

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

AMERICAN AIRLINES, INC. AND SOUTHWEST AIRLINES CO.,

Petitioners

v.

INTELLECTUAL VENTURES I LLC,

Patent Owner.

Inter Partes Review No. IPR2025-01510

U.S. Patent No. 10,103,845

Issue Date: October 16, 2018

Title: DUAL MODE COMMUNICATION SYSTEMS AND METHODS

**PETITIONERS' BRIEF IN OPPOSITION TO PATENT OWNER'S
REQUEST FOR DISCRETIONARY DENIAL**

Mail Stop Patent Board
Patent Trial and Appeal Board
U.S. Patent and Trademark Office
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<i>Tesla, Inc. v. Intellectual Ventures II LLC</i> IPR2025-00217, Paper 9 (Director Jun. 13, 2025)	6

EXHIBIT LIST

Exhibit No.	Description
1001	U.S. Patent No. 10,103,845 (the “’845 Patent”)
1002	Prosecution History of the ’845 Patent
1003	Declaration of William C. “Chuck” Easttom in Support of Petition for <i>Inter Partes</i> Review of U.S. Patent No. 10,103,845
1004	Curriculum Vitae of William C. “Chuck” Easttom
1005	U.S. Patent Application No. 2002/0154705 (“Walton”)
1006	U.S. Patent No. 7,130,592 (“Ishikawa”)
1007	U.S. Patent No. 7,885,178 (“Maltsev”)
1008	U.S. Patent No. 7,916,803 (“Gardner”)
1009	U.S. Patent No. 7,324,429
1010	International Patent App. No. WO2003003646A2
1011	2003 Texas Instruments White Paper
1012	2009 Cisco Presentation re: 802.11
1013	Correspondence to Brandon R. Theiss dated October 23, 2025 regarding Sotera Stipulation from American Airlines1014
1014	Correspondence to Brandon R. Theiss dated October 23, 2025 regarding Sotera Stipulation from Southwest Airlines
1015	Declaration of Kenneth Scott re: Admission as Provisionally Recognized PTAB Attorney
1016	Intellectual Ventures Patent Portfolio

I. INTRODUCTION

The '845 Patent's validity should be resolved by the PTAB ("the Board"), not in court. The '845 Patent has clear validity issues that are explained by the Petition—the merits of which Patent Owner does not contend with. Moreover, Patent Owner asserts the '845 Patent as part of a litigation campaign against Petitioner American involving twelve patents from ten different families (the "American Litigation"). This proceeding, if instituted, will save significant resources and resolve validity without the need for a district court trial.

The two arguments in Patent Owner's brief fail to justify discretionary denial. Patent Owner first attempts to argue that, due to previous institution decisions concerning six other patents asserted in the American Litigation, the district court "is better suited to review the validity of the '845 Patent." Opp. at 3. This argument is not persuasive. There are still six patents in the American Litigation whose validity has not been considered by the Board, with four pending petitions and two yet to be filed. The solution for the already-overburdened court in the American Litigation is not to heap another six patents on top of the six for which institution has been denied—that outcome would only exacerbate the challenge of resolving both invalidity and infringement in the district court on twelve patents.

Patent Owner also argues that the settled expectation of the parties favor discretionary denial. Patent Owner is wrong—the settled expectations of the parties

favor institution. Patent Owner claims settled expectations based on the '845 Patent's age and its allegation that Petitioners have commercial interests in the patent's subject matter, but it fails to explain how either justify its settled expectations of the '845 Patent's validity. Petitioners are airlines who depend on third parties to offer in-flight wi-fi to air travelers; the '845 Patent is a highly technical wireless communications patent that has *never* been incorporated into any wireless communications standard, wi-fi or otherwise. Indeed, the '845 Patent says nothing of air travel or inflight wi-fi—it is directed to “dual mode communication systems” that “perform spatial multiplexing and expanded bandwidth signaling to data.” Ex. 1001 at Abstract. So, Patent Owner's declaration of “settled expectations” fails to outweigh Petitioners' own expectation: that a patent assertion entity would not wait over six years to assert a highly technical wi-fi patent against an airline.

Finally, though Patent Owner's request for discretionary denial is silent with respect to *Fintiv*, that analysis counsels in favor of institution. Trial is not yet set in the American Litigation, and an institution decision will predate any significant expenditure in adjudicating the validity and infringement of the '845 Patent.

Thus, the number and range of the patents asserted in the American Litigation, Petitioners' settled expectations, and *Fintiv* all counsel that discretionary denial is inappropriate here. The Petition should be instituted because its arguments against the '845 Patent are strong, and the Board is best positioned to efficiently resolve

validity given the existing strain on the American Litigation district court. Petitioners respectfully request that the Board review the merits of the Petition and institute trial.

