditional trigger points—such as the end of a transmission or the receipt of an ACK—the combination teaches both “assigning a duration” (Cherian’s validity period) and “starting the timer” (Zhou’s reset triggers). ID, 13; Pet, 46-49. Therefore, the claims remain unpatentable even under Wilus’s narrower, incorrect construction.

III. Cherian is Prior Art Under *Lynks Labs*

Given that the Supreme Court has denied certiorari in *Lynks Labs*, the Federal Circuit’s ruling stands and “a patent application publication can be back-dated like a patent.” POR, 19-20. Thus, the argument that Cherian is “not prior art” is wrong under controlling law.

IV. Wilus’s Arguments Place Undue Weight on Erroneous Examiner Statements in Prosecution History

Attempting to effectively re-litigate the §325(d) discretionary denial issue, Wilus asserts that (i) “the Examiner issued these claims over effectively the same combination of art” (POR, 22), (ii) “[t]he addition of Kim does not add any disclosure that the Examiner did not likely already consider when withdrawing the rejection and allowing the patent,” (POR, 22-23), (iii) “in light of the Examiner’s rejection of Petitioner’s argument, Petitioner has not met its burden,” (POR, 23) and

(iv) “the Examiner considered effectively the same combination of references and knowledge, and [] concluded the claimed invention was novel and non-obvious.”

POR, 29. Wilus is misguided on all four points.

A. Wilus and Dr. Haas fail to provide independent technical analysis to rebut the Petitioner’s showing of obviousness.

Wilus urges the Board to rely on the arguments of the Examiner who “allowed the claims.” POR, 31. This reliance is legally improper because an IPR is not a deferential review of the prosecution history, but “a second [*de novo*] look at an earlier administrative grant of a patent.” *Cuozzo Speed Techs., LLC v. Lee*, 579 U.S. 261, 279 (2016). The Court explained the very purpose of an IPR is to “reexamine an earlier agency decision,” a mandate which requires an independent assessment of the record, not a rubber stamp of the Examiner’s conclusions. *Id.* While the Petitioner bears the ultimate burden of persuasion, a Patent Owner seeking to rebut the Petition’s case of obviousness must provide substantive evidence. Dr. Haas’s deference to the Examiner is not evidence—it is a legal conclusion. An expert whose opinion starts with a “presumption of validity” and amounts to merely “I agree with the Examiner” solely because the Examiner made a certain finding, fails to provide the independent technical basis required by Rule 42.65.

For example, throughout his declaration and during his deposition, Dr. Haas repeatedly deferred to the Examiner’s previous findings. EX2016, ¶¶81-85, 95

(“Examiner eventually concluded that the claimed invention was novel and nonobvious”), 101 (“the Examiner eventually allowed the claims over this combination”); SAMSUNG-1125, 81:5-82:12, 194:3-197:17. During deposition, Dr. Haas erroneously believed that the ’035 patent has “a presumption of validity” in these proceedings stating that “if the examiner considered the very combination that’s being proposed by the petition . . . [and] the examiner actually considered the arguments . . . and still allow[ed] this patent, then there’s even further weight that has to be given to this fact.” SAMSUNG-1125, 194:21-195:21. True, Dr. Haas’s statement arguably finds some support in §325(d)’s discretionary denial standard, but that issue, which is unrelated to the obviousness inquiry, has already been decided adversely to Wilus.

The Board should disregard these opinions because relying on an administrative “presumption of validity” is not only incorrect as a matter of law but also provides no substantive technical rebuttal to Petitioner’s obviousness mapping.

B. Examination has already been proven erroneous

Assertions by Wilus effectively urge the Board to ignore the new and material evidence in the form of the Zhou-Cherian-Kim combination that the Examiner never had a chance to consider. Because the notice of allowance followed the amendment to include elements [1.4]-[1.5], it is presumed that elements [1.4]-[1.5] are the reason for allowance. POR, 12-13; SAMSUNG-1013, 362-365. But, in instituting this

proceeding, the Board found “Petitioner’s contentions sufficiently persuasive for limitations 1.4 and 1.5.” ID, 14.

