

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 No. IPR2025-01164
U.S. Patent No. 12,004,262

PATENT OWNER'S PRELIMINARY RESPONSE

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TABLE OF AUTHORITIES

Cases

<i>Samsung Elecs. Co. v. Infobridge Pte. Ltd.</i> , 929 F.3d 1363 (Fed. Cir. 2019)	21
<i>Voter Verified, Inc. v. Premier Election Sols., Inc.</i> , 698 F.3d 1374 (Fed. Cir. 2012)	21

PATENT OWNER'S EXHIBIT LIST

Exhibit	Description
2001	Order, <i>Wilus Institute of Standards and Technology Inc., v. HP Inc.</i> , Case No. 2:25-cv-00069-JRG-RSP, Dkt. No. 51 (E.D. Tex., June 13, 2025) (“Docket Control Order”)
2002	Press Release, “Lenovo and Wilus Agree Wi-Fi License Deal,” April 10, 2025
2003	Excerpts of Defendants’ P.R. 3-3 and 3-4 Invalidity Contentions and Subject Matter Eligibility Contentions in the consolidated case, <i>Wilus Institute of Standards and Technology Inc., v. HP Inc.</i> , Case No. 2:25-cv-00069-JRG-RSP (E.D. Tex.), dated July 9, 2025.
2004	Docket Navigator Stay Statistics
2005	Excerpt from U.S. District Court – National Judicial Caseload Profile for the Eastern District of Texas, March 31, 2025, https://www.uscourts.gov/sites/default/files/document/fcms_na_distprofile0331.2025.pdf
2006	Judge Rodney Gilstrap’s median time to trial from August 25, 2024 until August 25, 2025, retrieved from www.docketnavigator.com
2007	Samsung “Letter of Assurance for Essential Patent Claims,” January 14, 2022
2008	Declaration of Jin Sam Kwak
2009	List of Licensees to Wifi 6 from Sisvel, https://www.sisvel.com/licensing-programmes/Wi-Fi/wifi-6/#tab-list-of-licensees
2010	Letter re “Notice of Wi-Fi 6 License offer” from Sisvel to Samsung Electronics Co., Ltd. with Attachments 1-2, August 24, 2022
2011	IEEE P802.11, Document IEEE 802.11-18/0367r, dated March 1, 2018

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2012	IEEE P802.11ax™/ D2.3, dated April 2018
2013	Excerpts of IEEE 802.11-17/1682r13, Comments on TGAX/D2.0

I. Introduction

The Board should deny institution of this IPR because none of the asserted art discloses the independent claims 1 and 4, which set forth how a wireless terminal sets the BSS color for a trigger-based PPDU when the terminal receives conflicting color information from the access point due to the access point changing the BSS color. Furthermore, the primary reference 802.11ax/D1.0 in Grounds 1A and 1B is not prior art because it was only circulated internally within the IEEE standards working group, and was not publicly accessible by a POSITA at the time of the '262 Patent's inventions.

II. Overview of the '262 Patent

The '262 Patent was filed on February 11, 2022, and issued on June 4, 2024. It is a continuation of U.S. Patent No. 11,284,475, filed on October 1, 2019, which is a continuation of PCT Application No. PCT/KR2018/004397, filed on April 16, 2018. SAMSUNG-1001 ('262 patent) at pgs. 1-2. The PCT Application further claims priority to multiple Korean applications filed in 2017. '262 Patent at 1:9-20, pg. 1 (listing KR10-2017-0048762 filed on April 14, 2017, KR10-2017-0146356 filed on November 4, 2017, and KR10-2017-0146358 filed on November 4, 2017). Petitioner treats April 14, 2017 as the critical date.

The '262 Patent describes that there is a continued need “for providing a high-efficiency and high-performance wireless LAN communication technology in a high-density environment” and recognizes that “in a next-generation wireless communication technology environment, communication having high frequency efficiency needs to be provided indoors/outdoors under the presence of high-density terminals and base terminals.” '262 Patent at 2:38-48. The '262 Patent's technology is utilized by products implementing the IEEE 802.11ax (Wi-Fi 6) standard, such as the 2021 version of the IEEE 802.11ax standard.

