

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE, INC.,
Petitioner

v.

HBCU MESSAGING US LP,
Patent Owner

IPR2025-01493
U.S. Patent No. 11,089,450

PATENT OWNER'S PRELIMINARY RESPONSE

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TABLE OF CONTENTS

I.	INTRODUCTION	1
II.	BACKGROUND	1
	A. Technology at Issue	1
	B. Challenged Claims.....	5
	C. District Court Case	8
III.	CITED REFERENCES	9
	A. Horvath (Ex. 1004)	10
	B. Tsampalis (Ex. 1005).....	17
	C. Chatterjee (Ex. 1007).....	23
IV.	LEVEL OF ORDINARY SKILL IN THE ART	24
V.	CLAIM CONSTRUCTION	24
VI.	PETITIONER IS UNLIKELY TO PREVAIL WITH RESPECT TO ANY CHALLENGED CLAIM	26
	A. Ground 1A Fails to Demonstrate a Likelihood of Invalidity of Any Challenged Claim	27
	1. Petitioner’s Reliance on “IM” Services Is Unavailing	27
	2. The Horvath-Tsampalis-Chatterjee Combination Fails to Disclose at least Elements 1.c and 1.f of Claim 1, and Like Elements from the Other Independent Claims.....	30
	B. The Dependent Claims Challenged by Grounds 1B-1E Are Also Not Rendered Invalid.....	34
VII.	CONCLUSION.....	35

TABLE OF AUTHORITIES

Cases

<i>Amgen Inc. v. Hoechst Marion Roussel, Inc.</i> , 314 F.3d 1313 (Fed. Cir. 2003)	25
<i>Cambridge Mobile Telematics, Inc. v. Sfara, Inc.</i> , IPR2024-00952 (P.T.A.B. Dec. 13, 2024)	26
<i>Facebook v. Windy City Innovations, LLC</i> , 973 F.3d 1321 (Fed. Cir. 2020)	33
<i>Intel Corporation v. Proxense LLC</i> , IPR2025-00327 (P.T.A.B. June 26, 2025)	8
<i>Medichem, S.A. v. Rolabo, S.L.</i> , 437 F.3d 1157 (Fed. Cir. 2006)	33
<i>Par Pharm., Inc. v. TWi Pharms., Inc.</i> , 773 F.3d 1186 (Fed. Cir. 2014)	33
<i>Xerox Corp. v. Bytemark, Inc.</i> , IPR2022-00624 (PTAB August 24, 2022)	33

Statutes

35 U.S.C. § 282 (b)	24
35 U.S.C. § 314	34
37 C.F.R. § 42.100 (b)	25
37 C.F.R. §42.104(b)	25

TABLE OF EXHIBITS

Exhibit	Description
2018	District Court Litigation - Complaint filed by Patent Owner on October 7, 2024 in the Western District of Texas
2019	District Court Litigation - First Amended Complaint filed on January 24, 2025
2020	District Court Litigation - September 24, 2025 Order dismissing Green Dot Corporation without prejudice to replead following initial discovery
2021	District Court Litigation - April 9, 2025 Agreed Scheduling Order
2022	District Court Litigation – Apple’s Opening Claim Construction Brief filed on September 22, 2025

I. INTRODUCTION

Petitioner Apple, Inc. (“Petitioner”) filed a Petition for *Inter Partes* Review of claims 1-30 of U.S. Patent No. 11,089,450 (“the ‘450 patent”) on August 29, 2025. In addition to the reasons set forth in Patent Owner’s Discretionary Denial Briefing (Paper No. 7), the Petition should be denied on the merits for at least the following reasons.

II. BACKGROUND

A. Technology at Issue

The ‘450 patent resulted from the pioneering efforts of Graham Merrett in the field of messaging services, and in particular, the selection of certain services to enhance the operation of messaging systems. The Inventor has multiple patents in this space, and the ‘450 patent represents just one example of his innovations.

As explained in the patent specification (Ex. 1001, ‘450 patent at 1:29-2:6), Short Messaging Service (SMS) is a cellular technology for sending and receiving short text messages between mobile users. It was first introduced in the Global System for Mobile Communications (GSM) standards in the 1990s, but was subsequently included in other wireless standards such as Code Division Multiple Access Systems (CDMA).

