

Petition for *Inter Partes* Review of
U.S. Patent No. 7,324,469 B2

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 AND
INTELLECTUAL VENTURES II, LLC
Patent Owners

U.S. Patent No. 7,324,469
Issue Date: January 29, 2008

Title: SATELLITE DISTRIBUTED HIGH SPEED INTERNET ACCESS

Inter Partes Review No. IPR2025-00782

**PETITION FOR *INTER PARTES* REVIEW
OF U.S. PATENT NO. 7,324,469 B2**

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LIST OF EXHIBITS

Exhibit No.	Description of Document
1001	U.S. Patent No. 7,324,469 (the “’469 Patent”)
1002	Declaration of William C. “Chuck” Easttom in Support of Petition for <i>Inter Partes</i> Review of U.S. Patent No. 7,324,469
1003	Curriculum Vitae of William C. “Chuck” Easttom
1004	Prosecution History of the ’469 Patent
1005	U.S. Patent Application Publication US2002/0138625 dated September 26, 2002 (“Bruner”)
1006	U.S. Patent 6,445,777 dated September 3, 2002 (“Clark”)
1007	U.S. Patent Application Publication US2003/0050041 dated March 13, 2003 (“Wu”)
1008	U.S. Patent 6,105,060 Dated August 15, 2000 (“Rothblatt”)
1009	“A Study on Dynamic Load Balance for IEEE 802.11b wireless LAN” dated January 2001 (“Papanikos”)
1010	U.S. Patent 5,749,075 dated May 5, 1998 (“Toader”)
1011	European Patent Application EP 1 098 455 A2 dated April 28, 2000 (“Berger”)
1012	Intellectual Ventures’ Infringement Contentions against American
1013	Intellectual Ventures’ Infringement Contentions against Southwest

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Intellectual Ventures (“IV”) is a private equity firm that monetizes patents. On November 2, 2024, it added American Airlines, Inc. (“American”) and Southwest Airlines, Co. (“Southwest”) (collectively, “Petitioners”) to its ever-growing list of targets by suing them for the infringement of six different patents, including the ’469 Patent.

Over a specification spanning four pages, the ’469 Patent purports to disclose a system of “satellite distributed high speed internet access.” Ex.1001, Cover. In reality, it recites nothing more than a generic subscription-based wireless internet system employing what is summarily described as a “data link with a satellite.” Ex.1001, Cls. 1, 24. Given the ’469 Patent’s breadth and simplicity, it’s unsurprising that there’s a wealth of prior art that invalidates the Challenged Claims.

The four primary references supporting invalidity in this Petition—Bruner, Clark, Wu, and Rothblatt—each describe a system of satellite-enabled internet access. They are each U.S. patents or patent applications. Some predate the priority date of the ’469 Patent by years. ***None*** were reviewed by Examiner before the ’469 Patent was granted. Ex.1004 at 91-93.

The ’469 Patent’s inventors overcame a single rejection for obviousness at the U.S.P.T.O. by adding the “subscriber access unit” limitation, in addition to several other generic features related to subscription-based internet services. Ex.1004 at 105-06. As will be seen, these features were not only generic to subscription-based

internet systems—they were well-known even in the context of *satellite-enabled* subscription-based internet systems. The rest of the purported features of the '469 Patent—all commonplace features of any subscription-based wireless network—fare no better.

IV's strategy in this litigation campaign is apparent. Rather than target the actual manufacturers (Viasat, Panasonic, and Intelsat) of the satellite internet systems it accuses of infringement, it sues their customers: airlines like American and Southwest Airlines. Indeed, IV also accuses Petitioners of infringing four cloud-computing-related patents alongside the '469 Patent. And as with the '469 Patent, IV has elected to target airlines and financial institutions rather than the makers of the purportedly infringing cloud-computing software. This approach to litigation burdens the federal court system, even if one sets aside the apparent weakness of the asserted patents.

Whatever IV's motivation is for this approach, it should fail. The facts here favor the institution of *inter partes* review of the '469 Patent—every *Fintiv* factor either favors institution or is neutral. But at bottom, it is the '469 Patent's clear validity issues that should drive institution here. Petitioners accordingly request institution on claims 1-14 and 24-32 (the "Challenged Claims") of the '469 Patent.

I. MANDATORY NOTICES UNDER 37 C.F.R. § 42.8

A. Real party in interest under § 42.8(b)(1)

Petitioners are the real parties in interest to this Petition. No unnamed entity is funding, controlling, or otherwise has an opportunity to control or direct this Petition or Petitioners' participation in any resulting IPR.

B. Related matters under § 42.8(b)(2)

To the best of Petitioners' knowledge, the '469 Patent is or has been involved in these matters:

Name	No.	Court	Filed	Status
<i>Intellectual Ventures I LLC et al. v. American Airlines, Inc.</i>	4:24-cv-980	EDTX	Nov. 2, 2024	Active
<i>Intellectual Ventures I LLC et al. v. Southwest Airlines Co.</i>	7:24-cv-277	WDTX	Nov. 2, 2024	Active
<i>Viasat, Inc. v. Intellectual Ventures I LLC et al.</i>	1:25-cv-56	DDE	Jan. 14, 2025	Active
<i>Anuvu Corp. v. Intellectual Ventures I LLC et al.</i>	1:25-cv-124	DDE	Jan. 30, 2025	Active

C. Lead and backup counsel under § 42.8(b)(3)

Petitioners designate the following counsel:

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D. Service information

USPTO records show the attorneys having power of attorney over the '469 Patent are Foley & Lardner LLP. This Petition is thus being served by USPS Priority Mail Express to the correspondence address for the '469 Patent, FOLEY & LARDNER, LLP, 150 East Gilman Street, P.O. Box 1497, Madison, WI 53701-1497. Petitioners consent to electronic service at AA_Intellectual_Ventures@mckoolsmith.com.

II. FEE PAYMENT

The Office is allowed to charge the fees specified by 37 C.F.R. §§ 42.103(a) and 42.15(a) to Deposit Account No. 50-5723.

III. GROUNDS FOR STANDING

Petitioners certify the '469 Patent is available for IPR and that Petitioners are not barred or estopped from requesting an IPR challenging the '469 Patent's claims on the grounds identified in this Petition. Petitioners filed this Petition within one year of service of the original complaints against Petitioners.

IV. BRIEF OVERVIEW OF THE '469 PATENT

The '469 Patent relates to a satellite distributed high speed internet access system. Ex.1001, Cover. The '469 Patent claims to disclose the invention of “rural ‘Hotspots’” that enable satellite distributed internet access for users with web-ready devices and valid credit cards. Ex.1001 1:34-38. These hotspots comprise a satellite dish, a router, and a “subscriber access unit” that validates a potential user's subscription account “via a remote server before the user is enabled to access other websites.” Ex.1001 1:49-63. The '469 Patent suggests locating these hotspots in rural locations “which experience[] a relatively high volume of transient traffic.” Ex.1001 1:52-54. In addition to these primary elements, the '469 Patent claims routine network features such as the use of 802.11 Wi-Fi standards, wired/wireless router connections, and transceivers. E.g., Ex.1001, Cls. 12, 25, 32. The '469 Patent

also claims routine features of subscription internet systems, such as transactional billing and the use of merchant services. E.g., Ex.1001, Cls. 4, 7.

V. PRIORITY DATE

For purposes of this Petition, Petitioners assume the earliest effective filing date of the '469 Patent is September 29, 2003. On that date, Provisional Application No. 60/507,022 ('022 provisional) was filed. The '469 Patent claims priority to the '022 provisional. Ex.1001 (Cover). Thus, this Petition applies pre-AIA 35 U.S.C. §103 in showing unpatentability. Petitioners' prior art references qualify as prior art. *See infra* Section IX.

VI. CLAIM CONSTRUCTION

Petitioners applies the claim construction standard established in *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005). 83 Fed. Reg. 51,340, 51,340-44 (Oct. 11, 2018). Petitioners do not believe explicit construction is required to resolve this Petition. Still, the district court case has not commenced claim construction. Petitioners reserve the right to revisit constructions proposed in district court and, in accordance with 37 C.F.R. § 42.100(b), will request leave to submit the district court's claim construction order for the Board to consider.

VII. PERSON OF ORDINARY SKILL IN THE ART (POSITA)

Based on the relevant factors, *In re GPAC Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995), a POSITA would have had at least a bachelor's degree in computer science,

computer engineering, business information systems, software engineering, or systems engineering and at least two years of experience in computer networking or telecommunications. Ex.1002 ¶21; *see also* Ex.1001 (1:14-31). Additional education could substitute for professional experience. Ex.1002 ¶21. Significant work experience could substitute for formal education. Ex.1002 ¶21.

VIII. PRECISE RELIEF REQUESTED AND GROUNDS RAISED

Petitioners request cancellation of claims 1-14 and 24-32 on the following grounds:

Ground	Claims	Basis for Invalidity
1	1, 2, 10-11, 24-28	Bruner
2	1, 2, 10-11, 13 24-30	Bruner in view of Clark
3	1, 3-12, 14, 24-28, 31-32	Bruner in view of Wu
4	3-5, 13, 29	Bruner and Clark in view of Rothblatt

In support of the above grounds Petitioners also submit the declaration of Dr. William “Chuck” Easttom (Ex.1002). Dr. Easttom is a qualified expert in the technological field of the ’469 Patent and is a POSITA. Ex.1002 ¶22; Ex.1003.