Wi-Fi 6 uses a new feature, BSS color, to enable devices operating in the same frequency space to quickly distinguish between data units from their own BSS and those from another BSS by simply referencing the BSS color value contained in the HE PPDU's header. *See* '262 Patent at FIGS. 1-2.

In OFDMA communications, based on the trigger frame from the access point, multiple wireless communication terminals send trigger-based PPDU's to the access point to ensure time-aligned reception at the access point. '262 Patent at 12:9-13 (“In the embodiment of FIG. 6, the AP transmits a trigger frame to the first station STA1 to the fourth station STA4. The first station STA1 to the fourth station STA4 receive a trigger frame and

simultaneously transmit a trigger-based PPDU to the AP based on the trigger frame.”), FIG. 6.

The Wi-Fi 6 devices typically can obtain the BSS color from the HE-SIG-A field of the trigger frame. As such, the Wi-Fi 6 devices can set the BSS color as that in the HE-SIG-A field when responding to the access point with the trigger-based PPDU. *See, e.g.*, '262 Patent at 20:41-49, FIGS. 14, 20-23.

However, there are instances where the wireless communication terminals cannot obtain BSS color information from the HE-SIG-A field of the trigger frame. '262 Patent at 54:19-30. One example would be when a trigger frame is received in a non-HE PPDU. In that situation, the wireless communication terminals can instead use the color set by an Operation element. '262 Patent at 38:64-39:12, FIG. 22. But when the access point changes the BSS color, color conflict may result between the color sent by an Operation element and the color changed by the access point. '262 Patent at 38:40-50, 39:12-20. The '262 Patent solves this issue. For example, if the trigger frame does not have the field indicating BSS color (e.g., trigger frame in a non-HE PPDU), the '262 Patent describes setting the new color as an active BSS color if the BSS color change time point is reached; otherwise, the active BSS color is set to be the color from the Operation element. '262 Patent at 20:49-58.

The '262 Patent has two independent claims, claims 1 and 4. The Petition appears to use claim 1 as the representative claim, which is reproduced below.

[1.pre] A wireless communication terminal wirelessly communicating with a base wireless communication terminal, the wireless communication terminal comprising:

[1.1] a transceiver configured to transmit and receive wireless signals;
and

[1.2] a processor configured to process the wireless signals,

[1.3] wherein the processor is configured to:

receive a physical layer protocol data unit (PPDU) including a trigger frame for triggering transmission to the base wireless communication terminal, wherein the trigger frame indicates a resource unit (RU) which is allocated to the wireless communication terminal,

[1.4] when a format of the PPDU including the trigger frame is a PPDU format in which at least one of physical layer signaling fields including a field for indicating a Basic Service Set (BSS) color is included, set a value of a BSS color to be indicated by a trigger-based PPDU based on the BSS color indicated by the field,

[1.5] when the format of the PPDU including the trigger frame is a PPDU format in which any physical layer signaling field including the field for indicating the BSS color is not included, set the value of the BSS color to be indicated by the trigger-based PPDU according to an active BSS color of the wireless communication terminal, and

[1.6] transmit the trigger-based PPDU based on the trigger frame,

[1.7] wherein the active BSS color is a BSS color actually used by the wireless communication terminal and set by an Operation element,

[1.8] wherein when the wireless communication terminal receives information on a BSS color change from the base wireless communication terminal and a BSS color change time point indicated by the information on the BSS color change is reached, the active BSS color is set to a value of a BSS color indicated by the information on the BSS color change, and

[1.9] wherein the BSS color is one of identifiers identifying a BSS.

Independent claim 4 is a method claim, which also recites similar elements as claim 1. As further discussed below, the asserted references do not disclose at least the elements of [1.5] and [1.8]. They failed to disclose the '262 Patent's solution, where a wireless communication terminal sets the BSS color for trigger-based PPDU when the color from the Operating element conflicts with the new color due to a color change by the access point.

The '262 Patent's solution can be applicable in situations where the PPDU, including the trigger frame received from the access point, does not provide a BSS color.

A. Overview of the File History of the '262 Patent

During the prosecution, the examiner rejected independent claims as unpatentable over Verma (U.S. Publ. No. 2017/0325202) and Yang (U.S. Publ. No. 2017/036129). The applicant argued, among other things in the December 11, 2023 office action response, that the asserted art does not disclose “when the format of the PPDU including the trigger frame is a PPDU format in which a physical layer signaling field including the field for indicating the BSS color is not included, set the value of the BSS color indicated by the trigger-based PPDU according to an active BSS color of the wireless communication terminal.” Ex. 1002 at 229-231.

