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.

Case No. IPR2025-00785
U.S. Patent No. 7,257,582

AUTHORIZED REPLY BRIEF IN SUPPORT OF PATENT OWNER'S REQUEST FOR DISCRETIONARY DENIAL

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PATENT OWNER'S EXHIBIT LIST

Ex. 2001	https://www.unifiedpatents.com/faq
Ex. 2002	https://www.unifiedpatents.com/members
Ex. 2003	Reexamination Request challenging U.S. Patent 7,257,582 filed by Unified Patents (No. 90/015,337)
Ex. 2004	Reexamination Request challenging U.S. Patent 8,332,844 filed by Unified Patents (No. 90/019,938)
Ex. 2005	Petition filed in IPR2025-00931
Ex. 2006	Docket from *Intellectual Ventures I LLC et al. v. Southwest Airlines*, Co., 7:24-cv-277 (WDTX)
Ex. 2007	www.txwd.uscourts.gov/for-attorneys/judge-albright-courtroom-faq/
Ex. 2008	Docket from *Intellectual Ventures I LLC et al. v. American Airlines*, Inc., 4:24-cv-980 (EDTX)
Ex. 2009	Defendant American Airlines, Inc.'s P.R. 3-3 Invalidity Contentions in *Intellectual Ventures I LLC et al. v. American Airlines*, Inc., 4:24-cv-980 (EDTX)
Ex. 2010	Defendant Southwest Airlines Co.'s Preliminary Invalidity Contentions in *Intellectual Ventures I LLC et al. v. Southwest Airlines*, Co., 7:24-cv-277 (WDTX)
Ex. 2011	Agreed Scheduling Order *Intellectual Ventures I LLC et al. v. Southwest Airlines*, Co., 7:24-cv-277 (WDTX)
Ex. 2012	Order Denying Motion to Sever and Stay Claims Against Viasat's In-Flight Connectivity Systems by Defendant American Airlines *Intellectual Ventures I LLC et al. v. American Airlines*, Inc., 4:24-cv-980 (EDTX)
Ex. 2013	Declaration of Dr. Daniel Abadi
Ex. 2014	CV of Dr. Daniel Abadi

Ex. 2015	Motion To Dismiss By American Airlines
Ex. 2016	Memorandum and Order of District Court
Ex. 2017	U.S. Patent No. 8,407,722
Ex. 2018	U.S. Patent No. 8,332,844
Ex. 2019	U.S. Patent No. 7,949,785
Ex. 2020	Sapuntakis et al., Optimizing the Migration of Virtual Computers
Ex. 2021	U.S. Patent No. 6,766,371 (Hipp)
Ex. 2022	U.S. Patent No. 5,951,694 (Choquier)
Ex. 2023	U.S. Patent No. 7,324,469
Ex. 2024	U.S. Patent No. 8,027,326
Ex. 2025	IAM 2014, *What's inside IV's patent portfolio?*

I. THE NARROW SCOPE AND COMMON FACTUAL BASIS OF THE DISTRICT COURT ACTIONS DISTINGUISH THIS CASE FROM *TESLA* AND WEIGH IN FAVOR OF DISCRETIONARY DENIAL

The facts here are distinguishable from *Tesla, Inc. v. Intellectual Ventures II LLC*, IPR2025-00217, Paper 9, at 2–3, where the Director found that the parallel district court litigation "involves eleven patents spanning nine different families that involve a diverse range of subject matter" and concluded that "the Board [was] better suited to review a large number of patents involving diverse subject matter." The district court actions involving the present Petitioners involve just two technology areas: (i) the wireless technology supporting the provision of inflight internet connectivity,[1] and (ii) cloud computing technology that supports Petitioners' core operational systems, including online booking, bag tracking, and fleet management.[2]

The infringement claims based on U.S. Patents 7,324,469 and 8,027,326 (Exs. 2023 and 2024) are directed to wireless technologies that provide inflight internet connectivity and therefore involve a common technology. With respect to the remaining patents, American Airlines represented to the District Court that they are

[1] The patents asserted against Petitioners based on their provision of inflight internet connectivity are U.S. Patent 7,324,469 (challenged in IPR2025-00782) and U.S. Patent 8,027,326 (challenged in IPR2025-01055).

[2] The patents asserted against Petitioners based on cloud computing are U.S. Patent 8,332,844 (challenged in IPR2025-00840 and IPR2025-00931), U.S. Patent 8,407,722 (challenged in IPR2025-00987), U.S. Patent 7,949,785 (challenged in IPR2025-00786) and U.S. Patent 7,257,582 (challenged in IPR2025-00785).

all directed to Cloud Computing and referred to them collectively as the "Cloud Computing Patents." For example, Petitioner American Airlines stated:

> ... The six patents IV asserts against American are United States Patent Nos. 8,332,844 (the "'844 Patent"), 8,407,722 (the "'722 Patent"), 7,949,785 (the "'785 Patent"), 8,027,326 (the "'326 Patent"), 7,324,469 (the "'469 Patent"), and 7,257,582 (the "'582 Patent") (collectively, the "Asserted Patents"). *Four of the Asserted Patents, the '844, '722, '785, and '582 Patents, relate to cloud computing (collectively, the "Cloud Computing Patents")*. ... Ex. 2015, 9 (emphasis added).

Throughout its Motion, American Airlines refers to these four patents as the "Cloud Computing Patents," indicating that they relate to the same technology. The District Court also called these patents the Cloud Computing Patents. Ex. 2016, 1.