By tethering his opinion to the Examiner’s conclusions, Dr. Haas departed from his role as a technical expert and instead acted as a cheerleader for the Examiner. Indeed, parts of his testimony are merely legal commentary on the Examiner’s findings rather than an independent analysis of the prior art’s predictable solutions. Under Rule 42.65(a), such conclusory deference to the file history is entitled to little, if any, weight.

V. The Combination of Zhou-Cherian-Kim Renders Obvious the Conditional Setting of the Second Parameter Set Timer –Limitations [1.4]-[1.5] and [8.3]-[8.4]

A. Wilus Overstates the Requirements of the “When” Limitations

Wilus argues that the “when” limitations (1.4-1.5 and 8.3-8.4) require that “[t]he claimed timer is set based on¹ whether the wireless communication terminal requests an immediate response (or not) in an MPDU.” POR, 21-22 (emphasis added). This assertion finds no basis in the actual claim language. Wilus is attempting to read a requirement into the claims that the MPDU itself must dictate the timer’s duration via signaling. However, as will be explained below, the claim

¹ The applicant removed the broader language of “based on whether a response . . . is received” replacing it with the “when” clauses. SAMSUNG-1017, 389.

language, specification, and expert testimony confirm the “when” limitations recite a temporal condition for when a transmission is complete.

First, in element [1.4] the claim requires “set[ting] a second parameter set timer . . . when the transmission . . . ends.” Pet, 48. The specification confirms this is a point-in-time trigger describing “set[ting] the MU EDCA timer at the time point at which transmission of the trigger-based PPDU ends.” SAMSUNG-1001, 25:2-10. Both experts agree with this interpretation, which contradicts Wilus’s “signaling theory” argument in the POR. As Dr. Haas argued, “[b]ecause, for example, the PPDU did not ask for acknowledgement. Then you are going to . . . start the timer immediately after you finish [transmitting].” SAMSUNG-1125, 119:15-19; SAMSUNG-1003, ¶140 (“EDCA timer is set after the UL-MU transmission is complete e.g., *when the transmission of the ... PPDU ends.*”).

Second, in element [1.5], the claim requires “set[ting] the second parameter set timer . . . for which immediate response is received.” As explained in the Petition, “[a] successful transmission occurs when the node either receives an expected acknowledgment correctly, or transmits a frame that does not require an acknowledgement.” Pet, 48-49 (citing SAMSUNG-1018, 0009), Pet, 55-56 (“STA measures the ‘completion’ of the transmission by receiving an ACK—if an ACK is requested—or upon completion of the physical transmission.”). The specification agrees, describing “set[ting] an MU EDCA timer upon receiving a response to the

transmission.” SAMSUNG-1001, 19:62-66. Once again, both experts agree with this interpretation that contradicts the POR’s signaling requirement. Dr. Haas testified in deposition that “the scenario in which the PPDU requested acknowledgement, and then when the acknowledgement now comes back . . . then at the end of the acknowledgement, the timer . . . will start.” SAMSUNG-1125, 120:1-5. In agreement, Dr. Valenti explained that “the STA pauses to confirm the transmission was successfully received. . . [and when] acknowledgement is received . . . the STA *set[s] the second parameter set timer*”). SAMSUNG-1003, ¶¶151, 154-155.

Thus, contrary to Wilus’s assertion, elements [1.4] and [1.5] are not “based on” the indication within the MPDU signaling the ACK type, but instead are based on the moment the transmission ends in each respective case. Pet, 40-41. In [1.4], the timer is set “when the transmission . . . ends.” In [1.5], “the transmission requiring an immediate response is not complete until the immediate response is received.” Pet, 48 (citing SAMSUNG-1003, ¶141). This distinction is a matter of timing, illustrated in FIG. 18, which demonstrates the various times at which the timer is set. SAMSUNG-1001, FIG. 18. Wilus cannot transform a temporal “when” clause into a physical signaling requirement that does not exist in the claims.