Grounds 1-4 rely on art that was not presented to or considered by Examiner. Ex.1004 at 91-93. During prosecution, Applicant overcame Examiner’s initial rejection of the Application’s independent claims by arguing that Examiner’s prior art failed to disclose the “subscriber access unit” and other related limitations.

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Ex.1004 at 105-06. Grounds 1-3 address this purported deficiency in the prior art. Applicant also overcame Examiner's rejection of the application's dependent claims by arguing that Examiner failed to cite documentary evidence showing that the dependent claims limitations were well-known in the art. Ex.1004 at 107-19. Grounds 1-4 address this purported deficiency.

Each of the asserted references is analogous art and is thus usable in an obviousness analysis. *Unwired Planet, LLC v. Google, Inc.*, 841 F.3d 995, 1000-01 (Fed. Cir. 2016). As analogous art, a POSITA is presumed to have been aware of these references. *In re Nilssen*, 851 F.2d 1401, 1403 (Fed. Cir. 1988).

The references cited in this Petition are analogous art because each reference is directed towards the same field of endeavor. Ex.1002 ¶¶ 29, 37, 44. The '469 Patent, Bruner, Clark, Wu, and Rothblatt are all directed towards satellite-enabled remote internet access. *E.g.*, Ex.1005, ¶15 (“[The present invention] is an Internet Content Provider . . . [that] delivers high-speed connections and uses a combination of existing satellite systems and ground technologies.”); Ex.1006 2:8-13 (“The network of the present invention includes . . . a digital satellite communications system with a network operations center that controls voice and data traffic.”); Ex.1007 ¶48 (“The connection between the wireless access point and the base station may include any high bandwidth communication channels such as . . . satellite links . . . [and] satellite feed lines . . . for data transfer through a global communications

network.”); Ex.1008, Abstract (“A system for providing global and portable Internet access to low cost user terminals compris[ing] a[] . . . satellite.”). Because they are each directed towards the same field of endeavor, Bruner, Clark, Wu, and Rothblatt are analogous art, and a POSITA is presumed to have been aware of each.

IX. SCOPE AND CONTENT OF THE PRIOR ART

A. Brief Overview of the Prior Art

1. Bruner (Ex.1005)

Bruner, titled “Method and Apparatus for Inflight Electronic Commerce,” is U.S. Patent Application No. 2002/0138625A1. The application was filed March 21, 2001 and published September 26, 2002. Bruner thus qualifies as prior art to the ’469 Patent under pre-AIA 35 U.S.C. § 102(b). Bruner teaches a system enabling “remote users, such as airline passengers, to conduct electronic commerce . . . using a communications network, such as . . . [a] satellite based remote communication system[.]” Ex.1005, ¶21. Bruner’s system includes an “Airborne Data Server (ADS) . . . the inflight remote server that preferably serves content to inflight users of the system and also acts as a gateway to the ground based servers.” Ex.1005 ¶23. Working with the ground-based servers, Bruner’s ADS imposes “security restrictions . . . to verify that only those person with appropriate rights can view the data and access system functionality.” Ex,1005 ¶23.

2. Clark (Ex.1006)

Clark, titled “Mobile Tele-Computer Network,” is U.S. Patent No. 6,445,777B1. It was filed December 21, 1998 and issued September 3, 2002. Clark thus qualifies as prior art to the ’469 Patent under pre-AIA 35 U.S.C. § 102(b). Clark teaches a “tele-computing network architecture” comprising “a wireless local area network (LAN), at least one mobile hub, and a wireless wide area network (WAN) that includes a satellite communication system with a network operations center to control voice and data traffic.” Ex.1006 2:53-58. Clark’s system acts “as a ‘gateway’ onto the full range of public Internet services,” allowing “clients [to] access any part of the Internet from their remote location nodes connected through a wireless LAN.” Ex.1006 5:17-20. Clark explains that its mobile hub “is configured to transfer information as a single nomadic transmission/reception point between the satellite communication system and the wireless LAN.” Ex.1006 2:60-64. Each hub contains a server that is “used to coordinate communication with a satellite transmission/reception system” and “operates in synchronization with the master network operations center.” Ex.1006 4:33-37.

3. Wu (Ex.1007)

Wu, titled “Network System for Providing Prepaid Wireless Remote Access Service,” is U.S. Patent Application No. 2003/0050041A1. The application was filed September 7, 2001 and published March 13, 2003. Wu thus qualifies as prior art to

the '469 Patent under pre-AIA 35 U.S.C. § 102(e). Wu teaches a “network system capable of providing prepaid wireless remote access services.” Ex.1007 ¶6. Wu’s network includes a “base station” that facilitates communication between a local wireless coverage area and the internet. Ex.1007 ¶7. Wu’s base station is linked to a “central network access server” that “implement[s] and maintain[s] prepaid remote access services.” EX.1007 ¶7.

4. Rothblatt (Ex.1008)

Rothblatt, titled “System for Providing Global Portable Internet Access Using Low Earth Orbit Satellite and Satellite Direct Radio Broadcast System,” is U.S. Patent No. 6,105,060. It was filed September 5, 1997 and issued August 15, 2000. Rothblatt thus qualifies as prior art to the '469 Patent under pre-AIA 35 U.S.C. § 102(b). Rothblatt teaches a system for “providing remote user terminals with global portable Internet access using a satellite direct radio broadcast system.” Ex.1008 1:8-12. Rothblatt’s user terminals allow users to connect devices such as laptops with internet service provider “gateways.” Ex.1008 2:30-35. Rothblatt’s system “subsequently determines if the user terminal is authorized to access the Internet,” then “provides subsequent screens and multimedia data requested by the user terminal.” Ex.1008 2:52-55.

X. THE CHALLENGED CLAIMS ARE UNPATENTABLE.

This Petition uses bold text to identify elements drawn from claim language. For grounds that disclose claim 24, which is the sole-asserted independent claim in the district court complaint, claim 24 and any related dependent claims are presented first, followed by any other claims the ground discloses. As used herein, the verbs “disclose,” “suggest,” and “teach” reflect the contention that a reference’s disclosure renders a given claim element or concept as obvious to a POSITA.

A. Grounds 1 and 2: Claims 1, 2, 10-11, 13, and 24-30 are anticipated by Bruner under § 102 and/or are obvious over Bruner in view of Clark under § 103.

Bruner anticipates several claims of the ’469 Patent, including at least Claims 1, 2, 10, 11, and 24-28. To the extent Bruner does not anticipate these claims, Bruner in view of Clark renders claims 1, 2, 10-11, 13, and 24-30 obvious.

1. Motivation to Modify Bruner with the teachings of Clark

A POSITA would have been motivated to combine the teachings of Bruner and Clark. Ex.1002 ¶29. Both references are directed toward the same problem as the ’469 Patent: satellite-enabled remote internet access. *E.g.*, Ex.1005 ¶8 (“It is therefore an object of the present invention to provide a method and apparatus to allow airline passengers or other remotely located users, to access the Internet.”); Ex.1006 5:17-18 (“Acting as a ‘gateway’ onto the full range of public Internet services, clients access any part of the Internet from their remote location nodes.”)

Wireless LANs like those taught by Clark in its satellite internet system were a well-known technique of connecting internet-browsing devices to a hotspot at the time of the '469 Patent's purported invention. Ex.1002 ¶31; *see, e.g.*, Ex.1009 (January 2001 research paper studying the problem of "load balancing in 802.11-based wireless networks"). To the extent Bruner does not already disclose such techniques, modifying it with Clark's teachings on wireless networks would have been a simple combination of known elements to obtain a predictable result and thus obvious to a POSITA. Ex.1002 ¶31. Moreover, because the technologies included in Bruner and Clark are analogous and complementary, a POSITA would have had a reasonable expectation of success in modifying Bruner to include the teachings of Clark. Ex.1002 ¶29.

The benefits of combining Clark with Bruner would have been apparent to a POSITA. Ex.1002 ¶¶31-33. For example, Clark's teachings regarding wireless routers are a natural fit with Bruner, which focuses on wired connections between routers and user devices. This is similarly true with respect to Clark's teachings of coupling an amplifier with an antenna and amplifier. Modifying Bruner with the teachings of Clark would have been nothing more than the use of known techniques to improve similar systems of internet access. Ex.1002 ¶¶31-33.

2. Independent Claim 24

Bruner anticipates claim 24. Further, Bruner in view of Clark renders obvious each limitation of claim 24.

a) [24a] “24. An Internet Hotspot comprising:”

To the extent claim 24a is limiting, it is disclosed by Bruner. Ex.1002 ¶¶161,163. For example, Bruner teaches a “remote internet system” that “allow[s] remote users, such as airlines passengers, to conduct electronic commerce from a remote location.” Ex.1005 ¶21. A POSITA would understand that such a system could only be accomplished using an internet hotspot. Ex.1002 ¶163.

Clark also discloses claim 24a. Ex.1002 ¶¶162-63. Clark teaches a “mobile hub . . . configured to transfer information as a single nomadic transmission/reception point between [a] Satellite communication system . . . and [a] wireless LAN.” Ex.1006, 2:24-29. Clark explains that its mobile hub “links the location LAN to the Internet backbone” and to “single or multiple points in the network infrastructure.” Ex.1006, 4:26-29.