Subsequently, the examiner allowed the claims. In the examiner's notice of allowance, the examiner found that applicant's arguments with respect to the renumbered claims 1-4, “along with arguments presented in remarks filed on 12/11/2023 have been fully considered and are persuasive along with an interview held on 01/30/2024.” Ex. 1002 at 39.

III. Level of Ordinary Skill in the Art

The Petition proposes that a POSITA “would have had a Bachelor's

degree in electrical engineering, computer engineering, computer science, or a related field, and at least 3 years of experience in the research, design or development of wireless communication devices, systems, and/or networks, or equivalent, as of the Critical Date. Increased education experience can make up for less work experience and vice versa.” Petition at 3. Patent Owner does not otherwise challenge Petitioner’s definition for purposes of this Preliminary Response.

IV. Claim Construction

“Petitioner submits that no formal claim constructions are necessary....” Petition at 3. The parties have not proposed terms for construction for this Patent. Nevertheless, assuming the plain and ordinary meanings of the terms apply, Petitioner still failed to establish that the asserted references disclose the claims.

V. None of the Asserted References Disclose Elements [1.5] and [1.8]

As discussed in the patent overview section, element [1.5] recites “when the format of the PPDU including the trigger frame is a PPDU format in which any physical layer signaling field including the field for indicating the BSS color is not included, set the value of the BSS color to be indicated by the trigger-based PPDU according to an active BSS color of the wireless communication terminal.” The element [1.8] further specifies how a wireless

communication terminal should set the active BSS color in the event of a color change by the base wireless communication terminal. Specifically, element [1.8] recites the following “wherein when the wireless communication terminal receives information on a BSS color change from the base wireless communication terminal and a BSS color change time point indicated by the information on the BSS color change is reached, the active BSS color is set to a value of a BSS color indicated by the information on the BSS color change.” Thus, when the trigger frame is received in a non-HE PPDU, the access point would specify the BSS color in the trigger-based PPDU to be the new color if the change time point has been reached, which will avoid color conflict, e.g., between the new color announced by the base wireless communication terminal and the color received from the Operation element of the base wireless communication terminal.

Petitioner relied on IEEE draft standard 802.11ax/D1.0 (Ex. 1005), proposals 802.11-17/0250r2 (Ex. 1007) and 802.11-16/1415r0 (Ex. 1008), and the old standard 802.11-2016 (Ex. 1010) as allegedly disclosing the independent claims. The 802.11ax/D1.0 was used as a primary reference in Grounds 1A and 1B, with Ground 1B additionally combining it with Yang and

802.11-2016. The proposals 802.11-17/0250r2 and 802.11-16/1415r0 are both cited in Grounds 2A and 2B¹ in combination with Yang.

However, none of these IEEE documents disclose the claimed invention on how to set BSS color in trigger-based PPDU in response to the trigger frame in the non-HE PPDU, when there is a color conflict due to the access point changing BSS color. In fact, the IEEE's amendment history shows that the '262 Patent's solution was not submitted to and adopted by IEEE until *after* the critical date of the '262 Patent.

A. Ground 1A

The Petitioner's Ground 1A relied solely on the IEEE 802.11ax D1.0. The IEEE 802.11ax D1.0 (the "D1.0 draft") was a draft of the IEEE 802.11ax standard within the standard's working group, which is not publicly accessible. *See infra*, Section VI. Regardless, the D1.0 draft does not address how wireless devices can set BSS color in a trigger-based PPDU, in the event of color conflict due to the access point changing the color, particularly in the situations where the BSS color is not present in the PPDU including the trigger frame (e.g., the trigger frame in the non-HE PPDU).

Section 27.5.2.3 of the D1.0 draft defines the operation of a non-AP

¹ Ground 2B is only for dependent claim and thus would not be separately discussed here.

STA when it responds to a trigger frame as follows.