As stated in the Petition and highlighted at Institution, “‘after’ in Zhou means after the transmission ends if an ACK is not requested; in the case of an ACK, Zhou

expressly discloses starting the timer after receiving the ACK.” ID, 13 (citing Pet, 46–49).

B. Zhou-Cherian-Kim Renders Obvious the “When” Limitations

Wilus attempts to distinguish the prior art by arguing that: (i) “Zhou does not disclose the claimed timer ‘setting’ based on whether an immediate response is requested,” (POR, 25) (ii) “Zhou . . . does not disclose starting a timer based on whether an MPDU requests an immediate response,” (POR, 25) (iii) “[t]he combination. . . do[es] not disclose the . . . conditional setting of a timer based on the MPDU.” POR, 26-27. These arguments fail as a matter of law and technical reality. As established above, the claims recite temporal triggers based on when a transmission ends—not a signaling requirement based on the MPDU. Furthermore, Wilus’s attempt to distinguish “setting” from “resetting” is flawed for at least two reasons:

First, Wilus’s position is internally inconsistent: it contends that “setting” encompasses “starting” in the claims yet simultaneously argues that “resetting” is excluded or somehow that “resetting” excludes “starting”. POR, 14-15, 25-26. Wilus’s construction cannot simultaneously have the claim limitation “set” require actions that “resetting” in Zhou does not. A POSITA cannot be imbued with so called “common sense” to read “starting” into the claim language while being stripped of that same common sense when reading the prior art. If a POSITA understands that

“setting” a timer in the ’035 patent includes initiating its operation, that same POSITA would necessarily understand that “resetting” a timer in Zhou performs that exact same function.

Moreover, Wilus’s own expert has abandoned the distinction between “setting” and “starting.” While Dr. Haas’s declaration initially asserted Zhou’s timer cannot “start” because “the timer was *already* started before” (Haas Decl. ¶¶88-89), he recanted this position in deposition. Dr. Haas admitted “[y]ou will typically, you know, restart the timer or start the timer again.” SAMSUNG-1125, 118:9-18. This admission confirms that “resetting” a timer is functionally the act of starting it again, directly contradicting the “technical distinction” Wilus now attempts to manufacture.

Second, in the context of networking protocols and timer logic, a POSITA would have understood that assigning a timer value (Cherian ¶63) and resetting the timer under Zhou’s temporal conditions (Zhou ¶81) is functionally and technically a “setting” of that timer. Pet, 46-48. The temporal conditions for this act in the prior art is equivalent to the conditions in the claims: the completion of a transmission. Obviousness is guided by “common sense” and “predictable results,” not by semantic labels that vanish in technical context. *KSR*, 417.

C. Wilus Misunderstands the Combination and Motivation to Combine

First, Wilus mischaracterizes the Petition's mapping by analyzing the references in isolation rather than as a combination. The Petition makes clear that it's the *combination* of Zhou-Cherian-Kim that discloses assigning a duration to a timer that later expires. Pet, 39-61; ID, 13-14. Cherian teaches a MU EDCA timer that defines the validity period of the parameters, while Zhou teaches the precise timing execution of *when* that timer should be reset. Pet, 39-61.

Second, Wilus erroneously argues that Zhou lacks disclosure on how to select the time point for resetting the timer and that the Petition's reliance on *KSR*'s design choice arguments given a finite number of options constitutes impermissible hindsight. POR, 27. Wilus cites to *TQ Delta*, but this case turned on a lack of evidence, and not on improper "hindsight." In that case, the Petitioner provided "conclusory" expert testimony that a POSITA *could* combine the references but failed to explain why they would. It did not strike down *KSR*'s "finite options" doctrine; it merely held that you cannot use "common sense" as a wholesale substitute to gap fill a lack of technical analysis and a reasoned explanation. *TQ Delta, LLC v. CISCO Sys., Inc.*, 942 F.3d 1352, 1360-61 (Fed. Cir. 2019) ("the expert's 'conclusory statements and unspecific expert testimony' did not qualify as substantial evidence.").

