

Petitioners' Opposition To Patent Owner's
Request For Discretionary Denial Of Institution
U.S. Patent No. 11,818,591

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SAMSUNG ELECTRONICS CO., LTD., and
SAMSUNG ELECTRONICS AMERICA, INC.,

Petitioners,

v.

XIFI NETWORKS R&D, INC.,

Patent Owner.

Case No. IPR2025-01204

U.S. Patent No. 11,818,591

**PETITIONERS' OPPOSITION TO PATENT OWNER'S REQUEST FOR
DISCRETIONARY DENIAL OF INSTITUTION**

TABLE OF CONTENTS

	<u>Page</u>
I. INTRODUCTION	1
II. SETTLED EXPECTATIONS WEIGH AGAINST DENIAL	2
III. INSTITUTION WOULD EFFICIENTLY USE BOARD RESOURCES	3
IV. THE EXAMINER ERRED IN ALLOWING THE ’591 PATENT.....	4
V. ON BALANCE, THE <i>FINTIV</i> FACTORS WEIGH AGAINST DISCRETIONARY DENIAL	6
A. Factor 4: Petitioners’ Stipulation Weighs Heavily Against Denial	6
B. Factor 1: The District Court’s Likelihood to Grant a Stay If the IPR Is Instituted Is Neutral.....	8
C. Factor 2: The Proximity of the District Court Trial and The Board’s Final Written Decision Is Neutral.....	9
D. Factor 3: The Parties’ Limited Investment in the District Court Litigation Weighs Against Discretionary Denial.....	11
E. Factor 5: Petitioners Being the District Court Defendants Does Not Outweigh the Factors Weighing Against Discretionary Denial	13
VI. THE MERITS OF THE PETITION ARE STRONG.....	13
A. Patent Owner’s “Gap-Filling” Criticisms	14
B. The Chincholi/Riggert Combination Is Motivated by the References and Predictable to Implement.....	17
C. The Petition’s Implementation Analysis Is Grounded in References	18
VII. CONCLUSION.....	19

Petitioners' Opposition To Patent Owner's
Request For Discretionary Denial Of Institution
U.S. Patent No. 11,818,591

TABLE OF EXHIBITS

Exhibit	Description
1001-1015	<i>Previously presented.</i>
1016-1019	[Intentionally Omitted]
1020	Patent Owner's March 26, 2025 P.R. 3-1 Infringement Contentions
1021-1022	[Intentionally Omitted]
1023	Eastern District of Texas Calendar Events Set for October 19, 2026 (Oct. 9, 2025, 4:50 PM)
1024	Excerpt of Federal Court Management Statistics (June 30, 2025), https://www.uscourts.gov/sites/default/files/document/fcms_na_dist_profile0630.2025.pdf

I. INTRODUCTION

The Director should deny Patent Owner's request for discretionary denial (Paper 8) ("DD Request"). The challenged patent is one of eleven closely related patents that Patent Owner only recently obtained on a previously dormant patent family and then abruptly asserted against a long-standing industry participant. Petitioners have challenged all eleven patents, three by PGR.

The recently issued patents each lack the settled expectations that the Director has repeatedly emphasized. For example, the '591 patent was not filed until 2021, and it issued less than two years ago, on November 14, 2023. Board review would be highly efficient given the interconnected and highly technical nature of the proceedings: the eleven patents have a common ancestor and share the same specification, and the claims have a high degree of overlap.

Institution is also warranted because of the lack of rigorous examination across the patent family. Nearly all of the patents issued through Track One prioritized examination with minimal substantive review, creating a pattern of expedited allowances without thorough prior art consideration.

District Court timing also militates against discretionary denial. The (tentative) trial date is nearly a year away and remains subject to change. These petitions were filed at the beginning of the litigation, before any substantive discovery or claim construction proceedings took place. The parties are in the early stages of discovery,

Petitioners' Opposition To Patent Owner's
Request For Discretionary Denial Of Institution
U.S. Patent No. 11,818,591

and any claim construction hearing is more than six months away.

Petitioners' unusually broad stipulation mitigates the risk of duplication across forums by extending beyond standard *Sotera* terms: Petitioners stipulate that they will not pursue in district court any combinations that include Chincholi or Riggert—even combinations with references that could never be raised in an IPR.