A STA transmitting an HE trigger-based PPDU in response to a Trigger frame sets the TXVECTOR parameter as follows:

- The FORMAT parameter shall be set to HE_TRIG
- The PE_DURATION parameter shall be set according to the value of the Packet Extension field in the soliciting Trigger frame
- The TXOP_DURATION parameter shall be set according the rules defined in 27.2.2 (Updating two NAVs)
- The BSS_COLOR parameter shall be set as follows:
 - If the preceding Trigger frame was received in an HE PPDU, then set to the value of the RXVECTOR parameter BSS_COLOR of the HE PPDU
 - If the Trigger frame was received in a non-HE PPDU, then set to the value of the BSS Color sub-field of the most recently received HE Operation element for that BSS

Ex. 1005 at 168²; *see also* Petition at 30-31. As shown above, in the D1.0 draft, the STA always sets the value of the BSS color field using the BSS color from the Operation element.

The D1.0 draft does not mention setting an “active BSS color” for the trigger-based PPDU when trigger frame was received in a non-HE PPDU. Indeed, the “active BSS color” concept does not seem necessary in the D1.0 draft, as the BSS color of the trigger-based PPDU is always set to be the value from the Operation element when the Trigger frame is received in a non-HE PPDU. Nor does D1.0 draft provide a solution for conflicting color information received by wireless devices when the access point changes color.

The rest of the Petitioner's arguments miss the point. They either pointed to the fact that the BSS_Color parameter may not be present, or the

² Unless otherwise specified, the page number for Ex. 1005 is the page number in the original document.

procedure of BSS color change by the access point. *See, e.g.*, Petition at 30, *citing* D1.0 draft, Table 28-1; Petition at 33-35, *citing* Ex. 1005 at 206.

Contrary to Petitioner's truncated quotes, the disclosure on page 206 of the D1.0 draft is about how *the access point* performs a BSS color change, e.g., by notifying that the color will be changed with a countdown represented as TBTT. Petition at 35. Section 27.16.2 of the D1.0 draft states that “[d]uring the time leading up to the BSS Color change TBTT, an HE AP shall continue to advertise the existing BSS color via the BSS Color subfield in the HE Operation element” and “at the BSS Color change TBTT, an HE AP shall ... start using the new BSS color.” Ex. 1005 at 206. But it does not teach how wireless communication devices handle potential conflicting color information from the access point during a BSS color change. Nor does it teach setting BSS color in the trigger-based PPDU in response to non-HE PPDU including the trigger frame to avoid color conflicts when the access point changes the BSS color.

Lastly, the Petitioner argued that the STA supporting HE PPDU sets its BSS color based on the HE-SIG-A field in D1.0 draft. Petition at 31-32. But HE PPDU already includes the field for BSS color, it does not meet “when the format of the PPDU including the trigger frame is a PPDU format

in which any physical layer signaling field including *the field for indicating the BSS color is not included ...*” ’262 Patent, Claim 1 (emphasis added).

B. Ground 1B

The Petitioner asserts a combination of D1.0 draft with Yang and IEEE 802.11-2016 standard. Petition at 13-16. Petition only used Yang for “processing system” and “transceiver.” Accordingly, Yang failed to cure the deficiencies of the D1.0 draft. Petition at 13-14.

As to the 802.11-2016 standard, the Petitioner did not provide any specific analysis with respect to elements [1.5] and [1.8]. At best, the Petitioner includes one cite to an irrelevant feature, i.e., the management frame, with no explanation on how it bears any relationship to the claim language. Petition at 35, *citing* Ex. 1010, pgs. 694, 724. Indeed, Petitioner appears to acknowledge that this document is even earlier than the D1.0 draft and does not include the features in the D1.0 draft, much less the invention of the ’262 Patent. Petition at 15. Since Petitioner failed to demonstrate how the 802.11-2016 standard allegedly discloses specific elements of the ’262 Patent, combining it with the D1.0 draft does not help to remedy the deficiencies of the D1.0 draft.

C. Grounds 2A/2B

The Petition argues, in Ground 2A, that Yang (Ex. 1006) in combination

with 802.11-17/0250r2 (Ex. 1007) and 802.11-16/1415r0 (Ex. 1008) renders obvious claims 1, 2, 4. Petition at 2, 47-68. As for Ground 2B, Petitioner added 802.11-17-023r1 to the Ground 2A for dependent claim 3. Petition at 2, 68-72. For purposes of this preliminary response, since the independent claims were not obvious in view of the asserted art, the dependent claim 3 was also not obvious.