In contrast, the Petition does not rely on expert statements alone but rather explains that determining exactly when to set the timer is a “design choice—described in Zhou—[within] a finite number of options available to a POSITA.” Pet, 47-48. Zhou provides a finite menu, teaching that a station can reset a timer either “after the STA 106 transmits a scheduled UL transmission” or after it “transmits a scheduled UL transmission and gets an ACK message.” Pet, 46-47 (citing SAMSUNG-1005, ¶81). Selecting from a limited number of “predictable design variations” is exactly the type of “common sense” application *KSR* requires. *Uber Techs., Inc. v. X One, Inc.*, 957 F.3d 1334, 1339-40 (Fed. Cir. 2020). Specifically, because the prior art in *Uber* disclosed “two of a finite number of known, predictable solutions. . . a [POSITA] would have faced a simple design choice between the two, and therefore would have been motivated to combine the teachings.” *Uber*, 1341. The Petition similarly demonstrates the finite number of options which Zhou provides. Pet, 46-48; ID, 13 (“Zhou expressly discloses multiple options for resetting the timer, including ‘after’ the STA 106 transmits a scheduled UL transmission, or transmits a scheduled UL transmission and gets an ACK message.”)

Wilus offers only conclusory statements in asserting that the Petition’s explanations “are a result of multiple purported design choices and/or multiple permutations of purported design choices, not a single choice,” citing to Dr. Haas’s declaration ¶¶89-97. POR, 27. If the selection of the claimed triggering events were

truly unpredictable or technically discouraged, one would expect Wilus to provide objective indicia of non-obviousness, such as test data showing unexpected results or prior art “teaching away” from the combination. However, not a single citation to such evidence exists in Wilus’s briefs or Dr. Haas’s declaration. EX2016, ¶¶89-97; Rule 42.65 (“Expert testimony that does not disclose the underlying facts or data on which the opinion is based is entitled to little or no weight.”). Moreover, Dr. Haas’s assertions are full of improper legal conclusions asserting the combination is based on “hindsight” and concluding that his findings are “further supported by the fact that the Examiner considered effectively the same combination of references and knowledge.” EX2016, ¶¶95, 83.

Third, Wilus argues “[i]f it were obvious and beneficial to modify Cherian as Petitioner and Dr. Valenti now argue in hindsight, the [prior art] inventors likely would have disclosed as much.” POR, 27-28. This statement fails both in law and logic.

Regarding the former, Wilus attempts to equate silence with proof of absence. But it is well-settled that absence of evidence is not evidence of absence. *Cf. Celotex Corp. v. Catrett*, 477 U.S. 317, 322-23. Technical publications are necessarily selective; they describe what the author chose to emphasize for a particular purpose, not an exhaustive catalog of all known features, variations, or implementations.

Regarding the later, the test for obviousness is not whether a *specific author or inventor* disclosed a possible modification, but whether a hypothetical *POSITA* would have been motivated to do so based on the teachings of the prior art. *KSR*, 419 (The analysis “need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ.”).

If Wilus’s statement of law was correct—that a modification is non-obvious simply because it was not documented in the patent under consideration—then the doctrine of “obvious to try” given a finite number of identified, predictable solutions would be a nullity. Under Wilus’s theory, the more “obvious” a design choice is to a routine engineer, the more “inventive” it becomes simply by virtue of being too mundane to merit a specific textbook entry. This is exactly the type of “formalistic conception” of obviousness rejected in *KSR*.

Thus, Dr. Haas’s statements suggest he searched for express disclosure within the prior art for a motivation to combine. Because the prior art did not provide an explicit direction to combine and the fact that Zhou and Cherian were “perfectly operational,” Dr. Haas concluded that there is “no reason for [a] POSITA to change it. . . to combine [the references].” SAMSUNG-1125, 159:13-16. The law does not require prior art to be non-operational to provide a motivation to combine; it requires only that the combination be a predictable variation. By limiting his consideration

to express statements of motivation in the prior art, Dr. Haas relied on a legal standard that does not exist. This is logically and legally incorrect and thus cannot be relied upon as evidence of non-obviousness.