Although SMS is extremely popular, one of its biggest drawbacks was that an SMS message can only carry a small amount of data, due to limitations imposed

by the Mobile Application Part (MAP) protocol of SS7. Previously, an SMS message could only contain up to 160 8-bit alphanumeric or binary characters and any message longer than 160 characters was usually sent in multiple messages. (Ex. 1001, '450 patent at 1:30-43.)

A Short Messaging Service Center (SMSC) is responsible for handling the delivery of SMS messages in a wireless communications network. An SMS message sent by a mobile user is first delivered to the user's network SMSC before being routed to the recipient. If the recipient's network is operated by a different provider or employs a different wireless standard, the message may pass through more than one SMSC or SMSC gateway before reaching its final destination. Typically, signaling System 7 (SS7) provided the transport mechanism for SMS traffic. (*Id.* at 1:62-2:7),

Several messaging services acted as extensions to SMS. Enhanced Messaging Service (EMS), which uses existing SMS infrastructure, allowed up to 255 SMS messages to be packaged as one EMS message having richer content such as animation, pictures, sounds and formatted text. Multimedia Messaging Service (MMS) messages allowed yet further functionality, and were delivered using a packet data network operating within the cellular system. MMS was first introduced in 2.5 generation networks such as GPRS, which provides an Internet

Protocol (IP) overlay to the existing GSM networks. A multimedia message may contain images, audio clips and videos. (*Id.* at 2:7-20.)

As further described in the patent, another technology, Mobile Instant Messaging (MIM), enabled mobile devices to engage in real-time, instant messaging via an internet protocol data network. Users typically needed to register a user name tag or “handle” with an instant messaging service provider to send and receive messages. Many then-current MIM services also required users to maintain a persistent connection with the Internet during a chat session. (*Id.* at 2:49-3:2.)

The inventions of the ‘450 patent address multiple gaps in the prior technology, providing a system including that can transmit short message service messages via a cellular network or alternatively packet switched messages via a packet switched message service (PSMS) that operates outside the cellular core network. The system includes a server or collection of servers that support the PSMS and may also maintain status information and queue messages for delivery as needed. (*Id.* at 4:49-54; 6:10-32; 10:10-18.)

In practice, the sending mobile phone sends a request to a server residing outside the cellular core network, querying whether the recipient device address corresponds to a subscriber address. If so, the sending mobile phone sends the message via the PSMS. If not, the sending mobile phone sends the message via

SMS. (*Id.* at 11:36-12:18.) The ‘450 patent also departed from conventional MIM systems by doing away with the requirement that an instant messaging user register a user nametag or handle for purposes of identifying the user to the system. Instead, the ‘450 patent teaches that the user’s mobile phone number be utilized as the user’s identifier:

The destination address may be a mobile phone number or a numeric “shortcode” or alias representing one or more, or a combination of, phone numbers, email addresses, instant messaging user handles and IP addresses. Therefore, for all users of the messaging service, and unlike conventional MIM clients, the invention utilizes a user’s mobile phone number as the identifier of the user, and does not require the user to register a user name, tag or handle, thus providing a single number for message sending.

(*Id.* at 3:40-47.)

The patent also addresses situations in which the recipient mobile phone is not connected to the server when the packet switched message is sent. In that situation, the ‘450 patent teaches that message may be queued by the server until the recipient device connects to the server. (*Id.* at 4:16-22.) Messages received over both SMS system and the PSMS system are displayed by the same messaging application. (*Id.* at 9:24-36.)

B. Challenged Claims

Petitioner challenges claims 1-30 of the patent, including independent claims regarding 24. As set forth below, given that the asserted prior art fails to disclose regarding the independent claims, the Petitioner's arguments regarding the dependent claims must also be rejected.