Thus, Bruner and/or Bruner in view of Clark disclose the **internet hotspot** of claim 24a. Ex.1002 ¶163.

b) [24b] “a satellite dish communicating with the Internet via one or more data links with a satellite;”

Claim 24b is disclosed by Bruner. Ex.1002 ¶166-69. Bruner teaches that its invention “delivers high-speed connections and uses a combination of existing

satellite systems and ground technologies to update information on [an aircraft-based] server.” Ex.1005, ¶15. Bruner also teaches that “[b]y using a communications network, such as provided by ground-based radio towers and/or satellite based remote communication systems, the airborne based remote equipment communicates with the network on the ground based central system.” Ex.1005, ¶21.

Claim 24b is also disclosed or suggested by Clark. Ex.1002 ¶170. For example, Clark teaches that its “mobile hub may be in the form of a mobile vehicle . . . or a portable field unit and is configured to transfer information as a single nomadic transmission/reception point between the satellite communication System and the wireless LAN.” Ex.1006 2:60-64. Clark explains that the server “in each hub station is used to coordinate communication with a satellite transmission/reception system.” Ex.1006 4:32-35. Clark further discloses that its mobile hub may comprise a “satellite communication subsystem,” and particularly a satellite “uplink.” Ex.1006 8:54, 9:7. Clark also depicts a satellite dish as a component of one of its mobile units. Ex.1006 Fig. 1.

Thus, Bruner and/or Bruner in view of Clark both disclose each limitation of claim 24b, including the **satellite dish** (e.g., Bruner’s “airborne based remote equipment” communicating with “satellite based remote communication systems” and Clark’s “satellite communication subsystem”) and **communicating with the internet via one or more data links with a satellite** (e.g., Bruner’s “network on the

ground based central system” and Clark’s “satellite communications system” and “uplink.” Ex.1002 ¶171.

c) [24c] “at least one router operatively coupled to the satellite dish;”

Bruner discloses claim 24c. Ex.1002 ¶¶175-76. For example, Bruner teaches that “airborne users” of its satellite internet system “do not communicate directly with the ground network but use the remote ADS server as a router.” Ex.1005, ¶25. Bruner also teaches that the “ADS is the inflight remote server that preferably serves content to inflight users of the system and also acts as a gateway to the ground based servers for additional content.” Ex.1005 ¶21. Bruner explains that the ADS “communicates with the network on the ground based central system” by “using a communications network, such as provided by . . . satellite based remote communication systems.” Ex.1005 ¶21.

Clark also discloses claim 24c. Ex.1002 ¶177. For example, Clark teaches that its “satellite communication system comprises a plurality of hubs, wherein each hub comprises a wireless router and a Satellite transmission/reception System to relay information between hubs.” Ex.1006, 10:26-30.

Thus, Bruner and/or Bruner in view of Clark both disclose each limitation of claim 24c, including a **router** (e.g., Bruner’s “ADS” and Clark’s “wireless router”) that is **operatively coupled to the satellite dish** (e.g., Bruner’s ADS

“communicat[ing] with the network” by using “satellite based remote communication systems” and Clark’s hub using a “wireless router and a satellite transmission/reception system to relay information between hubs”). Ex.1002 ¶178.

- d) [24d] **“a subscriber access unit operatively coupled between the satellite dish and the at least one router, the subscriber access unit being capable of authenticating a subscription account associated with a user prior to allowing the user access to the Internet; and”**

Bruner discloses claim 24d. Ex.1002 ¶¶183-87. For example, Bruner teaches that “[a]ccess to ground based internet content, whether e-commerce or e-mail, is preferably via an application layered gateway or proxy, present on the [ADS].” Ex.1005 ¶26. Bruner also teaches that the ADS “acts as a gateway to the ground based servers” of the system. Ex.1005 ¶21. Bruner’s ADS is connected to its satellite network. Ex.1005 ¶25.

Regarding authentication, Bruner explains that “[s]uch a system provides that the proxy services insure that all air to ground traffic may be logged and billed accordingly.” Ex.1005 ¶26. Bruner also discloses that the ADS may be “connected to existing proprietary telecommunications networks,” including satellite internet providers. Ex.1005, ¶25. This system “provides protection from any unwanted traffic” and “prevent[s] users from bypassing the log-in and accounting services involved with the ADS or gateway.” Ex.1005, ¶25. Bruner also teaches that users of

one embodiment of its satellite internet system must provide a “username and password . . . to be able to use all the functions of the airborne based internet service.”

Ex.1005 ¶28.

Thus, Bruner discloses each limitation of claim 24d, including a **subscriber access unit operatively coupled between the satellite dish and the at least one router** (Bruner’s ADS provides proxy or gateway services, operates as a router, and facilitates communication using the satellite communication system) and **authenticating a subscription account prior to allowing access to the Internet** (e.g., acting as a “gateway” to the system such that “all air to ground traffic may be logged and billed accordingly,” preventing bypassing of the system’s “log-in and accounting services,” and requiring a username and password for users “to be able to use all the functions of the airborne based internet service”). Ex.1002 ¶187.

- e) **[24e] “a web-ready device operatively coupled to the at least one router, the web-read device having a browser application operating thereon for accessing the Internet;”**

Bruner discloses claim 24e. Ex.1002 ¶¶192-95. For example, Bruner teaches that “[f]rom a laptop computer for example, an inflight passenger initiates a dial-up networking PPP connection to the ADS server via the inflight telephone connection.” Ex.1005 ¶23. Bruner explains that after the connection is established, the “user utilizes his or her internet browser software running on the laptop to access

a variety of content.” Ex.1005 ¶23. Bruner thus discloses each limitation of claim 24e, including the **web-ready device operatively coupled** to a **router** (e.g., the laptop computer coupled to the ADS server) and the **browser application** (e.g., the internet browser software). Ex.1002 ¶195.

- f) [24f] **“wherein the satellite dish, at least one router and the subscriber access unit are located in a remote location a experiencing a relatively high volume of transient traffic;**

Bruner discloses claim 24f. Ex.1002 ¶200-01. For example, Bruner discloses that the “remote internet system of the present invention [] allow[s] remote users, such as airline passengers, to conduct electronic commerce . . . from a remote location, such as during the course of an airline flight.” Ex.1005, ¶21. Thus, Bruner discloses each limitation of claim 24f, including the **satellite dish, router, and subscriber access unit** (discussed under claims 24b, 24c, and 24d, respectively) and their location in a **remote location experiencing a relatively high volume of traffic** (the remote internet system . . . allow[ing] remote users, such as airline passengers, to conduct electronic commerce.”). Ex.1002 ¶201.

- g) [24g] **“wherein the user may authenticate the subscription account and access the Internet at the remote location by establishing a data connection between the web ready device and the router.**

Bruner discloses claim 24g. Ex.1002 ¶¶206-10. For example, Bruner teaches that a user’s access to the internet “is preferably via an application layered gateway

or proxy, present on the [ADS].” Ex.1005 ¶26. Using “a laptop computer for example, an inflight passenger initiates a . . . connection to the ADS server.” Ex.1005 ¶23. The layered gateway or proxy present on the ADS “insure that all air to ground traffic may be logged and billed accordingly.” Ex.1005 ¶26. Further, the user “upon accessing the system of the present invention via a home page logs in by providing a user name and password.” Ex.1005 ¶28.

Bruner also discloses that the ADS may be “connected to existing proprietary telecommunications networks,” including satellite internet providers. Ex.1005, ¶25. This system “provides protection from any unwanted traffic” and “prevent[s] users from bypassing the log-in and accounting services involved with the ADS or gateway.” Ex.1005, ¶25. And as discussed previously with respect to claim 24c, Bruner’s ADS functions as a router. Ex.1005 ¶25.

Thus, Bruner discloses each limitation of claim 24g, including **authenticating the subscription account** (e.g., the ADS proxy or gateway “insur[ing] that all air to ground traffic may be logged and billed,” the web application “validat[ing] the user,” “security restrictions,” logging in “by providing a user name and password,” and “preventing users from bypassing the log-in and accounting services”) and **accessing the Internet at the remote location by establishing a connection between the device and the router** (e.g., the laptop computer’s connection to the ADS server

allowing users to access the internet). A POSITA would find claim 24g obvious over the teachings of Bruner. Ex.1002, ¶210.

3. Claim 25: “The Internet Hotspot of claim 24, wherein the data connection is one of a wired data connection and a wireless data connection.”

Bruner and/or Bruner in view of Clark discloses claim 25. Ex.1002 ¶¶216-20. For example, Bruner discloses a **wired data connection** in teaching a “dial-up networking PPP connection” between its ADS and a user’s laptop computer. Ex.1005 ¶23. Bruner also discloses a **wireless data connection** in disclosing that “[o]ther wireless communication systems can be used as the communication link between the remote server and the central server.” Ex.1005 ¶35. And Clark also discloses a **wireless data connection** in teaching a “mobile communication hub and a wireless local area network (LAN).” Ex.1006 2:13-15. Clark explains that its wireless LAN may “connect multiple remote personal computers” to one of its mobile hubs. Ex.1006 4:4-10.

As noted above in Section X.A.1, a POSITA would be motivated to modify Bruner with the teachings of Clark, including to the extent necessary for the **data connection** taught by both to be **one of a wired or a wireless data connection**. Ex.1002 ¶29. Thus, Bruner and/or Bruner in view of Clark discloses claim 25. Ex.1002 ¶220.