VI. Zhou-Cherian-Kim Renders Obvious the Setting of a Second Parameter Set Timer For an Access Category –Limitations [1.4]-[1.5] and [8.3]-[8.4]

A. Wilus Misrepresents the “for an Access Category of the MPDU” Limitation

Element 1.4 recites: “set a second parameter set timer for an access category of the MPDU.”

Wilus argues that the Zhou-Cherian-Kim combination discloses only a single, global timer for the overall use of MU EDCA parameters, and therefore fails to teach a timer set specifically “for an access category.” POR, 30-32. This argument fails because it attempts to rewrite the claim language, is contrary to the specification, and ignores the structural relationship between the timer and the access categories in the prior art.

Wilus imparts new limitations into the claims to require the station to maintain multiple, independent timers that are physically separated by access category. POR, 30-32. However, the plain language of limitations [1.4] and [1.5] simply requires the station to “set a second parameter set timer for an access category of the MPDU.” In the context of the claim, setting a timer “for an access category” means that the timer’s expiration dictates a change in that category’s behavior (e.g., reverting from

MU EDCA parameters to legacy parameters). It does not require that the timer be *exclusive* to that category. Just as a single kitchen timer set “for the roast and vegetables” in a single pot successfully governs both, a single MU EDCA timer governs the transition of parameters across all involved access categories simultaneously. Thus, a single timer that governs the operational parameters of an access category satisfies the limitation of setting a timer *for* that access category.

The '035 patent supports the Petition's mapping. For example, claim 3 requires obtaining the timer period from a beacon frame, and FIG. 22 illustrates this exact beacon frame information element—showing a single “MU EDCA Timer” value governing all access categories, mirroring the disclosure of Cherian's FIG. 6. SAMSUNG-1001, claim 3; FIG. 22. Throughout the patent, the embodiments refer to using a singular “MU EDCA timer” and the specification confirms STAs may “apply the MU EDCA parameter set to a plurality of ACs.” SAMSUNG-1001, FIG. 16, 13:60-67. Against this structural and operational evidence, Dr. Haas's reliance on the patent's “for each access category” language (Col. 38) attempts to improperly limit the claims to a single, narrow embodiment. By doing so, Dr. Haas ignores the broader plain language of the claims, which simply require setting “a” timer “for an” access category. SAMSUNG-1125, 174-175.

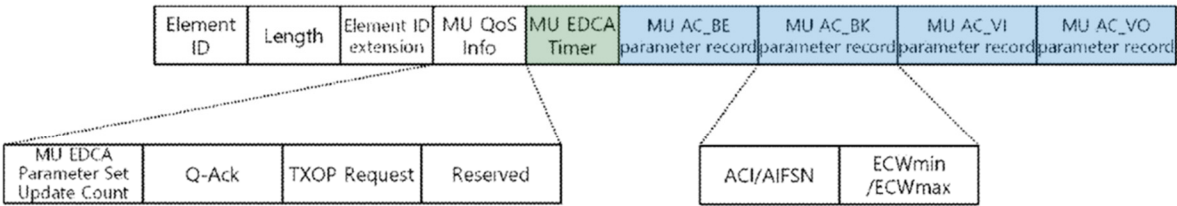
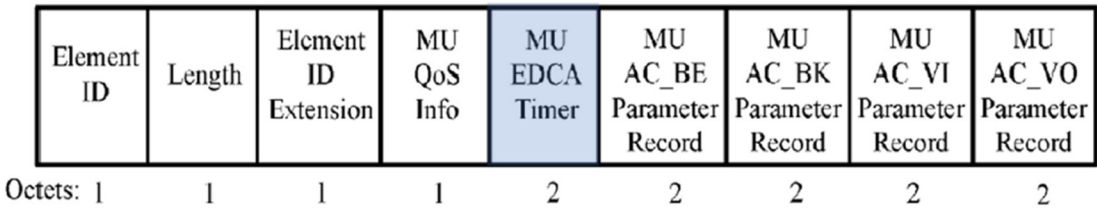


FIG. 22

SAMSUNG-1001, FIG. 22.