II. THE DIRECTOR SHOULD ALLOW THE PETITION TO PROCEED ON THE MERITS

A. The Board is best suited to review this patent because of the breadth of the twelve patents asserted in the American Litigation.

“The large number and vast scope of the patents asserted” in the American Litigation weighs against discretionary denial. *Shenzen Tuozhu Tech. Co., Ltd. v. Stratasy, Inc.*, IPR2025-00438, Paper 10 at 3 (Director July 17, 2025) (“*Stratasy*”). Contrary to Patent Owner’s arguments, the Board’s declining to institute the earlier petitions does not alter this rationale, it strengthens it—there are still twelve patents at issue in the American Litigation, and this proceeding, if instituted, *will* lighten the district court’s load in resolving the litigation.

The ’845 Patent is one of twelve different patents (from ten different families) asserted in the American Litigation. This fact led the Director to decline Patent Owner’s earlier requests for discretionary denial. *E.g.*, Exs. 2001, 2002, and 2003. It should do so here as well. Patent Owner is wrong that the Board’s denial of institution in the earlier proceedings now strengthens its case for discretionary denial. If anything, those earlier denials only reinforce the need for the Board to review the ’845 Patent’s validity, as it is now clear that the district court will adjudicate the validity and infringement of a large number of unrelated patents, *i.e.*,

the six patents for which discretionary denial was denied but for which the Board denied institution. The Board can prevent that burden from growing even larger by instituting the Petition and resolving the '845 Patent's validity outside of the district court.

Patent Owner's argument that "no results by the Board in the four remaining IPRs will avoid the need for the District Courts to address the validity of patents spanning a 'diverse range of subject matter'" defies common sense. Opp. at 6. It would only exacerbate the judicial-economy problem faced by the district court if additional patents in the American Litigation were left for its adjudication. Further waste and inefficiency can be avoided by having a specialized tribunal—the Board—review the '845 patent's validity. Doing so would undeniably reduce the load on the already-overburdened district court in the American Litigation.

This point is especially salient given the '845 Patent's subject matter. The '845 Patent is the only patent in the American Litigation directed to spatial multiplexing in wi-fi systems. Ex. 1001, Cover. However, this unique stature is obscured in Patent Owner's discretionary denial brief, which contains an inaccurate table that omits two of the patents in the American Litigation and describes the subject matter of the remaining patents at such a high level of generality that the comparison between patents is meaningless. Opp. at 5. For example, Patent Owner contends that U.S. Patent No. 8,027,326, which concerns only expanded bandwidth

WLAN operations in wi-fi systems, is so similar to the '845 Patent that there will be no legitimate efficiency concerns raised by the District Courts adjudicating both patents. Opp. at 5-6. Bandwidth expansion and spatial multiplexing are distinct wi-fi technologies, and the asserted claims of the '845 Patent are the only ones that concern spatial multiplexing. The argument that the subject matter areas of the other patents in the American Litigation “fully encompass” that of the '845 Patent is just not true. Board review of the '845 Patent’s validity would thus promote efficiency and reduce the burden on the district court.

The table below recites the complete list of patents asserted in the American Litigation, along with the title of each patent and the technology Patent Owner accuses of infringement. As can be seen, the technological focus of the '845 Patent is distinct from every other asserted patent; it is the only patent concerning “dual mode” wi-fi access points, i.e., those that employ bandwidth expansion *and* spatial multiplexing.

U.S. Patent No.	Description	Notes
7,257,582	“Load Balancing With Shared Data”	Accusing Spark/Hadoop software
7,324,469	“Satellite Distributed High Speed Internet Access”	Accusing onboard satellite internet systems
7,712,080	“Systems and Methods for Parallel Distributed Programming”	Accusing Spark software

U.S. Patent No.	Description	Notes
7,721,282	“Block-Level I/O Subsystem for Distributed Application Environment Management”	CIP of ’844 Patent; Accusing Docker software
7,822,841	“Method and System for Hosting Multiple, Customized Computing Clusters”	Accusing Kubernetes software
7,949,785	“Secure Virtual Community Network System”	Accusing Kubernetes software
8,027,326	“Method and System for High Data Rate Mult-Channel Wlan Architecture”	Accusing 802.11-based wi-fi access points
8,332,844	“Root Image Caching and Indexing for Block-Level Distributed Application Management”	Accusing Docker software
8,352,584	“System for Hosting Customized Computing Clusters”	Continuation of ’841 Patent; Accusing Kubernetes software
8,407,722	“Asynchronous Messaging Using a Node Specialization Architecture in the Dynamic Routing Network”	Accusing Kafka software
10,103,845	“Dual Mode Communication Systems and Methods”	<i>Asserted against Petitioner American, but not asserted against Petitioner Southwest; Accusing 802.11-based wi-fi access points</i>
11,032,000	“Communications In a Wireless Network”	Accusing LTE-based wireless systems

Moreover, the ’845 Patent is one of six patents asserted in the American Litigation that has not yet reached an institution decision before the Board. This scenario reflects others in which the Board has declined to exercise its discretion to deny institution. *Tesla, Inc. v. Intellectual Ventures II LLC* IPR2025-00217, Paper 9

at 2-3 (Director Jun. 13, 2025) (declining to discretionarily deny institution where six patents from a single litigation were before the Board). Thus, even setting aside the six previously decided institution decisions and the unique subject matter of the '845 Patent, the breadth and complexity that would be added to the American Litigation from the patents where institution has not been denied would be reason enough for the Board not to discretionarily deny this Petition.