Yang is directed to how an access point changes BSS color when there is a BSS color collision. Despite the word “collision,” BSS color collision is actually a different problem from the '262 Patent's claimed invention. As described in Yang, BSS color collision occurs when devices in BSS and OBSS use the same BSS color, which can create issues in BSS color-based operations. *See, e.g.*, Yang at [0035]-[0039], [0046]. Yang does not disclose “the BSS color indicated in the ‘Trigger frame’ would be used in the responsive trigger-based PPDU transmitted by the STA to the AP,” as conjectured by the Petitioner. Petition at 50. Nor does Yang solve the problem pointed out by the '262 Patent where the BSS color from the Operation element is different due to the access point changing the color.

Yang provides a completely different solution from the '262 Patent, perhaps because the technical issues between Yang and the '262 Patent are very different. Yang devises a two-stage process for *an access point* to change

its BSS color when it detects a color collision. Yang at [0051]. In the first stage, the access point sets a temporary BSS color value to be used by mobile devices. Yang at [0052]-[0053]. Then in the second stage, the access point decides on a new BSS color value and sets the BSS Color Field in HE-SIG-A to the new BSS color. Yang at [0054]-[0055]. In contrast, the independent claims of the '262 Patent are not about how an access point changes the BSS color. Instead, the '262 Patent relates to how *mobile devices* (for example) set BSS color in trigger-based PPDU in response to non-HE PPDU including the trigger frame, when the devices receive conflicting color information from the access point.

The Petition admits that Yang does not disclose element [1.5]. Instead, the Petition referred to 802.11-17/0250r2. Petition at 60-62. But the relevant portion of the 0250r2 has the same disclosures as the D1.0 draft. And the Petition also repeats the same argument as Ground 1A. *Compare* Petition at 61 *with* Petition at 30-31. Thus, 802.11-17/0250r2 has the same problem as the D1.0 draft, as discussed above in Ground 1A.

Similar to the D1.0 draft, the 0250r2 specifies that the BSS color for non-HE PPDU is always the value received from the Operation element. Ex. 1007 at pg. 17 (“If the Trigger frame was received in a non-HE PPDU, then set to the value of the BSS Color subfield of the most recently received HE

Operation element for that BSS.’”). It does not mention or need the concept “active BSS color” since the BSS color is always the one from the Operation element. Nor does it provide a solution for color conflicts for trigger-based PPDU when the access point changes color, where the trigger frame is received in the non-HE PPDU.

The Petition also failed to establish that the combination teaches element [1.8]. While the Petition acknowledges that Yang’s two-stage approach has a number of deficiencies, the Petition nevertheless proposes to combine Yang with 802.11-16/1415r0. *See* Petition at 53. But a POSITA would not be motivated to modify Yang with 1415r0 because it would fundamentally change how Yang works, i.e., from a two-stage process to a one-stage process. The use of an additional stage in Yang does not just increase “the number of BSS colors that are in use” as the Petitioner argued (Petition at 64), but it also requires additional protocols and exchanges of uplink and downlink frames. Furthermore, a purpose of the temporary color in Yang’s stage one is to allow the access point to select a non-used new BSS color value. Yang at [0053]-[0054]. By removing one of the stages, the system in Yang would not have the opportunity to test the criteria and find a workable new BSS color, thereby defeating the purpose of Yang’s system.

Even if Yang were to be combined with 1415r0, it still does not

disclose the independent claims of the '262 Patent. The same information that Petitioner relied on in 1415r0 is also in Section 27.16.2 of D1.0 and thus the two share the same deficiencies. Petition at 64-66. Similar to D1.0, the 1415r0 specifies the procedure for *an access point* to change BSS color. Id. The commentator at the time of the 1415r0s submission confirms that the purpose for the change in 1415r0 is in fact to “[a]llow an AP to change its Color value during the existence of the BSS.” Ex. 1008 at pgs. 2, 7. It failed to teach how the wireless communication terminal would set BSS color for trigger-based PPDU when there is a color conflict caused by the access point changing BSS color.