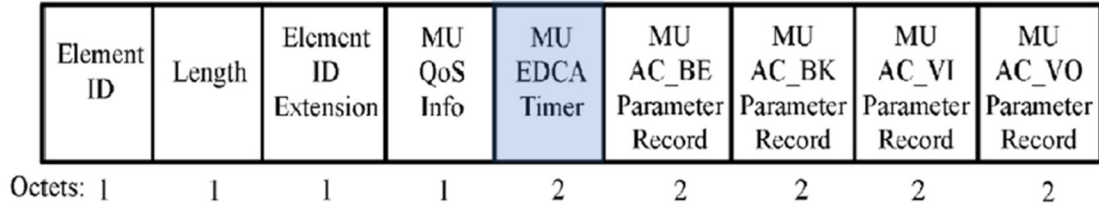


SAMSUNG-1006, FIG. 6.

Pet, 67.

B. Zhou-Cherian-Kim Renders Obvious the “For an Access Category of an MPDU” Limitation

Cherian satisfies this limitation without requiring any modifications to create “separate” timers. Pet, 49-53. For example, Cherian organizes its MU EDCA parameters by access category. Pet, 49-53. As shown in Cherian’s Figure 6, the “MU EDCA Timer” is transmitted in the same data structure as the specific parameter records for the access categories—the information element. Notably, this mirrors the ’035 patent’s embodiment in FIG. 22.



SAMSUNG-1006, FIG. 6.

Pet, 67.

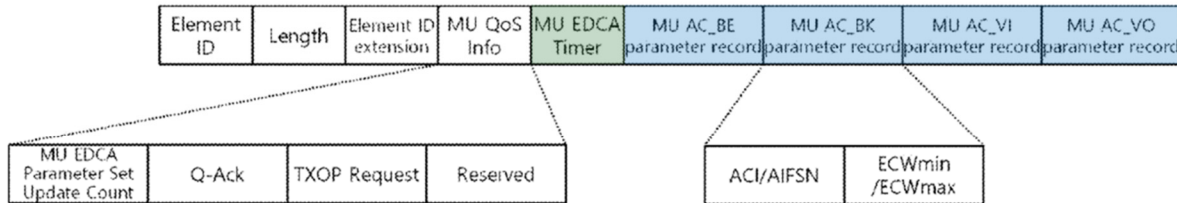


FIG. 22

SAMSUNG-1001, FIG. 22.

Cherian defines the MU EDCA Timer as the mechanism that “indicates the duration of time . . . for which the provided MU EDCA parameters are valid.” Pet, 46. The 802.11 standard defines an “Access Category” as simply a “label for the common set of enhanced distributed channel access (EDCA) parameters.” SAMSUNG-1017, 5 (emphasis added). Because the MU EDCA parameters are comprised of the specific contention values for these access categories, the timer actively dictates the operational timeframe for those access categories. Pet, 49-53.

When the MU EDCA Timer counts down, it is tracking the validity period for the access category's parameters. When the timer expires, the application of the parameter set for those access categories terminates. Therefore, Cherian's timer dictates the validity period for multiple access categories simultaneously, satisfying the limitation.

The claims further require the timer to be set "for an access category of the MPDU." When a station prepares to transmit an MPDU, that MPDU carries specific data (e.g., voice data). Pet, 49-53. The 802.11 standard requires (and required before the '035 patent) the MPDU's MAC header to include a QoS Control field containing a Traffic Identifier (TID), which maps directly to a specific access category (e.g., AC_VO for voice traffic). Pet, 51-53, SAMSUNG-1017, Table 9-1.