Finally, the merits of Petitioners' substantive arguments are strong, further supporting denying Patent Owner's request.

II. SETTLED EXPECTATIONS WEIGH AGAINST DENIAL

The '591 patent is in the same family as U.S. Pat. Nos. 11,849,337 ("337 patent"), 11,856,414 ("414 patent"), 11,974,143 ("143 patent"), 11,950,105 ("105 patent"), 12,003,976 ("976 patent"), 12,015,933 ("933 patent"), 12,114,177 ("177 patent"), 12,169,756 ("756 patent"), 12,190,198 ("198 patent"), and 12,250,564 ("564 patent") (collectively, the "Challenged Patents."). Each Challenged Patent issued only within the past two years. Thus, each lacks settled expectations. *Cambridge Indus. USA, Inc. v. Applied Optoelectronics, Inc.*, IPR2025-00433, Paper 11 at 2 (Director June 27, 2025).

Patent Owner's DD Request does not even address settled expectations. That silence is all the more telling, because Patent Owner "does not contend that any XiFi apparatus, device, process, method, act, or other instrumentality practices any of the asserted claims." EX1020 at 6. The Director has previously found that lack of

previous application of challenged claims “in [Petitioners’] particular technology space” contributes to a lack of settled expectations as to the validity of this claims. *See Shenzhen Tuozhu Tech. Co., Ltd. v. Stratasy, Inc.*, IPR2025-00438, Paper 10 at 3 (Director July 17, 2025). Indeed, the Challenged Patents were never asserted in any lawsuit until this one, and Patent Owner has not filed any other suits since. There are no “settled expectations” that would inure to Patent Owner’s benefit.

Patent Owner’s lack of settled expectations is further demonstrated by the recency of its enforcement. Patent Owner alleges that the Challenged Patents enable standardized Wi-Fi 7 features. EX2001, ¶ 2. Samsung released its first Wi-Fi 7 products in 2024, and Patent Owner filed suit in December 2024—less than a year later. This rapid assertion against newly released products confirms the absence of any settled expectations regarding validity of the challenged claims.

III. INSTITUTION WOULD EFFICIENTLY USE BOARD RESOURCES

Referring all eleven petitions to the Board would be an efficient use of Board resources, which further weighs against discretionary denial. *Embody, Inc. v. LifeNet Health*, IPR2025-00248, Paper 13 at 3 (Director June 26, 2025). There is significant overlap among the petitions. Chincholi appears in all eleven petitions, providing the fundamental teachings for the obviousness grounds. Riggert appears in seven of the eight IPR petitions, and Clegg appears in seven petitions spanning both IPRs and PGRs. The consistent use of these core references makes analysis of one petition

highly informative for the others.

Further, Patent Owner alleges the Challenged Patents cover “foundational” technologies and enable Wi-Fi 7 features that are standardized across the industry. EX2001, ¶ 2. Board review would provide clarity for numerous implementers, making institution a highly efficient use of Board resources.

IV. THE EXAMINER ERRED IN ALLOWING THE '591 PATENT

Most of the Challenged Patents issued through Track One prioritized examination with no substantive office actions, creating conditions ripe for error. This is particularly concerning given the technical complexity of the claimed wireless communications technology and the crowded field. Indeed, the Examiner overlooked or failed to raise relevant prior art, including Chincholi and Riggert, which Petitioners now demonstrate render all claims obvious. Pet., Ground 1.

The Examiner's errors during prosecution of the '591 patent may stem, in part, from moving too fast. The Examiner issued a single non-final rejection, asserting obviousness over references not at issue here. EX1004, Feb. 8, 2023 Non-Final Rejection. In response, Applicant amended the specification and drawings and replaced all then-pending claims with new claims. EX1004, Aug. 8, 2023 Amendment. The Examiner issued an NOA a mere 22 days later. EX1004, Aug. 30, 2023 NOA. Applicant then filed two post-allowance amendments. EX1004, Sept. 7, Sept. 28, 2023 Amendment. The examiner renewed the NOA each time, taking only

Petitioners' Opposition To Patent Owner's
Request For Discretionary Denial Of Institution
U.S. Patent No. 11,818,591

twelve days and eight days. EX1004, Sept. 19, Oct. 6, 2023 NOA.