Thus, Yang's combination with 1415r0 at best would result in a method for changing BSS color by the access point. They do not teach how wireless communication devices handle potential conflicting color information from the access point during a BSS color change, including how to set BSS color in trigger-based PPDU in response to non-HE PPDU including the trigger frame.

D. 802.11ax Amendment History Demonstrates that the Claims are Not Obvious

Contemporaneous evidence from IEEE strongly suggests that the solution in the '262 Patent is not obvious. The asserted IEEE documents (D1.0 draft, 802.11-2016, IEEE 802.11-16/1415r0, IEEE 802.11-17/0250r2), which

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are allegedly just a few months before the '262 Patent, do not disclose the claims. The '262 Patent is instead trying to solve the issues arising from the standards of these IEEE documents.

The inventor brought up the issues addressed by the '262 Patent and the solution in commenting on a later draft, *i.e.*, the D2.0 draft, months after the critical date of the '262 Patent, and one year after the D1.0 draft. As shown below, the inventor commented on color conflict issues in the D2.0 draft around November 2017, and his solution was adopted in D2.3 in 2018.

	A	B	D	E	P	R	S	T	V
	CID	Commenter	Draft	Clause Number(C)	Submission	Comment	Proposed Change	Resolution	Comment Group
1	11730	Geonjung Ko	2	27.5.3.3	11-18/0367r1	When the AP announced the BSS Color Change, for STAs that failed to receive a Beacon frame at the BSS color change TBTT, the value of the BSS Color subfield of the most recently received HE Operation element is the previous BSS color, not the new BSS color. This may cause different HE-SIG-A signals between STAs solicited by the Trigger frame.	If the Trigger frame was received in a non-HE PPDU, then the BSS_COLOR shall be set to the active BSS color.	REVISED (MU: 2018-03-13 06:41:38Z) Agree with the comment. Revised text to indicate that the responding STA shall use the active color as defined in 27.11.4 TGax editor, please make changes as shown in doc 11-18/0367r1	Approved Edits in D2.3
732	11731	Geonjung Ko	2	27.5.3.3	11-17/1849r2	There is no BSS_COLOR setting rule when the Trigger frame is in a non-HE PPDU and the STA is an unassociated STA.	Use the active BSS color, use an HE PPDU when soliciting unassociated STAs, or define the BSS Color field in the Trigger frame format	REVISED (MU: 2018-01-23 08:12:30Z) TGax editor, please make changes as shown in doc 11-17/1849r2 that are marked with CID 11731	Approved Edits in D2.2
733									

Ex. 2013 (<https://mentor.ieee.org/802.11/dcn/17/11-17-1682-13-00ax-comments-on-tgax-d2-0.xlsx>) (retrieved October 8, 2025); *see also* Ex. 2011 (IEEE 802.11-18/0367r1) at pgs. 2, 4. The screenshot below reflects the changes between the language in the old draft and the new draft.

TGax Editor: Please modify the 7th paragraph of this section as follows:

A STA transmitting an HE TB PPDU in response to a Trigger frame shall set the TXVECTOR parameters as follows:

- The FORMAT parameter is set to HE_TRIG
- The TRIGGER_METHOD parameter is set to TRIGGER_FRAME
- The TXOP_DURATION parameter is set as defined in 27.11.5 (TXOP_DURATION)
- The BSS_COLOR parameter is set as follows:
 - If the Trigger frame was received in an HE PPDU, then set to the value of the RXVECTOR parameter BSS_COLOR of the HE PPDU
 - If the Trigger frame was received in a non-HE PPDU, then set to the value of the active BSS Color as defined in 27.11.4 ~~subfield of the most recently received HE Operation element for the BSS with which the STA is associated~~ [11730]

Ex. 2011 (IEEE 802.11-18/0367r1) at pg. 4 (markups in original).