In sum, the fact that IPR petitions concerning previous patents asserted in the American Litigation were not instituted changes nothing with respect to Petitioners' arguments of efficiency and judicial economy. There is still an unworkably high number of patents for the district court to adjudicate and there are still six patents asserted in the American Litigation that have not reached institution decisions by the Board. Any review of the '845 Patent's validity will lighten the district court's load and prevent it from having to conduct an infringement and invalidity trial over yet another technology. On these facts, discretionary denial is not an appropriate outcome for the '845 Petition.

B. Petitioners' settled expectations favor institution.

Patent Owner claims "well-settled expectations" based on the '845 Patent's age (seven years) and an allegation that Petitioners have "commercial interests in the subject matter of the '845 Patent." Opp. at 7-8. However, Patent Owner's claim falls flat when considering Patent Owner's own failure to previously assert the '845

Patent, which is not in the same technology space as Petitioners' businesses. *Home Depot U.S.A., Inc., v. H2 Intellect LLC*, IPR2025-00480, Paper 11, pp. 2-3 (Director September 4, 2025) (declining to deny institution where Patent Owner asserted a patent concerning an electronic content delivery platform against a hardware store chain).

Petitioners had no actual notice of the '845 Patent before IV asserted it against Petitioner American. Patent Owner has not shown that, before the American Litigation, the '845 Patent was ever "commercialized, asserted, marked, licensed, or otherwise applied" in Petitioners' technology space, air travel. *Intel Corp. v. Proxense LLC*, IPR2025-00327, Paper 12, pp. 2-3 (Director June 26, 2025) (noting these as "persuasive reasons why the Board should review challenged claims several years after their issuance date"). Indeed, the '845 Patent mentions **absolutely nothing about air travel or in-flight wi-fi**. These facts establish that Patent Owner should never have developed any settled expectations with respect to the '845 Patent.

Moreover, Patent Owner's contentions that "it was known that Patent Owner had acquired rights in many patents . . . from Conexant" and that "it was also well-known that Patent Owner negotiated primarily portfolio-wide licenses," even if true, would not justify Patent Owner's claim of settled expectations. Besides its vague allusions to unspecified "portfolio-wide licenses," Patent Owner identifies no litigation and no license concerning the '845 Patent. Opp. at 11. Patent Owner should

not be able to claim “settled expectations” when Patent Owner’s own engagement with the ’845 Patent is apparently limited to including it in Patent Owner’s licensing portfolio, which, according to IV’s website, is “one of the world’s largest.” Ex. 1016.

The ’845 Patent’s mere existence is similarly insufficient to have provided notice to Petitioners. Petitioners are airlines who rely on vendors (companies who develop and market in-flight satellite wi-fi systems) to offer satellite internet to air travelers. Petitioners cannot reasonably be expected to have monitored the U.S.P.T.O.’s published patents and patent applications for any and all technology relating to wi-fi, such as the ’845 Patent—which, has never been incorporated into any standard and is silent with respect to the specific technology of in-flight wi-fi. Allowing Patent Owner to claim settled expectations, on these facts, would create an unworkably high burden for companies to monitor and challenge a vast range of patents, including patents that do not even reference its core business.

To the extent Patent Owner can claim any settled expectations regarding the ’845 Patent, Petitioners’ own expectations outweigh them. Patent Owner claims that it has controlled the ’845 Patent since it issued in 2018, well after the dates it claims Petitioners began offering in-flight wi-fi to air travelers. Opp. at 9-10. This begs the question: why did Patent Owner, whose entire business model is monetizing patents, wait until well after the ’845 Patent’s issuance to assert it against Petitioners’ in-flight wi-fi offerings? Dusting off an old patent related to a specific aspect of wi-fi

technology and asserting it against airlines offering in-flight wi-fi internet (which is not mentioned in the specification) provided by third-party technology partners cannot have created settled expectations for Patent Owner. This is especially true given Patent Owner's longstanding failure to commercialize the '845 Patent in any way beyond its mere inclusion in Patent Owner's portfolio licenses. Whatever the reason for Patent Owner's delay, it cannot maintain that its expectations were more settled than Petitioners'.