Applicant's disclosure practices illustrate the prosecution errors plaguing this patent family. For example, Applicant disclosed Clegg on October 11, 2024 in IDSs for the '198, '756, and '564 patents. Yet four related patents (that are now being challenged as obvious over Clegg) had already issued without Applicant disclosing or the Examiner considering this reference. Samsung now demonstrates that all seven of these patents related to the '591 patent are obvious over Clegg. Similarly, Applicant disclosed a related Chincholi reference (U.S. Pat. Pub. No. 2013/0201847) in an IDS for other family members, but the Examiner never discussed it or used it as the basis for any rejection. *Ecto World, LLC v. RAI Strategic Holdings, Inc.*, IPR2024-01280, Paper 13 at 5-6 (Director May 19, 2025) (precedential) (Examiner materially errs when failing to consider prior art teachings material to patentability).

Even if the Director finds that other factors may favor discretionary denial, "it is an appropriate use of Office resources to review the[se] potential error[s]." *Taiwan Semiconductor Mfg. Co. v. Marlin Semiconductor Ltd.*, IPR2025-00847 *et al*, Paper 11 (Director Sept. 3, 2025) (referral when the ITC hearing on the challenged patent is scheduled nine months before the projected final written decision due date). This remains true even if the Director finds the Examiner's errors are applicable to only some Challenged Patents, since instituting proceedings on the other patents will be an "efficient use of Board resources." *Embody*, IPR2025-00248, Paper 13 at 3.

**V. ON BALANCE, THE *FINTIV* FACTORS WEIGH AGAINST
DISCRETIONARY DENIAL**

A proper analysis of the *Fintiv* factors supports denying the DD Request. Most notably, Petitioners have filed a broad stipulation that goes beyond addressing the Director's concerns with *Sotera* stipulations. Paper 7; *Motorola Sols. v. Stellar, LLC*, IPR2024-01205, Paper 19 at 3-4 (Director Mar. 28, 2025).

A. Factor 4: Petitioners' Stipulation Weighs Heavily Against Denial

Petitioners' stipulation, which Petitioners' research indicates is one of the broadest that an IPR petitioner has provided, outweighs every other *Fintiv* factor. Petitioners stipulate that, if this petition is instituted, they will not assert in the litigation invalidity grounds that include:

1. "any grounds of invalidity arising under U.S.C. § 102 or § 103 involving only patent or printed publication prior art that could have reasonably been raised before the Board with respect to [the '591 patent], including the same grounds in the Petition (Paper 1);" or
2. "any grounds of invalidity arising under U.S.C. § 102 or § 103 with respect to the '591 patent that include [Chincholi or Riggert]."

Paper 7.

The two components together eliminate potential overlap between this PTAB proceeding and the District Court litigation. Clause 1 is a standard *Sotera* stipulation. Clause 2 goes significantly further. It removes the primary IPR references (Chincholi and Riggert) from *any* District Court invalidity grounds, *including combinations with system art*. By removing these from all potential district court §§ 102 or 103

Petitioners' Opposition To Patent Owner's
Request For Discretionary Denial Of Institution
U.S. Patent No. 11,818,591

grounds—including combinations with system art—Clause 2 effectively eliminates the possibility of duplicative or conflicting adjudication.

Patent Owner argues that Clause 1 leaves open the possibility that in district court Petitioners might assert combinations of *other* patents or printed publications with system art. DD Request, 11. But Petitioners' stipulation mitigates this risk far more than the a typical *Sotera* stipulation. Moreover, Patent Owner points to no law, rule, or decision that supports its position that discretionary denial is warranted on the mere basis that Petitioners may assert in district court system art references in combination with patents or printed publications that are *not* asserted in the IPR.

Patent Owner's citation to *Motorola*, IPR2024-01205, Paper 19, is inapposite. There, the Director expressly noted that petitioner's stipulation did not foreclose combinations of system art with the IPR references. *Id.* at 4. Here, Clause 2 directly addresses this concern. Further, *Motorola* does not hold that a stipulation is inadequate unless it forecloses all possible system art combinations. Rather, *Motorola* addressed the *overall* weighing of *Fintiv* factors: the Director acknowledged that a standard stipulation "may mitigate some concern of duplication," *id.* at 4, but concluded that the mitigation there did not outweigh other case-specific facts, including substantial investment in the district court proceeding and factors 1, 2, and 5. *Id.* at 4.