As shown in the screenshot, the inventor's proposal, removed the old draft's approach of always setting the BSS color when responding to trigger frame in the non-HE PPDU using the color from the Operation element. The inventor's proposal recognizes that the color information that a wireless terminal has may be outdated or in conflict due to a color change by the access point. As a result, the BSS color to be indicated by the trigger-based PPDU will be the value of the "active BSS color" which can be set differently depending on whether a time point in a color change announcement has been met. *See e.g., Ex. 2012 (802.11ax D2.3, Sections 27.5.3.3, 27.11.4)* (reproduced below);

- The BSS_COLOR parameter is set as follows:
 - If the Trigger frame was received in an HE PPDU, then set to the value of the RXVECTOR parameter BSS_COLOR of the HE PPDU
 - If the Trigger frame was received in a non-HE PPDU, then set to the value of the active BSS color as defined in 27.11.4 (BSS_COLOR)(#11730)

Id. at 280 (showing the new amendment as #11730);

54
55 An active BSS color is used to set the BSS_COLOR parameter and is the BSS Color field value in the HE
56 Operation element when an HE STA receives an HE Operation element from a peer HE STA. When an HE
57 STA receives a BSS Color Change Announcement element and the BSS color change TBTT has passed, it is
58 the BSS color value received in the BSS Color Change Announcement element (see 27.16.2.1 (Selecting
59 and advertising a new BSS color)) transmitted by a peer HE STA.
60

Id. at 344 (Section 27.11.4)

It would not be obvious for a POSITA to reach the claimed invention which prevents color conflicts in trigger-based PPDU, between the color from the Operation element and the color change by the access point, when responding to a trigger frame in the non-HE-PPDU. This can be seen in the failure of disclosures in the IEEE references Petitioner cited just a few months prior to the critical date of the '262 Patent. And the IEEE submissions do not mention this issue or provide a solution until at least a year after the D1.0 draft, when the inventor of the '262 Patent comments on the D2.0 draft, and the inventor's comments were adopted in D2.3 draft. Other than its expert's self-serving declaration, the Petitioner could not find any evidence in support of its hindsight obviousness analysis. *See* Petition at 35-36, 65-66. In short, the Petition failed to establish that the independent claims would be invalid as obvious.

VI. The Petition Fails to Establish 802.11ax_D1.0 is Prior Art

The Petition fails to establish that 802.11ax_D1.0 was "publicly accessible" for purposes of serving as printed-publication prior art. The

Petition and Petitioner's expert, Dr. Christopher Hansen, argue at length that the D1.0 draft was "publicly accessible" on December 1, 2016, because it was circulated internally to the voting members of the IEEE 802.11 Working Group on that date. Ex. 1015 at ¶ 52.

The Petition acknowledges that the document was not "publicly accessible" in the conventional sense. Dr. Hansen explains—and the Petition does not mention—that, first, the existence of the D1.0 draft was made known to "IEEE 802.11 Working Group" via email on December 1, 2016, and that the email contained a "link to the draft D1.0 PDF, which was password protected." Ex. 1026, ¶ 53. According to Dr. Hansen, a "voting member of the IEEE 802.11 Working Group could enter their credentials" to download a copy of 802.11ax_D1.0. Id. The draft was otherwise not "publicly accessible" in the myriad scenarios addressed by the Federal Circuit case law on this issue: for example, it was not downloadable or retrievable via the Internet by a member of the general public, it could not be located in a library via an index of collected works, and so on.

Instead, the Petition and Petitioner's expert advances a novel theory of public accessibility: that (1) "[i]nterested members of the public would have gained access to the D1.0 draft either by following IEEE's straightforward procedures for joining the ranks of voting members of the IEEE 802.11

Working Group,” or (2) “by obtaining a copy of 802.11ax_D1.0 from a voting member (or an intermediary who obtained a copy from a voting member).”

Pet. at 73

As an initial matter, the Petition's argument for the alleged public accessibility of 802.11ax_D1.0 is unsupported by any Federal Circuit or other precedent. It is settled law that a publication which is “uploaded to a website or deposited in a library” and which is “indexed or catalogued in some way” may be “publicly accessible” for prior art purposes. *See Samsung Elecs. Co. v. Infobridge Pte. Ltd.*, 929 F.3d 1363, 1369 (Fed. Cir. 2019). For a publication to be “publicly accessible” to a POSITA, whether the POSITA “would have been independently aware” of the publication before the critical date also affects the determination. *Voter Verified, Inc. v. Premier Election Sols., Inc.*, 698 F.3d 1374, 1381 (Fed. Cir. 2012). For publications deposited in an Internet location, the inquiry should include whether “a person of ordinary skill could have reasonably found the website and then found the reference on that website.” *Infobridge*, 929 F.3d at 1369. The 802.11ax_D1.0 draft fits none of these or other scenarios in which the Federal Circuit has confirmed the “public accessibility” of a prior art reference.