Therefore, the MPDU itself dictates its access category. When a station sets the MU EDCA Timer at the end of a transmission (per Zhou and Cherian), the timer governs the channel access parameters for the specific access categories of that MPDU (dictated by its TID). Pet, 51-53. The STA in the combination of Zhou-Cherian-Kim, executes the logical sequence claimed: the STA sets the timer that defines the validity period for the MPDU's access categories.

VII. The Petition’s Motivation to Combine is Legally Sound and Wilus Puts Forth No Evidence or Case Law Suggesting Otherwise

Wilus’s arguments—that a motivation to combine must be explicitly stated in the prior art and that selecting from known design options constitutes hindsight—are legally flawed. POR, 33-38. Indeed, *KSR* holds exactly the opposite.

A. Wilus’s “Fully Operational” Defense Relies on a Legally Flawed, Subjective Standard

Wilus argues that if the modification were obvious, the original “inventors [(Zhou and Cherian)] likely would have disclosed as much.” POR, 28, 33-38. In fact, Dr. Haas testified that if a prior art reference “presents a fully operational system . . . there would be no motivation for [a] POSITA to look to other references to change whatever the scheme is and combine.” SAMSUNG-1125, 158:13-159:2. This argument—and Dr. Haas’s testimony—represents a fundamental misunderstanding of the obviousness inquiry. The law has long held that a reference need not disclose or suggest the very invention it is used to invalidate but rather must account for the “creative steps that a [POSITA] would employ.” *KSR*, 418.

Because Dr. Haas’s declaration is tainted by an improper standard for obviousness, an erroneous “presumption of validity,” and a failure to provide independent technical support for why, in his view, a POSITA could not have made the claimed modifications, his testimony is entitled to little if any weight.

B. The Motivation to Combine Stems from Known Design Needs and Predictable Results

Wilus contends the Petition provides “insufficient explanation” as to why a POSITA would have combined the references, dismissing goals like “optimizing performance” as “generic labels.” POR, 34-38. This argument ignores the technical environment described in the Petition and case law.

KSR states that “if a technique has been used to improve one device, and a [POSITA] would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill.” *KSR*, 417. The Petition describes an integration of Zhou-Cherian-Kim that uses standardized methods rooted in the IEEE-based communication protocols. Pet, 14-20. As noted by Dr. Valenti, a POSITA would, without undue experimentation, have been able to “fit the teachings of multiple patents together like pieces of a puzzle” where, as here, they address different facets of a common technological goal within a structured communication protocol. SAMSUNG-1003, ¶99.

Moreover, “[e]ven before *KSR*, we held that because such improvements are ‘technology-independent,’ ‘universal,’ and ‘even common-sensical,’ ‘there exists in these situations a motivation to combine prior art references even absent any hint of suggestion in the references themselves.’ *DyStar Textilfarben GmbH v. C.H. Patrick Co.*, 464 F.3d 1356, 1368 (Fed. Cir. 2006) (‘implicit motivation to combine’ to make

a device ‘more desirable, for example because it is stronger, cheaper, cleaner, faster, lighter, smaller, more durable, or more efficient’).” *Intel Corp. v. Qualcomm Inc.*, 21 F.4th 784, 797 (Fed. Cir. 2021).

Wilus’s statements thus amount to nothing more than attorney argument, with no supporting evidence or case law citations.

VIII. Conclusion

For the reasons discussed above, and in the Petition, all Challenged Claims are unpatentable.

Respectfully submitted,

Dated: May 15, 2026

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CERTIFICATION UNDER 37 CFR §42.24

Under the provisions of 37 CFR § 42.24(d), the undersigned hereby certifies that the word count for the foregoing Petitioner's Reply to Patent Owner's Response totals 5,588 words, which is less than the 5,600 allowed under 37 CFR § 42.24(c)(4).

Respectfully submitted,

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CERTIFICATE OF SERVICE

Pursuant to 37 CFR § 42.6(e)(4), the undersigned certifies that on May 15, 2026, a complete and entire copy of this Petitioner's Reply to Patent Owner's Response and Accompanying Exhibit was provided by email, to the Patent Owner by serving the email correspondence address of record as follows:

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