Patent Owner next argues that Petitioners' stipulation does not make IPR a

“true alternative” because Petitioners could use Chincholi or Riggert as “evidence” of other grounds. DD Request at 12-13. This argument misstates the law. *Sotera Wireless, Inc. v. Masimo Corp.*, IPR2020-01019, Paper 12 at 19 (P.T.A.B. Dec. 1, 2020) (stipulation makes IPR “true alternative” by “address[ing] concerns of duplicative efforts and potentially conflicting decisions in a much more substantial way”). Of course, § 101 and § 112 challenges, cannot by statute be raised in an IPR. *See* 35 U.S.C. § 311(b). There is thus no risk of parallel adjudication. Finally, contrary to Patent Owner’s argument, the possibility that Petitioners may use Chincholi or Riggert as background evidence—to show state of the art or level of ordinary skill—in parallel district court litigation is fundamentally different from asserting their teachings as a basis for invalidity. Only the latter creates duplicative adjudication. Patent Owner cites no case requiring petitioners to stipulate away non-IPR-eligible theories or every evidentiary use of references.

Accordingly, Factor 4 factor heavily weighs against denial.

B. Factor 1: The District Court’s Likelihood to Grant a Stay If the IPR Is Instituted Is Neutral

Patent Owner attempts to predict how the District Court might rule on a potential post-institution stay motion. DD Request, 8-10. But the Board declines to engage in such speculation when the district court has not expressed any position on the matter, instead treating this factor as neutral. *Apple, Inc. v. Fintiv, Inc.*, IPR2020-

00019, Paper 15 at 12 (P.T.A.B. May 13, 2020) (declining to “infer, based on actions taken in different cases with different facts, how the District Court would rule”).

Patent Owner concedes that the District Court would likely consider and potentially approve a stay if institution occurs across all eleven petitions. DD Request, 10 n.3; *see also Emerging Automotive LLC v. Kia Corp.*, No. 2:23-cv-00437-JRG, Dkt. 301 (E.D. Tex. Jun. 30, 2025) (granting stay following institution of IPRs and *ex parte* reexamination against all asserted patents). Indeed, the District Court has shown a recent willingness to grant stays even close to trial. *Id.* (approving stay three weeks pre-trial); *Stellar LLC v. Motorola Sols., Inc.*, No. 4:23-cv-750-SDJ, Dkt. 156 (E.D. Tex. Feb. 24, 2025) (imposing stay two weeks before trial, even while awaiting institution decisions on some asserted patents).

A stay in this case may be particularly attractive to the District Court given the high degree of overlap in prior art theories across the eleven petitions, and the fact that Petitioners are asserting PGRs which offer the possibility for guidance on the common § 101 and § 112 issues existing in this patent family.

C. Factor 2: The Proximity of the District Court Trial and The Board's Final Written Decision Is Neutral

While Patent Owner emphasizes the scheduled October 19, 2026 trial date, this date is not guaranteed given Judge Gilstrap's busy trial docket (there are *six* trials (four of them patent) and one pretrial conference currently scheduled for that

Petitioners' Opposition To Patent Owner's
Request For Discretionary Denial Of Institution
U.S. Patent No. 11,818,591

same day). EX1023. Additionally, the Eastern District of Texas's actual time-to-trial statistics show that the most recent median time-to-trial for the district court is 25.1 months. EX1024. Applying those statistics would place trial at around late January 2027, after the Board's latest statutory deadline of January 10, 2027.

Even if the scheduled trial date is accepted, the Director has referred petitions to the Board despite comparable timing concerns, particularly where other factors—like lack of settled expectations—weigh against denial. *See Zhuhai CosMX Battery Co. v. Ningde Amperex Tech. Ltd.*, IPR2025-00385, Paper 9 at 2-3 (P.T.A.B. July 2, 2025) (lack of settled expectations justified referral to the Board despite trial scheduled to occur before FWD).