4. **Claim 26: “The Internet Hotspot of claim 24, wherein a plurality of users may access the Internet simultaneously at the remote location by respectively establishing data connections with the router via their web-ready devices.”**

Bruner discloses claim 26. Ex.1002 ¶¶221-23. For example, Bruner discloses that in one embodiment, “the system comprises a remote server computer located within the aircraft to control the operations of the system for the passengers in their seats at terminals or phone connections mounted in their seat location.” Ex.1005 ¶11. Bruner also states that it is an object of its invention “to allow airline passengers or other remotely located users, to access the Internet.” Ex.1005 ¶8. Thus, Bruner discloses each limitation of claim 26 in that it teaches **a plurality of users** (the passengers) **accessing the internet** by **establishing data connections** with the **router** (the remote server computer, i.e., the ADS). Ex.1002 ¶223.

5. **Claim 27: “The Internet Hotspot of claim 26, wherein the data connections include wired data connections.”**

Bruner discloses claim 27 for substantially similar reasons as those already discussed for claim 25. Ex.1002 ¶¶227-29.

6. **Claim 28: “The Internet Hotspot of claim 26, wherein the data connections include wireless data connections.”**

Bruner and/or Bruner in view of Clark discloses claim 28 for substantially similar reasons as those already discussed for claim 25. Ex.1002 ¶¶ 231-32, 33.

7. **Claim 29: “The Internet Hotspot of claim 28, further comprising an amplifier and antenna operatively coupled to the router.”**

Bruner in view of Clark discloses each limitation of claim 29. Ex.1002 ¶238. As an initial matter, wireless routers, including those at the time of the '469 Patent's invention, generally comprise an amplifier and antenna. Ex.1002 ¶235. Thus, to a POSITA, it would have been obvious at the time of the '469 Patent to **operatively couple** a **wireless router** with an **amplifier** and **antenna**. Ex.1002 ¶235. Claim 13 would thus have been obvious to a POSITA in light of the state of the art of wireless routers at the time of the '469 Patent's invention. Ex.1002 ¶235.

Bruner in view of Clark additionally discloses the concept of a router coupled with an amplifier and antenna. Ex.1002 ¶¶236-38. For example, Clark discloses an embodiment of its invention in which the LAN connected to the satellite communications system of the invention “is a wireless ethernet LAN connecting multiple remote personal computers as nodes.” Ex.1006 4:9-11. Clark explains that the LAN “covers an ‘on site’ radius of up to ½ mile at 2 Mbps from a mobile hub station.” Ex.1006 4:12-13. Given this disclosure, a POSITA at the time of Clark's publication would understand that the **router** supporting Clark's wireless LAN would necessarily be **operatively coupled** with an **amplifier** and **antenna**. Ex.1002 ¶236. Claim 29 is thus rendered obvious as disclosed by Bruner in view of Clark. Ex.1002 ¶238.

8. Claim 30: “The Internet Hotspot of claim 29, wherein the router is a Vivato outdoor switch.”

“The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results.” KSR Int’l Co. v. Teleflex Inc., 550 U.S. 398, 416 (2007). “If a person of ordinary skill can implement a predictable variation, § 103 likely bars its patentability.” *Id.* at 417.

Claim 30 is rendered obvious by Bruner in view of Clark. Claim 30 recites nothing more than the addition of a specific well-known product that would purportedly fill the role of a router in the system of claim 29. Ex.1002 ¶240. There is nothing inventive in using a Vivato outdoor switch (i.e., a known product) as a router (i.e., to yield a predictable result). A POSITA at the time of the ’469 Patent would have found it obvious to use a Vivato outdoor switch as a router in combination with the teachings of Bruner and/or Bruner in view of Clark. Ex.1002 ¶240.

9. Independent Claim 1

a) [1a] “1. A method for establishing and operating an Internet Hotspot comprising the steps of:”

Bruner and/or Bruner in view of Clark discloses claim 1a for substantially similar reasons as those already discussed for claim 24a. Ex.1002 ¶¶52-56.

b) [1b] “providing a satellite dish communicating with the Internet via data link with a satellite;

Bruner and/or Bruner in view of Clark discloses claim 1b for substantially similar reasons as those already discussed for claim 24b. Ex.1002 ¶¶57-65.

c) [1c] “providing at least one router operatively coupled to the satellite dish;”

Bruner and/or Bruner in view of Clark discloses claim 1c for substantially similar reasons as those already discussed for claim 24c. Ex.1002 ¶¶66-73.

d) [1d] “providing a subscriber access unit operatively coupled between the satellite dish and the router;”

Bruner and/or Bruner in view of Clark discloses claim 1d for substantially similar reasons as those already discussed for claim 24d. Ex.1002 ¶¶74-80.

e) [1e] “installing the satellite dish, router and Subscriber access unit in a rural location, the rural location experiencing a relatively high volume of transient traffic;”

Bruner and/or Bruner in view of Clark discloses claim 1e for substantially similar reasons as those already discussed for claim 24f. Ex.1002 ¶¶81-86.

f) [1f] “connecting a web-ready device to the router;”

Bruner and/or Bruner in view of Clark discloses claim 1f for substantially similar reasons as those already discussed for claim 24e. Ex.1002 ¶¶87-93.

- g) [1g] **“creating by a user a subscription account, the subscription account being created on a remote server and enabling the user to access the Internet;”**

Bruner discloses claim 1g. Ex.1002 ¶96. For example, Bruner teaches that a “user upon accessing the system of the present invention . . . logs in by providing a user name and password.” Ex.1005 ¶28. “The username and password can be provided when the user first accesses the system and provides necessary registration information to be able to use all the functions of the airborne based internet service.” Ex.1005 ¶28. Bruner explains that a user “provides basic information” and that “[t]his user profile information is then stored on the database server.” Ex.1005 ¶29. Bruner’s “database server” is remotely located as part of a “ground server network” that connects to the ADS via satellite. Ex.1005 ¶23, Fig. 1. Upon the “next time the user accesses the site, that user inputs the log-in information and is then given access to the full content of the system.” Ex.1005 ¶29. Bruner thus discloses each limitation of claim 1g, including a **subscription account** (e.g., the “username and password,” “user profile information,” and “log-in information”), its **being created on a remote server** (the “database server”) and its **enabling the user to access the Internet** (the ability to use the airborne internet service). Ex.1002 ¶¶94-96.

- h) [1h] **“navigating a browser operating on the web-ready device to a subscriber access website, the subscriber access website being capable of verifying that the subscription account is valid;”**

Bruner discloses claim 1h. Ex.1002 ¶101. For example, Bruner teaches that a user may use a laptop computer to connect to the ADS server and “utilize his or her internet browser software running on the laptop to access a variety of content.” Ex.1005 ¶23. Bruner also discloses the ADS “providing access to a portal site,” “providing a registration screen for registering the mobile internet user with the portal site,” and “receiving profile information from the mobile internet user to register the mobile internet user with the portal site.” Ex.1005 Cl. 8.

As discussed previously with respect to claim 24g, Bruner also discloses that “a screen and keyboard can be provided at the passengers seat for the user connection, eliminating the need for the user to have his or her laptop computer.” Ex.1005 ¶23. In this embodiment, a “web application will validate the user” and “security restrictions are in place to verify that only those persons with appropriate rights can view the data and access system functionality.” Ex.1005 ¶23.

Thus, Bruner discloses or suggest each limitation of claim 1h, including **navigating a browser to a subscriber access website** (e.g., the “portal site” or the “web application”) and the **capability of verifying that the subscription account is valid** (e.g., “register[ing] the mobile internet user with the portal site,”

“validat[ing] the user,” and “verify[ing] that only those persons with appropriate rights can view the data and access system functionality”). Ex.1002 ¶¶99-101.

i) [1i] **“verifying that the subscription account is valid via the subscriber access website to allow access to the Internet; and”**

Bruner discloses claim 1i. Ex.1002 ¶109. For example, and as discussed previously with respect to claim 1h, Bruner teaches a web application that will “validate the user” and that has “security restrictions in place to verify that only those persons with appropriate rights can view the data and access system functionality.” Ex.1005 ¶23.

Moreover, Bruner also discloses a “portal site” with a “registration screen for registering the mobile internet user.” Ex.1005 Cl. 7. Bruner teaches that this registration step is part of connecting a “remote internet user” to a “remote internet server.” Ex.1005 Cls. 7,8. Bruner thus discloses each limitation of claim 1i, including **verifying the subscription account is valid via the subscriber access website to allow access to the Internet** (e.g., the web application validating the user and/or the portal site connecting the user to the Internet). Ex.1002 ¶¶105-09.

j) [1j] **“allowing a user to access the Internet at the rural location.”**

Bruner discloses claim 1j for substantially similar reasons as those already discussed for claims 1e and 24f. Ex.1002 ¶¶108.

10. Claim 2: “The method of claim 1, wherein the router includes at least one jack to which a web-ready device may be connected via a wired connection.”

Bruner discloses claim 2. Ex.1002 ¶¶114-15. For example, and as previously discussed with respect to claim 25, Bruner discloses a **wired connection** between a **router** and a **web-ready device** in teaching a “dial-up networking PPP connection” between its ADS server and a user’s laptop computer. Ex.1005 ¶23. A POSITA would know to make such a PPP connection with the router using **at least one jack**. Ex.1002 ¶114. Bruner thus discloses each limitation of claim 2. Ex.1002 ¶115.

11. Claim 10: “The method of claim 1, wherein the connecting step includes connecting the web-ready device to the router via a wireless connection.”

Bruner in view of Clark discloses claim 10 for substantially similar reasons as those already discussed for claim 25. Ex.1002 ¶¶135-39.

12. Claim 11. “The method of claim 10, wherein a plurality of users can simultaneously connect web-ready devices to the router.”