The independent claims are reproduced below:

1.pre	A method comprising:
1.a	receiving a first message, by a first mobile wireless device from a second mobile wireless device, via a mobile operator base station, wherein the first message is formatted according to a short message service (SMS) format;
1.b	subscribing, by the first mobile wireless device, to a service for transmitting and receiving packet switched messages, via the Internet and the mobile operator base station;
1.c	transmitting, by the first mobile wireless device, after the subscribing, a request including at least information corresponding to at least one mobile phone number of the second mobile wireless device, to determine whether the second mobile wireless device corresponds to a subscriber of the service;
1.d	receiving, by the first mobile wireless device, a response to the request indicating that the second mobile wireless device corresponds to a subscriber of the service; and
1.e	formatting a second message in accordance with a message format of the service, subsequent to the subscribing and based at least in part on the response;
1.f	wherein the message format of the service is not a short message service (SMS) message format, a multimedia message service (MMS) message format or an enhanced message service (EMS) message format;
1.g	wherein the first message is received prior to the subscribing.

9.pre	A method performed by a first mobile wireless device, the method comprising:
9.a	receiving a first message, from a second mobile wireless device, wherein the first message is formatted according to a short message service (SMS) format;
9.b	subscribing to a service for transmitting and receiving packet switched messages, via the Internet;
9.c	transmitting a request, after the subscribing, including at least information corresponding to at least one mobile phone number of the second mobile wireless device, to determine whether the second mobile wireless device corresponds to a subscriber of the service; receiving a response to the request indicating that the second mobile wireless device corresponds to a subscriber of the service; and formatting a second message in accordance with a message format of the service, subsequent to the subscribing and based at least in part on the response;
9.d	wherein the message format of the service is not a short message service (SMS) message format, a multimedia message service (MMS) message format or an enhanced message service (EMS) message format;
9.e	wherein the first message is received prior to the subscribing.

15.pre	A method comprising:
15.a	receiving a first message, by a first mobile wireless device from a second mobile wireless device, via a mobile operator base station, wherein the first message is formatted according to a multimedia message service (MMS) format;
15.b	subscribing, by the first mobile wireless device, to a service for transmitting and receiving packet switched messages, via the Internet and the mobile operator base station;
15.c	transmitting, by the first mobile wireless device, after the subscribing, a request including at least information corresponding to at least one mobile phone number of the second mobile wireless device, to

	determine whether the second mobile wireless device corresponds to a subscriber of the service;
15.d	receiving, by the first mobile wireless device, a response to the request indicating that the second mobile wireless device corresponds to a subscriber of the service; and
15.e	formatting a second message in accordance with a message format of the service, subsequent to the subscribing and based at least in part on; wherein the message format of the service is not a short message service (SMS) message format, a multimedia message service (MMS) message format or an enhanced message service (EMS) message format;
15.f	wherein the first message is received prior to the subscribing.

24.pre	A method performed by a first mobile wireless device, the method comprising:
24.a	receiving a first message, from a second mobile wireless device, via a mobile operator base station, wherein the first message is formatted according to a multimedia message service (MMS) format; subscribing to a service for transmitting and receiving packet switched messages, via the Internet;
24.b	transmitting a request, after the subscribing, including at least information corresponding to at least one mobile phone number of the second mobile wireless device, to determine whether the second mobile wireless device corresponds to a subscriber of the service; receiving a response to the request indicating that the second mobile wireless device corresponds to a subscriber of the service; and formatting a second message in accordance with a message format of the service, based at least in part on the response;
24.c	wherein the message format of the service is not a short message service (SMS) message format, a multimedia message service (MMS) message format or an enhanced message service (EMS) message format;

24.d	wherein the first message is received prior to the subscribing.
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C. District Court Case

Patent Owner filed a Complaint (Ex. 2018, District Court Case, Dkt. 1) against Petitioner Apple on Oct. 07, 2024, in the Western District of Texas, and a First Amended Complaint (“FAC”) (Ex. 2019, District Court Case, Dkt. 32) on Jan. 24, 2025. The Complaint and FAC were originally filed against Apple, Inc. and Green Dot Corporation, but the Court dismissed Green Dot Corporation without prejudice to replead following initial discovery. (Ex. 2020, District Court Case, Dkt. 63.)