And the cases Patent Owner cites are distinguishable. In *Cisco Sys. Inc. v. WSOU Invs. LLC*, IPR2025-00429, Paper 15 (P.T.A.B. June 25, 2025), the projected final written decision was July 30, 2026, but the district court's scheduled trial date was April 20, 2026 (resulting in a gap 50% larger than here). *Id.* at 2. In *Full-Metal-Power B.V. v. Infocus Downhole Sols. USA LLC*, IPR2025-00391, Paper 14 (P.T.A.B. June 25, 2025), the Board denied institution where the jury trial was scheduled to begin a month before the projected due date of the final written decision, but this was just one factor in a “holistic assessment” of a situation markedly different from the one at issue here: for example, there, petitioner failed to offer any prior art stipulation. *Id.* at 2.

Petitioners' Opposition To Patent Owner's
Request For Discretionary Denial Of Institution
U.S. Patent No. 11,818,591

Patent Owner accuses Petitioners of “delay” in filing its petitions. DD Request, 7-8. To the contrary, Petitioners acted with diligence. Two of the eleven challenged patents—the '198 patent (challenged in PGR2025-00067) and the '564 patent (challenged in PGR2025-00069)—did not even issue until January 7, 2025 and March 11, 2025, respectively. Patent Owner added them on March 11, 2025 in an Amended Complaint. EX2003. Petitioners then had to assess the newly added patents. That Petitioners filed eleven petitions challenging over 300 technically complex claims only about three to four months after the Amended Complaint is evidence of diligence, not lack of diligence. The timeline reflects appropriate care in identifying the strongest prior art references and developing comprehensive positions across the family. *Tianma Microelectronics Co. Ltd. v. Japan Display Inc.*, IPR2021-01057, Paper 15 at 9-11 (P.T.A.B. Jan. 6, 2022) (finding diligence in filing petition nine months after complaint and six months after infringement contentions).

D. Factor 3: The Parties' Limited Investment in the District Court Litigation Weighs Against Discretionary Denial

This factor weighs against discretionary denial. At the time of the Board's institution decision, the District Court case will still be in its early stages with limited investment by the Court and parties.

While Patent Owner emphasizes that the parties have exchanged contentions (DD Request, 7), the litigation is in its infancy. Trial is not scheduled until October

Petitioners' Opposition To Patent Owner's
Request For Discretionary Denial Of Institution
U.S. Patent No. 11,818,591

19, 2026, at the earliest. Fact discovery is only recently underway and will not close until May 2026. Expert discovery will not close until late June 2026 (and Patent Owner will not need to serve an expert response to Petitioners' invalidity contentions until after the institution decision date, meaning Patent Owner will then benefit from Petitioners' broad stipulation). Claim construction proceedings have not even begun, the claim construction hearing is more than six months away (more than three months *after* the institution decision date), and dispositive motions are not due another two months after that. EX2002 at 4; *see also Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 11 at 10 (P.T.A.B. Mar. 20, 2020) ("If, at the time of the institution decision, the district court has not issued orders related to the patent at issue in the petition, this fact weighs against exercising discretion to deny institution"); *Coretronic Corp. v. Maxell Ltd.*, IPR2025-00941, Paper 9 (Sept. 26, 2025) (finding meaningful investment where "the parties have participated in a *Markman* hearing, fact discovery was scheduled to close on August 21, 2025, and expert discovery will close soon."). This schedule weighs heavily against discretionary denial.

Patent Owner claims Petitioners chose to "actively" litigate by filing an Answer/Affirmative Defenses and Invalidity Contentions. DD Request, 2. This is meritless. Petitioners complied with deadlines for mandatory filings. Pre-institution stays are exceedingly rare in this District Court, and the standard practice is to seek

a stay only after institution. *See, e.g., Advanced Integrated Circ. Process LLC v. Taiwan Semiconductor Mfg. Co.*, 2-25-cv-00324-JRG, Dkt. 71 at 2 (E.D. Tex. Aug. 29, 2025) (“withhold[ing] a [stay] ruling pending action on the petition by the PTAB”). Petitioners have not made the substantive investment *Fintiv* contemplates. They have not litigated claim construction or even any discovery disputes, and the court has issued no substantive orders on the patents.

In sum, neither party has made substantial investment in the District Court.

E. Factor 5: Petitioners Being the District Court Defendants Does Not Outweigh the Factors Weighing Against Discretionary Denial

The Petitioners here are the defendants in the District Court case. This factor does not outweigh the other factors discussed above.