Bruner discloses claim 11 for substantially similar reasons as those already discussed for claim 26. Ex.1002 ¶¶140-43.

13. Claim 13: “The method of claim 1, further comprising an amplifier and antenna operatively coupled to the router.”

Bruner in view of Clark discloses claim 13 for substantially similar reasons as those already discussed for claim 29. Ex.1002 ¶150-55.

B. Ground 3: Claims 1, 3-12, 14, 24-28, and 31-32 are obvious over Bruner in view of Wu.

1. Motivation to modify Bruner with Wu

A POSITA would have been motivated to combine the teachings of Wu with Bruner. Ex.1002 ¶¶35-39. Like Bruner, Wu is directed towards the same problem as the '469 Patent: satellite-enabled remote internet access. E.g., *supra*, Section X.A.1; Ex.1007 ¶1 (“The present invention relates generally to telecommunications systems, and more particularly, to a network system capable of providing prepaid wireless remote access service.”).

Further, Wu’s teachings regarding subscription-based payment systems for remote wireless internet access would be obvious for a POSITA to combine with the teachings of Bruner. Ex.1002 ¶38. This is established by the abundance of art teaching prepaid wireless internet access that was already available at the time of the '469 Patent’s purported invention. Ex.1002 ¶38; *see, e.g.*, Ex.1010 (patent issued in May 1998 describing a “method for providing prepaid internet access”). Moreover, because the technologies included in Bruner and Wu are analogous and complementary, a POSITA would have had a reasonable expectation of success in modifying Bruner to include the teachings of Wu. Ex.1002 ¶37.

The benefits of combining Bruner with Wu would have been apparent to a POSITA. Ex.1002 ¶¶35-39. Wu’s detailed teachings on remote payment systems for

satellite-enabled internet would assist a POSITA interested in modifying the authentication and payment systems taught by Bruner. Ex.1002 ¶38. Wu’s teachings regarding wireless networks and authentication would also provide a POSITA the incentive to combine the two references to the extent that Bruner did not already contain the same teachings. Ex.1002 ¶¶35, 36, 39. Modifying Bruner with the teachings of Wu would have represented the use of known techniques to improve similar systems of internet access. Ex.1002 ¶¶34-39.

2. Independent Claim 24

a) [24a] “24. An Internet Hotspot comprising:”

To the extent claim 24a is limiting, it is disclosed or suggested by Bruner in view of Wu. Ex.1002 ¶164. For example, and in addition to the teachings of Bruner, Wu teaches a system that “comprises a base station including a wireless access point for communicating through a wireless medium with a wireless station operated by a customer.” Ex.1007, Abstract.

Thus, Bruner in view of Wu discloses the **internet hotspot** of claim 24a.

b) [24b] “a satellite dish communicating with the Internet via one or more data links with a satellite;”

Claim 24b is disclosed or suggested by Bruner in view of Wu. Ex.1002 ¶¶172-73. In addition to the teachings of Bruner, Wu teaches that the “connection between the wireless access point and the base station may include any high bandwidth communication channels such as . . . satellite links . . . satellite feed lines . . . and the

like for data transfer through a global communications network (i.e., the Internet).”
Ex.1007 ¶48. Wu also teaches that its base station may be “connected to the global
communications network” through “satellite links” or “satellite feed lines.” Ex.1007
Cl. 6.

Based on Wu’s teaching of communication channels implementing satellite
links and feedlines, a POSITA would have found the implementation of a **satellite
dish** in such a channel obvious. Ex.1002 ¶¶172-73. Wu also discloses
communicating with the internet via one or more data links with a satellite, as
the satellite links/feed lines are for data transfer through the internet. Claim 24b is
thus rendered obvious by Bruner in view of Wu. Ex.1002 ¶173.

**c) [24c] “at least one router operatively coupled to the
satellite dish;”**

Bruner in view of Wu discloses each element of claim 24c. Ex.1002 ¶¶179-
81. In addition to the teachings of Bruner, Wu teaches that its base station “is
connected to the global communications networks (i.e., the Internet) through a
router.” Ex.1007 ¶58. As noted above in claim 24b, Wu also teaches that its base
station may be connected to the global communications networks via satellite.
Ex.1007 Cl. 6.

Additionally, Wu explains that its “wireless access point provides an interface
between the wireless network interface of the portable device[s] and the wired

portion of the wireless access network. In this manner, the wireless network interface forms a data link between the portable wireless device[s] and the wireless network.”

Ex.1007 ¶49. As noted above in claim 24b, Wu further explains that the connection between the wireless access point and the base station may include a satellite link or feed line. Ex.1007 ¶48.

A POSITA would find it obvious to couple a **router** to a **satellite dish** based on the teachings of Bruner and Wu. Ex.1002 ¶181. As a first example, Wu teaches that its base station may be connected to the global communications network through both a **router** and a **satellite** link or feed line. As a second example, Wu teaches that its wireless access point (which connects multiple portable wireless devices to the network by acting as a **router**) may connect to the base station via **satellite** link or feed line.

- d) [24d] “a subscriber access unit operatively coupled between the satellite dish and the at least one router, the subscriber access unit being capable of authenticating a subscription account associated with a user prior to allowing the user access to the Internet; and”

Bruner in view of Wu discloses each element of claim 24d. Ex.1002 ¶¶188-90. In addition to the teachings of Bruner, Wu discloses that its base station “prompts the portable wireless station to provide a valid PIN number and security code (e.g. password) corresponding to a prepaid card.” Ex.1007 ¶62. After this prompting, the

base station “connects to the web access server.” Ex.1007 ¶63. As noted above under claims 24b and 24c, Wu also teaches that its base station may be connected to the global communications network via satellite, Ex.1007 Cl. 6, and that it may be connected to a wireless access point acting as a router. Ex.1007 ¶ 48.

A POSITA would find claim 24d obvious over Bruner in view of Wu. Ex.1002 ¶190. In addition to Bruner’s teachings, Wu’s base station may be viewed as a **subscriber access unit** because it **authenticates a subscription account** (i.e., the account associated with a prepaid card) **prior to allowing a user access to the internet** by prompting the wireless station for a PIN and password before it connects to the web access server. Further, the base station is **coupled between a satellite dish and router** because, in one embodiment taught by Wu, the base station is simultaneously coupled to a wireless access station acting as a router and to the internet via satellite.

- e) [24e] “a web-ready device operatively coupled to the at least one router, the web-read device having a browser application operating thereon for accessing the Internet;”

Bruner in view of Wu discloses each element of claim 24e. Ex.1002 ¶¶196-98. In addition to the teachings of Bruner, and as noted above with respect to claim 24c, Wu discloses that its “wireless access point provides an interface between the wireless network interface of the portable device[s] and the wired portion of the

wireless access network. In this manner, the wireless network interface forms a data link between the portable wireless device[s] and the wireless network.” Ex.1007 ¶49. Wu further explains that the portable devices, which it also refers to as wireless stations, allow a customer to “initiate the wireless remote access service . . . by opening the browser software” on the wireless station. Ex.1007 ¶62.

A POSITA would thus have found claim 24e obvious over Bruner in view of Wu. Ex.1002 ¶198. Wu teaches a **web-ready device** (e.g., the portable wireless device/wireless station) **operatively coupled to the at least one router** (the wireless access point) and a **browser operating thereon for accessing the Internet** (the browser software used to initiate the wireless service).

- f) [24f] **“wherein the satellite dish, at least one router and the subscriber access unit are located in a remote location a experiencing a relatively high volume of transient traffic;**

Bruner in view of Wu discloses each element of claim 24f. Ex.1002 ¶¶202-04. In addition to the teachings of Bruner, Wu discloses that its invention is directed to a “network system capable of providing prepaid wireless remote access services.” Ex.1007 ¶6. Wu further depicts a “universal internet box” (i.e., the base station or subscriber access unit), a wireless access point, and several other devices used to facilitate internet access connected via internet to a remote server. Ex.1007 Fig. 1.

A POSITA would thus have found claim 24f obvious over Bruner in view of Wu. Ex.1002 ¶204. Wu teaches a **satellite dish, a router, and a subscriber access unit** (respectively disclosed in claims 24b, 24c, and 24d). Wu further teaches that all three are **located in a remote location experiencing a relatively high volume of transient traffic** in teaching that its network system provides prepaid wireless remote access services.

- g) [24g] **“wherein the user may authenticate the subscription account and access the Internet at the remote location by establishing a data connection between the web ready device and the router.**

Bruner in view of Wu discloses claim 24g. Ex.1002 ¶¶211-15. In addition to the teachings of Bruner, and as discussed previously with respect to claim 24e, Wu discloses that a “customer can initiate the wireless remote access service . . . by opening the browser software or email program residing on the wireless station within the wireless coverage area of the access point.” Ex.1007 ¶62. Wu further teaches that, after initiating the service, the wireless station and a base station “perform an initial connection set-up or ‘handshake.’” Ex.1007 ¶62. As discussed previously with respect to claim 24d, upon connecting to the wireless station/portable device, the base station prompts the wireless station for a PIN number or password for purposes of authentication before allowing the customer to connect to the internet. Ex.1007 ¶¶ 62-64.

Claim 24g would have been obvious to a POSITA based on the teachings of Bruner and Wu. Ex.1002 ¶215. In addition to the teachings of Bruner, Wu teaches that a user may **authenticate a subscription account and access the internet at a remote location** by, for example, connecting to a base station and providing the requested PIN/password. The user of Wu accomplishes this by **establishing a data connection between a web ready device and a router**—i.e., by initiating the service by connecting a wireless station/portable device and a wireless access point.