The District Court litigation has progressed steadily. In keeping with the Scheduling Order, the parties have served preliminary contentions and fully briefed claim construction. (Ex. 2021, District Court Case, Dkt. 49.) The claim construction hearing is scheduled for January 20, 2026. (*Id.* at 2-3.) This case already has a date set for jury trial. (*Id.* at 4.)¹

¹ Although a date is set here, having a date certain for a trial is not even a necessary prerequisite for discretionary denial. *See, e.g., Intel Corporation v. Proxense LLC*, IPR2025-00327, Paper 12 at 2 (P.T.A.B. June 26, 2025) (Petitions discretionarily denied due to settled expectations though no trial date scheduled).

III. CITED REFERENCES

Petitioner cobbles together a three-reference combination to assert against each of the challenged independent claims, with additional references tacked on for most dependent claims. In doing so, Petitioner manufactures what it names as the “Horvath-Tsampalis-Chatterjee combination,” and treats that as a single “reference”—something that Petitioner then speaks of as if it actually exists and can be measured against the claims. (See Pet. at 32 (“As explained above in the overview of the Horvath-Tsampalis-Chatterjee combination. . . .”))

This attempted usage disguises the numerous instances in which Petitioner simply fills in details where *the references themselves contain insufficient disclosure*. These are revealed by the Petition’s many resorts to asserting what would have been “obvious” even in light of the full three-reference combination, rather than disclosed within the collective combination itself. (See, e.g., Pet. at 30 (“Horvath’s and Chatterjee’s teachings would have rendered obvious subscribing to the IM service ‘via the Internet and the mobile operator base station.’”)); see also Pet. at 17, 20, 24, 51, 52 (statements beginning with a “POSITA would have found it obvious. . . .”))

In reality, none of the prior art references cited by Petitioner, either alone or in combination, teach all the elements of any independent claim, and thus

Petitioner's arguments fail at the outset. Each reference asserted against the independent claims is summarized briefly below.

A. Horvath (Ex. 1004)

Petitioner cites Horvath, Ex. 1004. As explained in Patent Owner's Discretionary Denial Brief, Horvath is cumulative with multiple references that were cited in original prosecution. (Paper No. 7 at 3.) For at least the same reasons that the claims were originally allowed, as well as at least the reasons set forth below, Horvath, alone or in combination with the other cited references, does not teach or suggest the claimed subject matter of the '450 patent.

Petitioner concedes that Horvath focuses on SMS messages only. "Horvath focuses on the selective use of packet switched or circuit switched bearers for delivery of SMS messages." (Pet. at 8.) As such, Horvath is concerned with messaging that is sent by way of a cellular network, not outside the cellular network.

Horvath identifies a problem associated with the conventional transmission of SMS messages, which is that SMS traffic was traditionally transmitted in the same circuit switched networks used by cellular providers to carry voice traffic:

One problem with the traditional way of transmitting SMS messages discussed above is that the circuit services network is primarily used for voice services. The circuit services network is unnecessarily

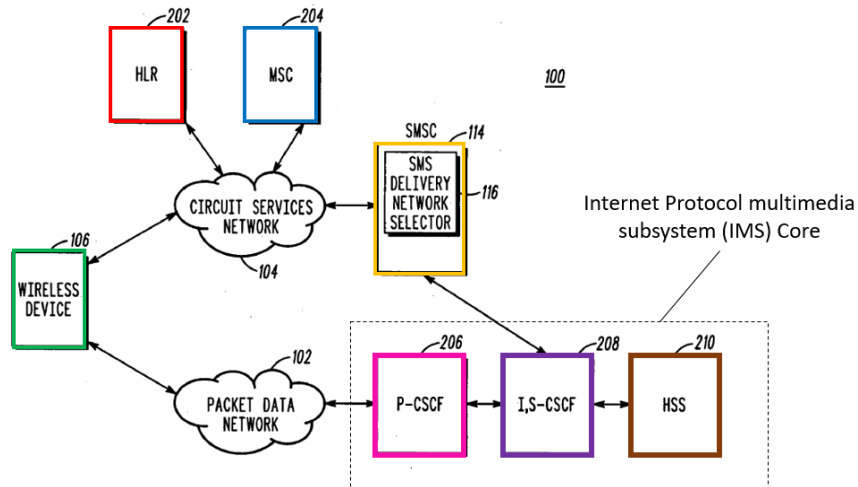
burdened with SMS traffic. Network resources such as air interface capacity and MSC capacity, among other things, are decreased.