VI. THE MERITS OF THE PETITION ARE STRONG

Patent Owner does not dispute the merits of the Petition—not even in its *Fintiv* Factor 6 analysis. DD Request (Section III.E). Patent Owner’s DD Request instead focuses on procedural criticisms about expert testimony and alleged “gap-filling.” This silence on the substantive merits weighs heavily in favor of institution.

The Petition’s merits are strong. The Petitions use specific, pinpoint citations to show that the prior art references—Chincholi and Riggert—disclose every disputed element and explain that the combination rationale flows directly from the references’ overlapping objectives (increasing throughput and efficiency in multi-

transceiver wireless networks) and from Chincholi's existing architecture, which a POSITA would naturally extend using Riggert's virtual interfaces.

Patent Owner's contrary characterization misstates how expert testimony properly functions under Board rules. Patent Owner argues that the Petition seeks to "fill gaps" with expert testimony, suggests over-reliance, labels portions "conclusory," and complains that the expert references background materials not listed as prior-art grounds. That framing misstates the record and the misapplies the rules. The Petition uses the expert to articulate why a POSITA would read the references the way the Petition does and why a POSITA would combine them. *See, e.g.,* EX1002, ¶¶ 68-168.

The substantive question is not, *e.g.*, the degree of textual overlap between a declaration and a petition, but is whether Chincholi and Riggert teach what the Petition says they teach. The Petition and the declaration both cite to the same specific disclosures in Chincholi and Riggert, and thus exhibit textual overlap. Nor does textual coordination between legal argument and expert analysis establish that there is anything improper about the Petition or the expert declaration. Here, the Petition makes proper use of expert testimony and does not rely on the expert to supply missing elements. 37 C.F.R. § 42.65(a); *Xerox Corp. v. Bytemark, Inc.*, IPR2022-00624, Paper 9 (Aug. 24, 2022) (precedential).

A. Patent Owner's "Gap-Filling" Criticisms

Petitioners' Opposition To Patent Owner's
Request For Discretionary Denial Of Institution
U.S. Patent No. 11,818,591

Patent Owner identifies two alleged “gap-filling” examples. Patent Owner claims Chincholi does not disclose a “virtual MAC interface” because it does not use the word “virtual.” DD Request, 15. Patent Owner also claims Chincholi lacks disclosure that one device’s use of bandwidth “does not prevent” other devices’ access, and that Dr. Almeroth supplies a detailed OFDMA explanation not otherwise in Chincholi to “find evidence” of this element. *Id.* at 16. Both criticisms fail because Chincholi expressly discloses both claimed functions, albeit not using the precise words chosen by Patent Owner. Dr. Almeroth merely explains why a POSITA would recognize those disclosures as teaching the challenged limitations.

Virtual MAC Interface. Chincholi discloses the architecture and functionality the claims recite as a “virtual MAC interface.” As discussed in the Petition, Chincholi discloses an “Opportunistic Multiple-Medium Access Control (MAC) Aggregation (OMMA) layer,” a “single thin software layer” positioned above multiple actual MAC/PHY stacks that “distributes and/or combines” packets between the IP layer and the underlying transceivers. Pet., 6-7, 29; EX1005 at [0003], [0120], [0192]. Chincholi also discloses the specific functional components the ’591 patent associates with the “virtual MAC interface”: an IP QoS Scheduler, a MAC Resource Reservation Module, and a Traffic Shaping Module. Pet., 29-31; EX1005 at [0139], [0142]-[0143].

Dr. Almeroth explains why a POSITA would understand these components

as corresponding to the claimed virtualization function. EX1002, ¶¶ 98-100. That is proper expert testimony—explaining why disclosed functionality meets claimed functionality—not gap-filling. The absence of the word “virtual” is immaterial when the reference discloses the underlying function.

“Does Not Prevent” Other Devices’ Access. Patent Owner asserts that “Chincholi does not expressly disclose” the limitation requiring that one device’s bandwidth use does not prevent other devices from using remaining bandwidth portions, and argues that Dr. Almeroth improperly fills this gap with OFDMA. DD Request, 16. Patent Owner is wrong.