3. Claim 25: “The Internet Hotspot of claim 24, wherein the data connection is one of a wired data connection and a wireless data connection.”

Bruner in view of Wu discloses claim 25. Ex.1002 ¶¶219-20. In addition to the **wired data connection** taught by Bruner and discussed in Section X.A.3, Wu discloses a **wireless data connection** in teaching that its “portable wireless devices are connected to the base station through a wireless access point also referred to as a wireless local bridge.” Ex.1007 ¶48.

As noted above in Section X.B.1, a POSITA would be motivated to modify Bruner with the teachings of Wu, including to the extent necessary for the **data connection** taught by both to be **one of a wired or a wireless data connection**. Ex.1002 ¶219. Thus, Bruner in view of Wu discloses claim 25.

4. Claim 26: “The Internet Hotspot of claim 24, wherein a plurality of users may access the Internet simultaneously at the remote location by respectively establishing data connections with the router via their web-ready devices.”

Bruner in view of Wu discloses claim 26. Ex.1002 ¶¶224-26. In addition to the teachings of Bruner noted in Section X.A.4, and as noted above with respect to claim 25, Wu discloses that its “portable wireless devices are connected to the base station through a wireless access point also referred to as a wireless local bridge.” Ex.1007 ¶48. Wu also notes that these “portable wireless devices may include mobile and personal computers, personal digital assistants,” and other types of devices. EX.1007 ¶44. Wu further explains that “customers are equipped with wireless-enabled electronic devices which are preferably portable for mobile connection to the wireless access network.” Ex.1007 ¶44.

A POSITA would thus find claim 26 obvious over Bruner in view of Wu, as in addition to Bruner’s teachings, Wu discloses each limitation of claim 26 in that it teaches **a plurality of users** (the customers) **accessing the internet by establishing data connections with the router via their web-ready devices** (the wireless access point and the portable wireless devices). Ex.1002 ¶226.

5. Claim 27: “The Internet Hotspot of claim 26, wherein the data connections include wired data connections.”

Bruner in view of Wu discloses claim 27 for substantially similar reasons as those already discussed for claim 25. Ex.1002 ¶228.

6. Claim 28: “The Internet Hotspot of claim 26, wherein the data connections include wireless data connections.”

Bruner in view of Wu discloses claim 28 for substantially similar reasons as those already discussed for claim 25. Ex.1002 ¶¶232-34.

7. Claim 31: “The Internet Hotspot of claim 24, further comprising at least one wireless extender transceiver operatively coupled between the subscriber access unit and the router.”

Bruner in view of Wu discloses claim 31. Ex.1002 ¶¶241-43. For example, Wu discloses that its wireless access point may act as a “wireless local bridge” connecting user devices and a base station. Ex.1007 ¶48. The bridge/access point can “be adapted to double the range of the wireless stations.” Ex.1007 ¶48. Further, Wu notes that multiple access points “may be utilized to create a multiple cell configuration for greater connection range” and that such a configuration “can provide continuous network connectivity when the access area exceeds the range of a single-cell wireless LAN.” Ex.1007 ¶49.

Bruner in view of Wu thus discloses each limitation of claim 31, including the **wireless transceiver extender unit** (the wireless bridge or access point), which is **coupled between the subscriber access unit and the router** (the bridge or access point may be used as part of a multi-cell configuration, thus enabling greater range than a single base station and access point/bridge/router). Ex.1002 ¶243.

8. **Claim 32: “The Internet Hotspot of claim 25, wherein the wireless connection is one of an 802.11a wireless area network, an 802.11b wireless area network, an 802.11g wireless area network, and an 802.11n wireless area network.”**

Bruner in view of Wu discloses each limitation of claim 32. Ex.1002 ¶¶244-47. As an initial matter, the 802.11 Wi-Fi standards were well known at the time of the '469 Patent's invention. Ex.1002 ¶244. The first version of the 802.11 standard was released to the public in 1997. Ex.1002 ¶244. It would have been obvious for a POSITA to implement these standards in combination with Bruner and Wu. Ex.1002 ¶247.

Further, Wu discloses that in one embodiment, its wireless network interface conforms with IEEE “standard 802.11 and extensions thereof such as IEEE 802.11a and 802.11b.” Ex.1007 ¶50. Wu further discloses that its interface may conform with IEEE standard 802.11g. Ex.1007 ¶54. Though it does not specifically mention the 802.11n standard, the standard is disclosed or suggested by Wu given that 802.11n is an “extension” of the 802.11 standard. At any rate, a POSITA would have found it obvious to employ such a standard given the teachings of Bruner, Wu, and the state of the art of wi-fi standards at the time of the '469 Patent's invention. Bruner in view of Wu thus renders obvious claim 32. Ex.1002 ¶247.

9. Independent Claim 1

- a) **[1a] “1. A method for establishing and operating an Internet Hotspot comprising the steps of:”**

Bruner in view of Wu discloses claim 1a for substantially similar reasons as those already discussed for claim 24a. Ex.1002 ¶¶55-56.

- b) **[1b] “providing a satellite dish communicating with the Internet via data link with a satellite;**

Bruner in view of Wu discloses claim 1b for substantially similar reasons as those already discussed for claim 24b. Ex.1002 ¶¶63-65.

- c) **[1c] “providing at least one router operatively coupled to the satellite dish;”**

Bruner in view of Wu discloses claim 1c for substantially similar reasons as those already discussed for claim 24c. Ex.1002 ¶¶70-73.

- d) **[1d] “providing a subscriber access unit operatively coupled between the satellite dish and the router;”**

Bruner in view of Wu discloses claim 1d for substantially similar reasons as those already discussed for claim 24d. Ex.1002 ¶¶78-80.

- e) **[1e] “installing the satellite dish, router and Subscriber access unit in a rural location, the rural location experiencing a relatively high volume of transient traffic;”**

Bruner in view of Wu discloses claim 1e for substantially similar reasons as those already discussed for claim 24f. Ex.1002 ¶¶83-86.

f) [1f] “connecting a web-ready device to the router;”

Bruner in view of Wu discloses claim 1f for substantially similar reasons as those already discussed for claim 24e. Ex.1002 ¶¶91-93.

g) [1g] “creating by a user a subscription account, the subscription account being created on a remote server and enabling the user to access the Internet;”

Bruner in view of Wu discloses claim 1g. Ex.1002 ¶¶97-98. In addition to the teachings of Bruner, Wu teaches that “[p]rior to access, the customers may set up prepaid accounts . . . stored and updated at the central network access server.” Ex.1007 ¶8. Thus, Wu teaches each limitation of claim 1g, and Bruner in view of Wu would render claim 1g obvious to a POSITA. Ex.1002 ¶¶98.

h) [1h] “navigating a browser operating on the web-ready device to a subscriber access website, the subscriber access website being capable of verifying that the subscription account is valid;”

Bruner in view of Wu discloses claim 1h. Ex.1002 ¶¶102-104. In addition to the teachings of Bruner, Wu discloses that a “customer can initiate the wireless remote access service . . . by opening the browser software or email program residing on the wireless station within the wireless coverage area of the access point.” Ex.1007 ¶62. Wu then explains that, following an initial “handshake” between the wireless station and its base station, the base station “prompts the portable wireless station to provide” a PIN or password “corresponding to a prepaid card.” Ex.1007 ¶62. Wu further teaches that its “base station is configured to immediately recognize

new customers accessing the wireless network as well as repeat customers” and that it “redirects the customer’s browser to a proprietary WWW page. The base station automatically re-configures the network configuration settings for wireless remote access to the global communications network.” Ex.1007 ¶40.

Claim 1h is thus obvious over Bruner in view of Wu. Ex.1002 ¶¶102-04. In addition to the teachings of Bruner, Wu teaches **navigating a browser on the web-ready device to a subscriber access website**. This action is represented, for example, by initiating the wireless access service by opening the browser software or by the base station’s redirecting the customer’s browser to a proprietary web page. Wu further teaches that the **website is capable of verifying that the subscription account is valid** by, for example, teaching that its base station will prompt the user for a PIN or password following the user’s “opening [of] the browser software or email program residing on the wireless station.” Wu also discloses this limitation by teaching that the base station “recognize[s] new customers,” “redirects the customer’s browser” to a webpage, and automatically re-configures the network to permit the customer to access the internet. Ex.1002 ¶102. Bruner in view of Wu thus discloses each limitation of claim 1h.

- i) **[1i] “verifying that the subscription account is valid via the subscriber access website to allow access to the Internet; and”**

Bruner in view of Wu discloses claim 1i. Ex.1002 ¶¶110-13. In addition to Bruner’s teachings, and as discussed previously with respect to claim 1h, Wu teaches that a customer may “initiate the wireless remote access service . . . by opening the browser software” on their device. Ex.1007 ¶62. Following this step, Wu teaches that the base station prompts the user for a password or PIN for authentication purposes. Ex.1007 ¶62. Wu further teaches that its base station will “immediately recognize new customers as well as repeat customers” and “redirect the customer’s browser to a proprietary WWW page” before configuring the network settings to allow for remote wireless access to the internet. Ex.1007 ¶40.

A POSITA would thus find claim 1i obvious over Bruner in view of Wu. Ex.1002 ¶113. In addition to Bruner’s teachings, Wu discloses each element of claim 1i by, e.g., authenticating a user’s account via password or PIN following the user’s opening of browser software and by recognizing customers and redirecting them to a proprietary webpage before configuring the appropriate network settings. Ex.1002 ¶¶110-12.

j) [1j] **“allowing a user to access the Internet at the rural location.”**

Bruner in view of Wu discloses claim 1j for substantially similar reasons as those already discussed for claims 24f and 1d. Ex.1002 ¶112.