(Ex. 1004 at [0004].)

Horvath explains that, in order to overcome this problem, some cellular providers utilize a packet data network (as opposed to a circuit services network) for transmission of SMS messages. (Ex. 1004, [0004].) However, this solution still burdened the overhead of the traditional cellular network because the Short Message Service Center (SMSC) did not know whether the intended recipient device was registered to receive messages over a packet data network. (*Id.*) As a result, the SMSC (operating within the traditional cellular network) still “needs to query a home subscriber server (‘HSS’) to determine the registration status of the recipient device. This process creates unnecessary overhead for the system.” (*Id.*)

Figure 2 of Horvath (reproduced produced below with added color annotations) illustrates Horvath’s proposed solution, in which a sending wireless device 106 (dark green box) is coupled to the packet data network 102 and the circuit services network 104. (Ex. 1004, [0034].) A home location register (“HLR”) 202 (red box) that helps route calls and SMS messages is also coupled to the circuit services network 104. The HLR is a database that holds subscription information associated with wireless devices subscribing in the circuit services network. (*Id.*, [0002].) A mobile switching center (“MSC”) 204 (blue box) that

manages communications between the wireless device 106 and the public switched telephone network (“PSTN”), is also coupled to the circuit services network. (*Id.*, [0031]-[0032].)



In the Horvath framework, the SMSC 114 (orange box) is directly coupled to the circuit services network 104, and also indirectly coupled to the packet data network 102 via a proxy call session control function (“P-CSCF”) 206 (pink box), an interrogating/serving call session control function (“I,S-CSCF”) 208 (purple box) and a registrar such as a home subscriber server (“HSS”) (brown box). (Ex. 1004, [0033].) The P-CSCF 206, I,S-CSCF 208, and HSS 210 together “comprise part of an Internet Protocol multimedia subsystem (‘IMS’) core” (black dotted line box)² that supports a session internet protocol (“SIP”) network “used for

² Dotted line in the original.

establishing instant messaging, telephone calls, and other real time communications over the Internet.” (*Id.*, [0033]-[0034].)

To send and receive SMS messages via the packet data network 102 in Horvath, the wireless device 106 registers with the S-CSCF component of the I,S-CSCF 208, “When the S-CSCF receives a registration request from the wireless device 106, the S-CSCF contacts the HSS 210 for authentication and authorization of the wireless device 106. Upon being authenticated by the S-CSCF, a security association between the wireless device 106 and the P-CSCF . . . is established.” (Ex. 1004, [0040].)