The "Cloud Computing Patents" are further limited to a specific aspect of Cloud Computing, namely, Extract-Transform-Load ("ETL") pipelines for moving and preparing data. ETL pipelines are cohesive architectures that integrate data ingestion, transformation, storage, packaging, and orchestration to ensure reliable and scalable data processing. Each asserted claim of the Cloud Computing Patents maps onto an aspect of an ETL pipeline. Asserted claim 14 of the '722 Patent is directed to the data ingestion layer of an ETL pipeline, and utilizes update messages to update data objects.[3] Asserted claim 19 of the '582 Patent is directed to

[3] *See, e.g.*, Ex. 2017, claim 14 ("sending, using the processing device of the input source, an update message to the routing network, wherein the update message identifies the live object and contains update data that updates a property of the live object").

implementation of the transformation and/or load layers of an ETL pipeline through the processing of partitioned data.[4] Asserted claims 7 and 11 of the '844 Patent are directed to the formation of containers (from a root image and leaf images) for creating scalable application environments for implementing an ETL pipeline.[5] Lastly, asserted claim 30 of the '785 Patent enables dynamic scaling of the containers used to implement application environments in an ETL pipeline by adapting a domain name server (DNS) architecture to manage the virtual network addressing of containers.[6]

The references relied on in the Petitions challenging the Cloud Computing Patents further demonstrate that the patents relate to a common field. For example,

[4] *See, e.g.*, Ex. 1001, Claim 1 ("(c) simultaneously executing at least a respective one of the subtasks of the computer-executable process in each of at least some of said processors on a respective one of the partitions with each subtask reading and processing the respective partition so as to process the respective partition and produce respective subtask output and; (d) thereafter repeating step (c) in at least some of the subtask processors ...").

[5] *See, e.g.*, Ex. 2018, claim 7 ("storing blocks of a root image of said compute nodes on a first storage unit; storing leaf images for respective compute nodes on respective second storage units ...") and claim 11 ("merging the blocks of said root image with the blocks of respective leaf images to create cohesive respective application environments").

[6] *See, e.g.*, Ex. 2019, claim 30 ("A virtual network manager, comprising ... a register module ... configured to ... distribute a virtual network address to the device when the device is registered in the virtual network... a DNS server for the virtual network, the DNS server configured to receive a DNS request from a first device in the virtual network, and return a network address associated with ....").

Hipp (relied on in IPR2025-00786) is directed to an "on-demand leasable computer infrastructure" for hosting applications, which is another way of referring to cloud computing. *See*, e.g., Ex. 2021, 1:46-63. Choquier (relied on in IPR2025-00987) is about an architecture that allows for replication of services on remote servers and that scales based on the processing load. Again, these are core aspects of cloud computing. *See*, e.g., Ex. 2022, 1:45-67 and 25:6-13. Similarly, Sapuntakis (relied on in IPR2025-00931) discusses "an environment where a collection of machines" are maintained "to run exactly the same software configuration" - another core characteristic of cloud computing. *See*, e.g., Ex. 2020, 9.

Because the Cloud Computing Patents have a common technological foundation, they necessarily involve overlapping factual inquiries, overlapping expert testimony, and overlapping invalidity defenses. Furthermore, the cloud computing functionality practiced by Petitioners is tied together by each airline's adoption and deployment of open-source components acquired and approved through common internal processes, integrated into shared repositories, compiled using centralized continuous integration and development pipelines, and deployed across the same operational platforms. The same witnesses, source code repositories, compliance records, and system architectures are relevant to the infringement of each asserted claim, and the basics of the technology necessary for the trier of fact to apply the prior art is common across the Cloud Computing Patents. Thus, both the

infringement and validity claims in the two subject technology areas are well suited for resolution in the district court. Accordingly, while the Director in *Tesla* concluded that discretionary denial was inappropriate due to the fragmented nature of the patents and technologies at issue, that rationale does not apply here.

II. PETITIONERS' ALLEGATION THAT THE '582 PATENT HAS NOT BEEN APPLIED IN PETITIONERS' TECHNOLOGY SPACE IS INCORRECT

American Airlines *correctly* told the District Court that Patent Owner *has* asserted the Cloud Computing Patent against businesses "such as *airlines*, insurers, and banks." Ex. 2015, 9 (emphasis added). However, in these proceedings, Petitioners falsely told the Board the opposite, i.e., that the '582 Patent (a Cloud Computing Patent) "has *not* been 'commercialized, *asserted*, marked, licensed, or *otherwise applied*' in Petitioners' technology space -- *airlines*." Paper #7, at 2.

It was (and is) well-known that Patent Owner primarily negotiates portfolio-wide licenses to all of Patent Owner's patents (including the '582 Patent). Patent Owner's reputation for licensing its patent portfolio was (and is) so well known that, by 2014, one magazine published an "Action Plan" that included "determin[ing] what your initial exposure to IV looks like." Ex. 2025, 11. This is clearly not a case where the subject patent has lain dormant.

For these reasons, the Director should exercise discretion to deny institution.

Respectfully submitted,

Dated: August 21, 2025

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Counsel for Patent Owner
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CERTIFICATE OF SERVICE

The undersigned certifies that pursuant to 37 C.F.R. § 42.6(e), a copy of the foregoing **AUTHORIZED BRIEF IN SUPPORT OF PATENT OWNER'S REQUEST FOR DISCRETIONARY DENIAL** was served via email (as consented to by counsel) on August 21, 2025 to lead and backup counsel of record for Petitioner as follows:

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