10. **Claim 3: “The method of claim 1, wherein the step of creating a subscription account includes creating the subscription account using a prepaid coupon via the remote server.”**

Bruner in view of Wu discloses claim 3. Ex.1002 ¶118. For example, Wu teaches that its prepaid card “suitably includes all the information necessary to allow a customer to draw upon the prepaid balance amount for obtaining a remote access service at a wireless station. Ex.1007 ¶28. Wu further explains that a user may “obtain remote access service through the wireless network system by inputting the ID code or PIN of the prepaid card into the wireless station,” causing the “remote central access server” to search a database and confirm the balance on the card. Ex.1007 ¶29. Moreover, a “prepaid card . . . residing on a remote central billing server stores account information . . . correlated to each prepaid card sold or distributed.” Ex.1007 ¶ 36. Bruner in view of Wu thus discloses each limitation of claim 3, including the **subscription account** (e.g., the account information associated with each prepaid card), the **prepaid coupon** (e.g., the prepaid card), and the **remote server** (e.g., the remote central access server). Ex.1002 ¶18.

11. Claim 4: “The method of claim 1, wherein the step of creating a subscription account includes purchasing by the user a quantity of subscription-based access time using a credit card via the remote server.”

Bruner in view of Wu discloses claim 4. Ex.1002 ¶¶121-22. For example, Wu teaches that a customer “may purchase a prepaid card in advance from participating vendor or a vending machine or terminal.” Ex.1007 ¶35. “Such vendors or terminals may be operatively associated with the central access server maintained by the wireless service provider.” Ex.1007 ¶30. Customers may pay using a “credit card . . . or the like.” Ex.1007 ¶66. Wu explains that the “prepaid card includes a balance amount where charges accrued for wireless remote access services may be deducted” and that the “balance amount entitles the customer to a specific access amount or time.” Ex.1007 ¶35. Wu suggests as an example that “the balance amount may provide 30 minutes of access time for a specified dollar amount (e.g. \$5.00).” Ex.1007 ¶35.

Bruner in view of Wu thus discloses each limitation of claim 4, including the **purchasing of a quantity of subscription-based access time using a credit card** (e.g., the customer’s purchasing the prepaid card providing, for example, 30 minutes of access time) and the use of a **remote server** (e.g., the central access server). Ex.1002 ¶122.

12. Claim 5: “The method of claim 4, wherein the subscription-based access time may be purchased in a definite quantity.”

Bruner in view of Wu discloses claim 5 for substantially similar reasons as those already discussed for claim 4. Ex.1002 ¶¶123-24.

13. Claim 6: “The method of claim 4, wherein the subscription-based access time may be purchased on a ‘continued until canceled’ basis.”

Bruner in view of Wu discloses claim 6. Ex.1002 ¶¶125-26. For example, Wu teaches that if the balance on the prepaid card “reaches a minimum limit, the wireless service provider may automatically deduct a new charge amount to replenish the balance amount.” Ex.1007 ¶34. A POSITA would understand that such a system would be enabled to cancel the “automatic[] deduct” functionality by allowing a user to opt out of this replenishment function as desired. Ex.1002 ¶125. Bruner in view of Wu thus discloses Claim 6’s limitation requiring **subscription-based access time purchased on a ‘continued until canceled’ basis.**

14. Claim 7: “The method of claim 4, wherein the credit card billing is performed by an existing merchant service.”

Bruner in view of Wu discloses claim 7. Ex.1002 ¶¶127-28. For example, Wu teaches that “the balance amount on the prepaid card may be deducted immediately and electronically from a credit card.” Ex.1007 ¶34. Wu continues to explain that a customer “may purchase a prepaid card in advance from a participating vendor or a vending machine or terminal.” Ex.1007 ¶35. Bruner in view of Wu thus discloses

Claim 7's limitation requiring the **credit card billing** to be **performed by an existing merchant service**. Ex.1002 ¶28.

15. Claim 8: “The method of claim 7, wherein the existing merchant service is reciprocal with other Internet subscription providers nationwide.”

Bruner in view of Wu discloses claim 8. Ex.1002 ¶¶ 129, 131. For example, Wu teaches that a customer “may replenish the balance amount of the prepaid card” by paying “participating prepaid card vendors or vending terminals.” Ex.1007 ¶30. Wu continues to explain that its system “may be used to obtain prepaid goods or services of any kind through the global communications network from participating merchants and providers.” Ex.1007 ¶33. Bruner in view of Wu thus discloses Claim 8's limitation requiring **the existing merchant service** to be **reciprocal with other Internet subscription providers nationwide**. Ex.1002 ¶131.

16. Claim 9. The method of claim 1, wherein the verifying step is performed by a subscriber merchant service.”

Bruner in view of Wu discloses claim 9. Ex.1002 ¶¶132, 134.. For example, and as discussed previously with respect to claim 4, Wu teaches that if a customer's balance is inadequate to cover his or her internet access, the “customer is requested to replenish the balance amount of the prepaid card such as by depositing payment with the participating prepaid card vendors or vending terminals.” Ex.1007 ¶30. “Such vendors or terminals may be operatively associated with the central access

server maintained by the wireless service provider.” Ex.1007 ¶30. Thus, Bruner in view of Wu discloses Claim 9’s limitation requiring the **verifying step** to be **performed by a subscriber merchant service**. Ex.1002 ¶134.

17. Claim 10: “The method of claim 1, wherein the connecting step includes connecting the web-ready device to the router via a wireless connection.”

Bruner in view of Wu discloses claim 10 for substantially similar reasons as those already discussed for claims 24e and 25. Ex.1002 ¶¶135-39.

18. Claim 11. “The method of claim 10, wherein a plurality of users can simultaneously connect web-ready devices to the router.”

Bruner in view of Wu discloses claim 11 for substantially similar reasons as those already discussed for claim 26. Ex.1002 ¶¶140-43.

19. Claim 12: “The method of claim 10, further comprising the steps of operatively coupling at least one wireless transceiver extender unit between the satellite dish and the router to extend the range of Internet access at the rural location.”

Bruner in view of Wu discloses claim 12. Ex.1002 ¶¶146-49. For example, Wu discloses a “wireless local bridge” connecting user devices and a base station. Ex.1007 ¶48. This bridge, or “access point,” can “be adapted to double the range of the wireless stations.” Ex.1007 ¶48. Further, Wu notes that multiple access points “may be utilized . . . for greater connection range.” Ex.1007 ¶49.

Bruner in view of Wu thus discloses each limitation of claim 12, including the **wireless transceiver extender unit** (the wireless bridge or access point), which is

coupled between the subscriber access unit and the router (the bridge or access point is located between user devices and the base station, or optionally between the base station and other wireless access points), and which **extends the range of Internet access** (the wireless bridge is said to at least double the range of wireless stations). Ex.1002 ¶¶146-49.

20. **Claim 14: “The method of claim 10, wherein the wireless connection is one of an 802.11a wireless area network, an 802.11b wireless area network, an 802.11g wireless area network, and an 802.11n in wireless area network.”**

Bruner in view of Wu discloses claim 14 for substantially similar reasons as those already discussed for claim 32. Ex.1002 ¶¶156-60.

C. Ground 4: Claims 3-5, 13, and 29 are obvious over Bruner in view of Clark and Rothblatt

1. Motivation to modify Bruner in view of Clark with Rothblatt

A POSITA would have been motivated to combine the teachings of Rothblatt with Bruner and Clark. Ex.1002 ¶¶40-51. Like Bruner, Clark, and the '469 Patent, Rothblatt is also directed towards satellite-enabled remote internet access. *E.g.*, *supra*, Section X.A.1; Ex.1008 2:22-27 (“[O]bjects of the present invention are achieved, in part, by providing remote users with user terminals . . . for communicating with an Internet service provider.”). Accordingly, modifying Bruner and Clark with the teachings of Rothblatt would have represented the use of known techniques to improve similar systems of internet access. Ex.1002 ¶¶46-47.

Moreover, Rothblatt teaches the use of gateways, and as with Clark, these teachings could have been used to improve the system of Bruner as needed. Ex.1002 ¶47. Additionally, Rothblatt teaches the use of multiple low-earth-orbit satellites. The benefits of such teachings would have been advantageous for a POSITA to incorporate with the satellite-enabled internet systems of Clark and Bruner. Ex.1002 ¶50. Thus, a POSITA would have been motivated to modify Bruner and Clark with the teachings of Rothblatt and would have had a reasonable expectation of success in doing so. Ex.1002 ¶¶50-51.

2. Claim 3: “The method of claim 1, wherein the step of creating a subscription account includes creating the subscription account using a prepaid coupon via the remote server.”

Bruner in view of Clark and Rothblatt discloses claim 3. Ex.1002 ¶¶116-17. For example, as part of “determin[ing] whether [a] user is authorized to connect to the Internet,” Rothblatt teaches that “this determination can include a check of the prepaid balance on the user’s debit card.” Ex.1008 15:34-40. Rothblatt further explains that the “system gateway verifies that the user has access” using authorization data stored in a database. Ex.1008 15:51-54.