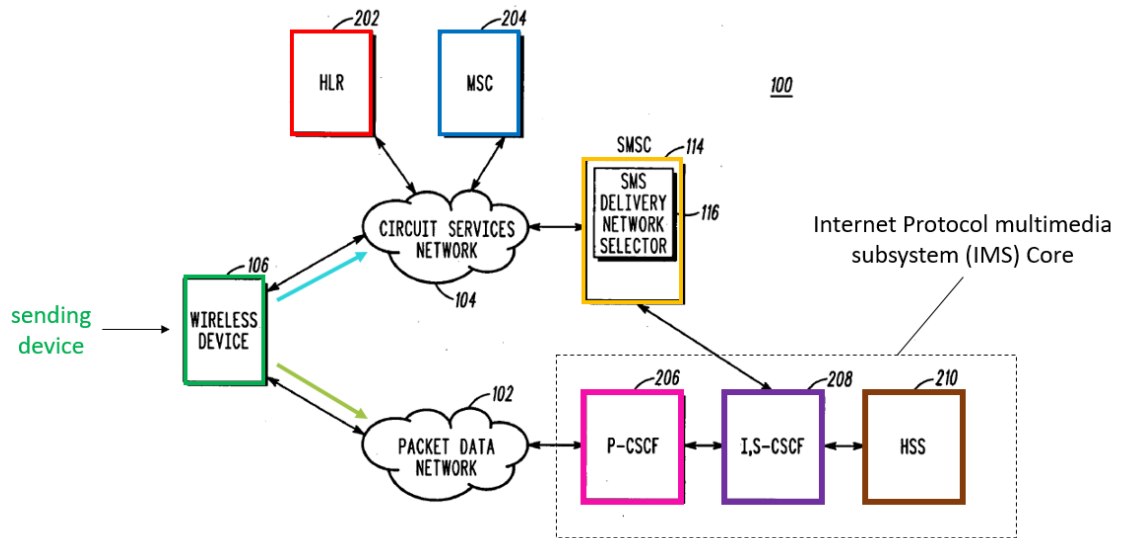
Within the IMS core, the HSS 210 maintains a database with a profile (e.g., the telephone number) of each wireless device 106 registered with the IMS core. In addition, the “S-CSCF notifies the SMSC 114 that the wireless device 106 has registered,” and “also transmits SIP contact information associated with the wireless device” so that the SMSC 114 can deliver a SMS message to the wireless device 106 over the packet data network 102. (Ex. 1004, [0040].)

In this manner, each wireless device registered with the IMS core can send and receive SMS messages through the packet data network 102. (Ex. 1004, [0040], [0044], [0053].) By contrast, each wireless device not registered with the IMS core can only send and receive SMS messages through the circuit services network 104. (*Id.*, [0047], [0050].) Through use of the IMS-based network,

Horvath moves some SMS messaging traffic off the circuit network 104 and onto the IMS-based data network (packet data network 102), thereby providing capacity relief on the circuit services network 104 without unduly burdening the SMSC. (Ex. 1004, [0039].)

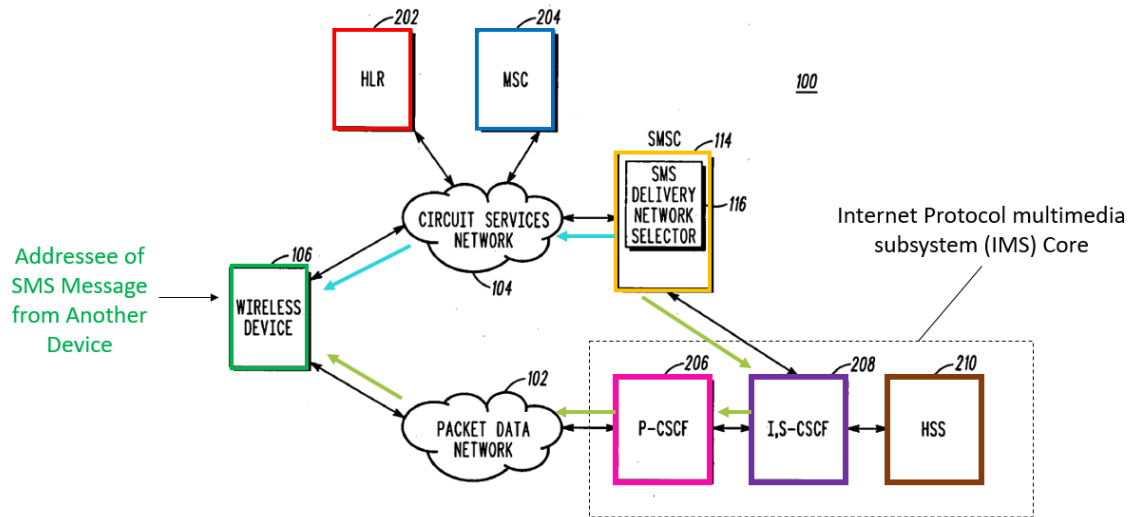
The operation of Horvath is set forth in the reproduction of Horvath's Figure 2 below, also annotated in color for convenience. When the wireless device 106 desires to send an SMS message to another device, device 106 decides whether to send the SMS message via the circuit service network 104 or packet data network 102 by determining if the sending wireless device itself is registered on the packet data network 102.