First, Chincholi expressly discloses multi-device concurrent access. Chincholi discloses that “[a] system may comprise multiple WTRUs, a single NT, and multiple IP flows from the NT to one or more WTRUs”—meaning multiple wireless devices receiving data at the same time. EX1005 at [0328]. Chincholi then explains how the system manages this: it uses separate queues for each device and schedules transmissions across multiple transceivers to accommodate all devices. *Id.* at [0351]-[0356]. These are Chincholi’s own disclosures, not expert characterization.

As for OFDMA, Chincholi expressly discloses that “Table 2 provides examples of feedback metrics that may be used by an OMMA layer.” *Id.* at [0161]. Then in Table 2, Chincholi expressly lists “OFDMA” as a “MAC Type” feedback metric. *Id.* at Table 2. OFDMA is a well-known technology in wireless

communications. When Dr. Almeroth explains what OFDMA refers to—dividing bandwidth into subcarriers for simultaneous multi-user access (EX1002, ¶ 126)—he is not improperly supplying information “not otherwise disclosed in Chincholi.” He is unpacking the jargon used in Chincholi. Patent Owner would prohibit expert explanations of a reference’s technical terminology, but that is quintessentially proper expert testimony.

B. The Chincholi/Riggert Combination Is Motivated by the References and Predictable to Implement

Patent Owner contends there is no proper motivation to combine Chincholi and Riggert, arguing that (1) the proffered rationale relies on “generalized appreciation for virtualization” rather than the cited art, and (2) background materials (*e.g.*, the IEEE 802.11 standard and U.S. Pat. Appl. No. 2009/0141691 (“Jain”)) improperly supply the “virtual PHY” idea. DD Request, 16-19.

Both criticisms fail because both the motivation and the idea come directly from the references. Chincholi already teaches a multi-RAT architecture with a thin OMMA layer above actual MAC/PHY stacks that aggregates bandwidth based on per-transceiver feedback. The expert explains that, because Chincholi already partially virtualizes MAC-level control at OMMA, a POSITA would extend that same design principle to the OMMA/transceiver boundary by implementing the “virtual PHY” interfaces from Riggert (a cited ground) to increase flexibility.

EX1002 at ¶ 69; EX1005 at [0137] (partial virtualization at OMMA motivates virtualized interfaces to the RATs). Both references address the same problem (increasing throughput in multi-transceiver wireless networks) and both operate in 802.11 contexts. *Compare* EX1005 at [1002] and [0138], *with* EX1006 at [0004] and [0057]. The combination simply applies Riggert's interface solution to Chincholi's existing architecture to achieve the benefits both references seek. The background materials contextualize what a POSITA already knew about interface abstraction in 802.11 systems. EX1002, ¶¶ 71-72; EX1006 at [0065].

C. The Petition's Implementation Analysis Is Grounded in References

Patent Owner criticizes Dr. Almeroth for providing "little discussion as to how a POSITA would implement" the combination and for using "conclusory statements" like "straightforward" or "easily substituted." DD Request, 18-19. But Dr. Almeroth does explain how, and the explanation is grounded in the references.

Dr. Almeroth explains that implementation would be straightforward because Chincholi already implements virtualization at the OMMA layer, and Riggert's interfaces are designed for generic use. EX1002, ¶ 73. He points to specific reference teachings: Chincholi's existing MAC-level virtualization (*Id.* ¶ 69 (citing EX1005 at [0137])) and Riggert's disclosure that its bondable virtual interfaces are designed "to be used generically in the framework" (*Id.* (quoting EX1006 at [0065])). From those, Dr. Almeroth explains that a POSITA would understand how to integrate

Riggert's generic interfaces into Chincholi's virtualized architecture—a routine extension. *Id.* ¶ 73.

The characterizations of implementation as “straight-forward” and “easily substituted” flow from the references: Chincholi's architecture is already virtualized, and Riggert's interfaces are designed for generic integration. *Id.* ¶¶ 71, 73 (citing EX1005 at [0137]; EX1006 at [0065]). That combination—applying a generic interface to a compatible architecture—yields a reasonable expectation of success. *Id.* ¶ 73.

VII. CONCLUSION

Patent Owner has identified no legitimate basis for the Director to deny institution based on any discretionary factors. Institution should be granted.

Petitioners' Opposition To Patent Owner's
Request For Discretionary Denial Of Institution
U.S. Patent No. 11,818,591

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