It would be obvious for a POSITA to combine the teachings of Rothblatt with those of Bruner and Clark to complete the method of claim 3. Ex.1002 ¶117. Bruner in view of Clark and Rothblatt discloses each limitation of claim 3, including **creating a subscription account using a prepaid coupon** (e.g., doing so using the

prepaid balance on a user's debit card) and the **remote server** (e.g., the system gateway verifying the authorization data using a remote database). Ex.1002 ¶¶116-17.

3. Claim 4: “The method of claim 1, wherein the step of creating a subscription account includes purchasing by the user a quantity of subscription-based access time using a credit card via the remote server.”

Bruner in view of Clark and Rothblatt discloses claim 4. Ex.1002 ¶¶120, 122. For example, Rothblatt teaches that users of its system may purchase internet access under a variety of subscription arrangements, including “charging users on a transactional basis.” Ex.1008 17:14-17. Rothblatt further discloses that a user of its system can be “billed for the Internet access time and downloaded data using a monthly statement generated by the Internet service provider.” Ex.1008 16:46-48.

It would be obvious for a POSITA to combine the teachings of Rothblatt with those of Bruner and Clark to complete the method of claim 4. Ex.1002 ¶122. Bruner in view of Clark and Rothblatt discloses each limitation of claim 4, including **purchasing a quantity of subscription-based access time** (e.g., through charging users on a transactional basis or by billing them for access time) and the **remote server** (e.g., as discussed with respect to claim 3 above).

4. Claim 5: “The method of claim 4, wherein the subscription-based access time may be purchased in a definite quantity.”

Bruner in view of Clark and Rothblatt discloses claim 5 for substantially similar reasons as those already discussed for claim 4. Ex.1002 ¶¶123-24.

5. Claim 13: “The method of claim 1, further comprising an amplifier and antenna operatively coupled to the router.”

Bruner in view of Clark and Rothblatt discloses claim 13. Ex.1002 ¶155. In addition to the teachings of Bruner and Clark, Rothblatt teaches a “handheld radio receiver connected to a computer” that transmits and downloads data from internet service providers. Ex.1008, 3:46-50; 3:61-65. Rothblatt further explains that its digital broadcast receiver is coupled with an **antenna**. Ex.1008, Fig. 5. Rothblatt further teaches that within its digital broadcast receiver, “a low noise **amplifier** boosts the satellite signal.” Ex.1008 13:5-6.

Thus, Bruner in view of Clark and Rothblatt discloses each limitation of claim 13, including the **router** (e.g., the radio receiver of Rothblatt, or alternatively the routers of Bruner or Clark) coupled to an **antenna** and an **amplifier**.

6. Claim 29: “The Internet Hotspot of claim 28, further comprising an amplifier and antenna operatively coupled to the router.”

Bruner in view of Clark in further view of Rothblatt discloses claim 29 for substantially similar reasons as those discussed above for claim 13. Ex.1002 ¶239.

XI. THE BOARD SHOULD INSTITUTE *INTER PARTES* REVIEW

A. The *Fintiv* factors either favor institution or are neutral.

To simplify the *Fintiv* analysis, Petitioners stipulate that, if the Petition is instituted, Petitioners will not pursue in the district court litigation any ground raised or that could have been reasonably raised in an IPR. *Sotera Wireless*, Paper 12 at 18.

Institution should not be denied under *Fintiv* because all of the relevant factors either favor institution or are neutral. Factor 1 is neutral because no party has requested a stay in either of the district court cases. *See, e.g., Sand Revolution II, LLC v. Continental Intermodal Grp.-Trucking LLC*, IPR2019-01393, Paper 24 at 7 (P.T.A.B. June 16, 2020) (informative).

Factor 2 is neutral because, although no trial date is yet set in IV's case against American, the schedule jointly submitted to the district court would provide for a trial more than eighteen months after the filing date of this petition. And although trial is set for July 27, 2026 in the case against Southwest, that date often changes. For example, the most recent time-to-trial data show that the median time to trial for jury trials in the Western District of Texas is 34.9 months. *Table T-3—U.S. District Courts—Trials Statistical Tables For The Federal Judiciary (December 31, 2024)*, U.S. COURTS, <https://www.uscourts.gov/data-news/data-tables/2024/12/31/statistical-tables-federal-judiciary/t-3> (last visited March 28,

2025). The Board has instituted IPR based on other petitions with similar facts. *Ericsson Inc. v. XR Commc'ns LLC*, IPR2024-00613, Paper 9, 33-34 (Oct. 9, 2024).

Factor 3 weighs against discretionary denial because no substantive rulings on the patents have yet issued in either of the district court cases and the parties have expended only limited resources in the litigation thus far. *Sotera Wireless*, Paper 12 at 16-17. Petitioners acted expeditiously by filing this Petition within six months of IV filing its suit—well before claim construction and well before either of the district court cases has incurred substantial costs.

Factor 4 weighs against exercising discretion to deny institution because the Petition challenges significantly more claims than are or will reasonably be at issue in the district court proceedings. Only claims 24-28 and 32 are asserted by Intellectual Ventures in its suits against Petitioners. Exs. 1012 and 1013. By contrast, challenged claims 1, 24, and the entirety of claims 1 and 24's dependent claims—23 claims in total—are at issue here.

Though *Fintiv* Factor 5 is commonly found to weigh against petitioners when the petitioners are also the defendant in parallel district court litigation, it weighs against exercising discretion to deny institution here. Given the Board's concerns regarding "efficiency and fairness" regarding parallel district court proceedings, a holistic review of IV's litigation practices and the facts of its suits against Petitioners would favor institution here. IV is a prolific patent litigant, having asserted the '469

Patent against Petitioners in two different proceedings in the last few months. *Supra* Section I.B. Efficiency and fairness would counsel resolving questions of invalidity in this single proceeding rather than in two separate district court proceedings. *Apple, Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 15 at 12 (P.T.A.B. May 13, 2020).

Factor 6 weighs against denying institution because Petitioners have established a compelling case of invalidity of the Challenged Claims in this Petition. *Sand Revolution*, Paper 24 at 13.

B. Analysis under 35 U.S.C. § 325(d) also favors institution.

The Board may consider whether “the same or substantially the same prior art or arguments previously were presented to the Office” in deciding whether to institute *inter partes* review. *Becton, Dickinson & Co. v. B. Braun Melsungen AG*, IPR2017-01586, Paper 8 at 17 (P.T.A.B. Dec. 15, 2017) (citing 35 U.S.C. § 325(d)). The Board answers that threshold question by reviewing *Becton, Dickinson’s* “factors (a), (b), and (d).” *Advanced Bionics, LLC v. Med-El Elektromedizinische Geräte GMBH*, IPR2019-01469, Paper 6 at 10 (P.T.A.B. Feb. 13, 2020). But even if the Board answers the threshold question affirmatively, it still considers whether institution is appropriate because “factors (c), (e), and (f)” show “a material error by the Office.” *Id.*

Factors (a), (b), (c), and (d) weigh against denial of institution. None of the references were presented to or cited by Examiner of the '469 Patent. Ex1004 at 91-93. Moreover, in attempting to overcome to Examiner's initial rejection of the '469 Patent's application, Applicant amended the application's claims with the "subscriber access unit" limitation and several related features. Ex1004 at 105-06. Applicant argued that the additional features distinguished the application from Examiner's art. *Id.* Given Examiner's apparent acceptance of this argument, the subscriber access unit and subscription-related features of the '469 Patent were the purported points of novelty over the art in front of Examiner. But Bruner, Clark, Wu, and Rothblatt squarely address this purported deficiency—and what's more, they do so in the specific context of commercial systems of satellite-enabled internet. Ex.1002; *see, e.g.*, Section IX.A. Given that none of these references were before Examiner—and their substantial distinctions compared to the art before Examiner—*Becton, Dickson*, factors (a), (b), (c), and (d) weigh in favor of institution. *Advanced Bionics*, Paper 6 at 9.

Factors (c), (e), and (f) also show material error by the Office, further supporting institution. *Id.* at 10. During examination, Examiner initially rejected many of the application's dependent claims on the basis that many of the dependent claims' features were well-known in the art. Ex.1004 at 89. However, Examiner failed to support this argument with documentary evidence, a weakness Applicant

relied on heavily in re-asserting the claims' validity. Ex1004 at 107-19. Again, the art asserted in this Petition squarely addresses the purportedly novel features of these claims and supports their invalidity. *Advanced Bionics*, Paper 6 at 10.

XII. CONCLUSION

Petitioners respectfully request institution of this Petition and cancellation of the Challenged Claims based on the grounds set forth above.

Dated: April 30, 2025

Respectfully submitted,

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CERTIFICATE OF COMPLIANCE WITH WORD COUNT

Pursuant to 37 C.F.R. § 42.24(a)(i), the undersigned certifies that this Paper—exclusive of the table of contents, table of authorities, grounds for standing under § 42.104, mandatory notices under § 42.8, certificate of service, and this certificate of word count—includes 12,393 words.

/ John Campbell/
John Campbell (Reg. No. 54,665)

CERTIFICATE OF SERVICE

I hereby certify, pursuant to 37 C.F.R. Sections 42.6 and 42.106, that a complete copy of the attached **PETITION FOR *INTER PARTES* REVIEW OF U.S. PATENT NO. 7,324,469**, including all exhibits (**Nos.1001-1013**) and related documents, are being served by Federal Express on 30th day of April, 2025, the same day as the filing of the above-identified document in the United States Patent and Trademark Office/Patent Trial and Appeal Board, upon Patent Owner by serving the correspondence address of record with the USPTO as follows:

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