Here, the D1.0 draft was never made “publicly available” to a general member of the interested public, unless one were to assume that the definition

of a POSITA include membership in the “voting” sub-group of the IEEE 802.11 Working Group. The Petition does not allege that a POSITA for the '262 Patent would have been a voting member of the IEEE Working Group (*see* Petition at 3, 72-75; Ex. 1005 at pgs. 32-39), and an assertion otherwise would be dubious at best, given that the Petition also asserts a POSITA would have had only “3 years of experience” with a Bachelor’s degree in electrical engineering or computer science, a definition met by innumerable 23-year-old, junior software engineers in the United States. Petition at 3.

Perhaps having foreseen this problem, the Petition contends that it would have been simple for a POSITA (having graduated from college 3 years earlier) to follow “straightforward procedures for joining the ranks of voting members of the IEEE 802.11 Working Group.” Petition at 73. Those procedures, as of the critical date, required an interested person to attend three IEEE working group meetings *in person*, two of which must be week-long “plenary” meetings. *See* Ex. 1015, ¶¶ 66-70.

Dr. Hansen’s declaration itself shows why the Petition’s arguments are suspect. If an interested member of the public desired to become a voting member of IEEE 802.11 Working Group as late as possible before the April 2017 Critical Date, they would have needed to do the following:

- Attend at least two “plenary” IEEE meetings in the following locations and dates: (1) San Diego, California, July 2016, (2) San Antonio, Texas, November 2016, and (3) Vancouver, Canada, March 2017.
- If only two “plenary” meetings attended, attend at least one of the following non-plenary IEEE meetings: (1) Waikoloa, Hawaii, May 2016, (2) Warsaw, Poland, September 2016.

The Petition’s theory that a POSITA would have just “joined” Working Group and become a member fails for numerous reasons. First, a POSITA could not have been meaningfully motivated to do so beginning in December 2016 if they had (hypothetically) been informed of the existence of the D1.0 draft, because they would not have had time to complete all the requirements before the April 2017 critical date. Even if one counterfactually assumes the role of a 23-year old software engineer in January 2016, it defies logic to conclude that 23-year old software engineer, even acting as a reasonably diligent member of the public but with just 3 years of experience and a Bachelor’s degree, would have strategically attended multiple IEEE meetings throughout 2017, some in far-flung locations, just to become a voting member of the Working Group for the chance to learn about and access the D1.0 draft between December 2016 and April 2017.

The Petition plainly understands the incredibility of the above scenario, and so also argues that a reasonably diligent POSITA would have asked a member of the Working Group (or some intermediary who knows a Working Group member) to obtain a copy of the D1.0 draft. Ex. 1015 at ¶ 64. But this presupposes, without evidence, that a POSITA would have known of the existence of D1.0 draft and its content before the April 2017 critical date, which is a factually dubious scenario given the Petition's own definition of a POSITA.

Moreover, the Petition provided no evidence, other than its expert's self-serving testimony that the Working Group member has a motivation to distribute the 802.11ax_D1.0 draft standards broadly. Petition at 74.

Petitioner's librarian declaration (Ex. 1016) does not help either. The screen capture of 802.11 Timeline table is dated 2025, and does not reflect any public availability around the critical date in April 2017. The rest of the screenshots from the IEEE website, using the wayback machine, contains no information that the D1.0 draft was actually publicly available.

The D1.0 draft was simply not "publicly accessible" for prior art purposes. No case law or other precedent supports Petitioner's expansive definition of "public accessibility," and the Petition cites none.

VII. Conclusion

For the foregoing reasons, Petitioner failed to demonstrate that the asserted art in all grounds discloses all elements of the '262 Patent, and that the asserted reference 802.11ax/D1.0 was publicly accessible as a printed publication for prior art purposes. Thus, the institution should be denied.

Dated: October 14, 2025

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CERTIFICATE OF COMPLIANCE WITH 37 C.F.R. § 42.24

I certify that there are 5,031 words in this paper, excluding the portions exempted under 37 C.F.R. § 42.24(a)(1), according to the word count tool in Microsoft Word.

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