C. *Fintiv* favors institution.

1. Factor 1 (likelihood of a stay) is neutral.

The relevant inquiry into *Fintiv* Factor 1 is “whether the court granted a stay or evidence exists that one may be granted if a proceeding is instituted.” *Apple, Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 15 at 12 (P.T.A.B. May 13, 2020) (informative) (“*Fintiv*”). Here, there is no indication from the district court in the American Litigation as to how it would rule on such a stay if a proceeding were instituted. Therefore, this factor does not weigh for or against denial. *Fintiv* at 12; *Sand Revolution II, LLC v. Continental Intermodal Grp.-Trucking LLC*, IPR2019-01393, Paper 24 at 7 (P.T.A.B. June 16, 2020) (informative) (“*Sand Revolution*”).

2. Factor 2 (proximity of the trial date) weighs against discretionary denial because a Final Written Decision will likely predate any trial.

The Board is set to issue its Final Written Decision on the '845 Patent by April 14, 2027. Further, trial is not yet set in the American Litigation. Factor 2 accordingly

weighs against discretionary denial. *Murata Mfg. Co., Ltd. v. Georgia Tech Research Corp.*, IPR2025-00384, Paper 13 at 2 (Director July 29, 2025).

3. Factor 3 (investment in the parallel proceeding) weighs against discretionary denial because institution would predate substantial investment in the American Litigation.

Fintiv Factor 3 weighs strongly against discretionary denial because, on the likely date of the Board's institution decision, the district court in the American Litigation is unlikely to have issued substantive orders related to the '845 Patent, and there will undoubtedly be substantial remaining investment in the merits of the parties' invalidity positions. *Sand Revolution* at 10.

The likely date of the institution decision (April 14, 2026) predates much of the *Markman* briefing in the American Litigation (which concludes April 20, 2026). Ex. 1033 at 2. The institution decision is also certain to predate any adjudication in the American Litigation of the '845 Patent's validity or infringement, as trial is not yet set. This IPR is by far the most efficient way to resolve the '845 Patent's validity going forward, so Factor 3 weighs strongly against discretionary denial.

4. Factor 4 (overlap between issues in the petition and parallel proceedings) weighs against discretionary denial because overlap between the proceedings is minimal.

Factor 4 weighs against discretionary denial because the Petition includes materially different arguments and evidence than what will be presented in the American Litigation. *Sand Revolution* at 11-12. Specifically, the Petition addresses

substantially more claims than are at issue in the American Litigation, and, pursuant to *Sotera*, Petitioners stipulated not to pursue any grounds in parallel proceedings that could have been raised in this proceeding. Exs. 1013-14.

This proceeding would address materially different issues than the American Litigation. In the American Litigation, Patent Owner asserts six claims of the '845 Patent (1-6), so Petitioner American may only seek review of those six claims in that forum. Conversely, Petitioners seek review of all 21 claims of the '845 Patent in this proceeding, including the claims asserted in the American Litigation. Petition at 1. This weighs against discretionary denial because this proceeding can resolve substantial validity issues that the American Litigation cannot.

Moreover, Petitioners have stipulated to “not pursue in the District Court Litigation any ground raised or that could have been reasonably raised in an IPR,” thereby eliminating any potential overlap between this proceeding and the American Litigation. Exs. 1013-14. (citing *Sotera*). Factor 4 weighs against denial. *Stratasys* at 3.

5. Factor 5 (identity of the parties) is neutral.

When the Petitioners are the same as the named defendants in the district court litigations, the Board has found that this factor adds “little if anything to the discretionary denial analysis.” *Aylo Freesites Ltd. f/k/a MG Freesites Ltd. v. WellcomeMat, LLC*, IPR2024-00710, Paper 13, at *17-18 (P.T.A.B. Sept. 5, 2024).

Here, Petitioner American and Patent Owner are the named parties in the American Litigation, and Petitioner Southwest has agreed to join this Petition as co-petitioner. Thus, as in *Aylo*, the overlap between the Petition and the American Litigation adds little to the discretionary denial analysis here, so Factor 5 is neutral. *Id.* at 18.

* * *

Of the five *Fintiv* factors to be considered, Factors 2, 3, and 4 weigh against denial, and Factors 1 and 5 are neutral. The *Fintiv* analysis thus favors institution.

III. CONCLUSION

For the reasons above, Petitioners respectfully ask the Director to institute the Petition.

Dated: January 14, 2026

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CERTIFICATE OF SERVICE

I hereby certify, pursuant to 37 C.F.R. Sections 42.6, that a complete copy of the attached **PETITIONERS' BRIEF IN OPPOSITION TO PATENT OWNER'S REQUEST FOR DISCRETIONARY DENIAL**, including exhibit No. 1016, are being served upon Patent Owner by servicing Patent Owner's counsel listed below:

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