If the wireless device 106 is registered on the packet data network 102, the wireless device 106 sends the message as a SIP message over the packet data network 102 (over the path is illustrated by the **olive green** arrow) to HSS 210, which forwards the message to the SMSC 114. If the wireless device 106, is not registered on the packet data network 102, the wireless device 106 transmits the SMS message to SMSC 114 over the traditional circuit services network 104 (over the path illustrated with the **turquoise** arrow). (Ex. 1004 at [0050].)



Significantly, the sending wireless device 106 decides which network to use based on the capabilities of the sender's device. (See Ex. 1004 at [0050], Fig. 2.) This aspect of Horvath stands in contrast with claim 1 of the '450 patent, where the sending mobile phone selects a transmission mode based on a response to a server query regarding (generally) whether the recipient device is also registered with the same external packet switched messaging system.

Horvath uses 106 to identify both the sending and receiving devices which further indicates the same pathway is followed. In Horvath, upon receiving the SMS message from the sending wireless device 106, the SMSC 114 determines whether to deliver the message to wireless the network using the circuit service network 104 (this path is illustrated with the turquoise arrows) or the packet data network 102 (this path is illustrated by the olive green arrows).



“[W]hen a SMS message request is received by the SMSC 114, the SMSC 114 first determines if the recipient wireless device 106 is registered on the packet data network 102 If the SMSC 114 determines that the recipient device is registered on the packet data network 102, the SMSC 114 delivers the SMS message to the recipient device through the packet data network 102 via the IMS.” (Ex. 1004, [0044].) That path is illustrated by the olive green arrows. Conversely, “[i]f the recipient device is not registered on the packet data network 102, the SMSC 114 delivers the SMS message to the recipient device through the traditional circuit services network [104].” (Ex. 1004, [0047], [0076].) That path is illustrated by the turquoise arrows.

Petitioner asserts that, once the message is sent from the sending wireless device to the SMSC, “SMSC 114 includes an ‘SMS delivery network selector 116’ that ‘selects either the packet data network 102 or the circuit services network 104

for delivery of a SMS message’ based on whether the intended recipient of the message is currently registered on the packet data network 102.” (Pet. at 9-10.)

This aspect of Horvath stands in contrast with claim 1 of the ‘450 patent, where the entity that selects a transmission mode is outside the cellular core network, as set forth within the claims (since the query and response “do not traverse the cellular core network”).

B. Tsampalis (Ex. 1005)³

Petitioner also cites Tsampalis, Ex. 1005. Notably, the PCT application leading to Tsampalis, WO 2004/061583 (“Tsampalis PCT”), was in the record during prosecution of the ‘450 patent and accordingly appears on the face of the ‘450 patent. A comparison of the Tsampalis PCT with Tsampalis references asserted here demonstrates that they are substantively identical. (Ex. 1005, Tsampalis reference; Ex. 2009 Tsampalis PCT reference.) Unsurprisingly, Petitioner identifies no material differences between the references. Likewise, unsurprisingly, Tsampalis fails, either alone or in combination with the other cited references, to teach or suggest the claimed subject matter of the ‘450 patent.

³ Ex. 1005 is incorrectly labeled as a duplicate of the Horvath reference, but it is, in fact, Tsampalis.

At the time of Tsampalis, cellular networks were known to support both the Short Messaging Service (SMS) as well the more recently introduced Multi-Media Service (MMS). (Ex. 1005, [0002]-[0003].) However, such networks often included mobile messaging devices that were “compatible with only a subset of the supported concurrent multiple mobile messaging systems.” (*Id.* at [0003].)

Such networks permitted a mobile device with MMS messaging capability to send an MMS message to a receiving mobile device capable of only receiving SMS messages (but not MMS messages). (*Id.*) On the other hand, if an MMS-capable device sent an MMS message to a device capable of only processing SMS messages, the messages could be bounced back to the sender. “Being unable to process the message due to the incompatibility of its messaging service capabilities with that of the format of the received message, the receiving mobile messaging device then typically bounces the message back to the sending mobile messaging device,” which was undesirable. (*Id.*)

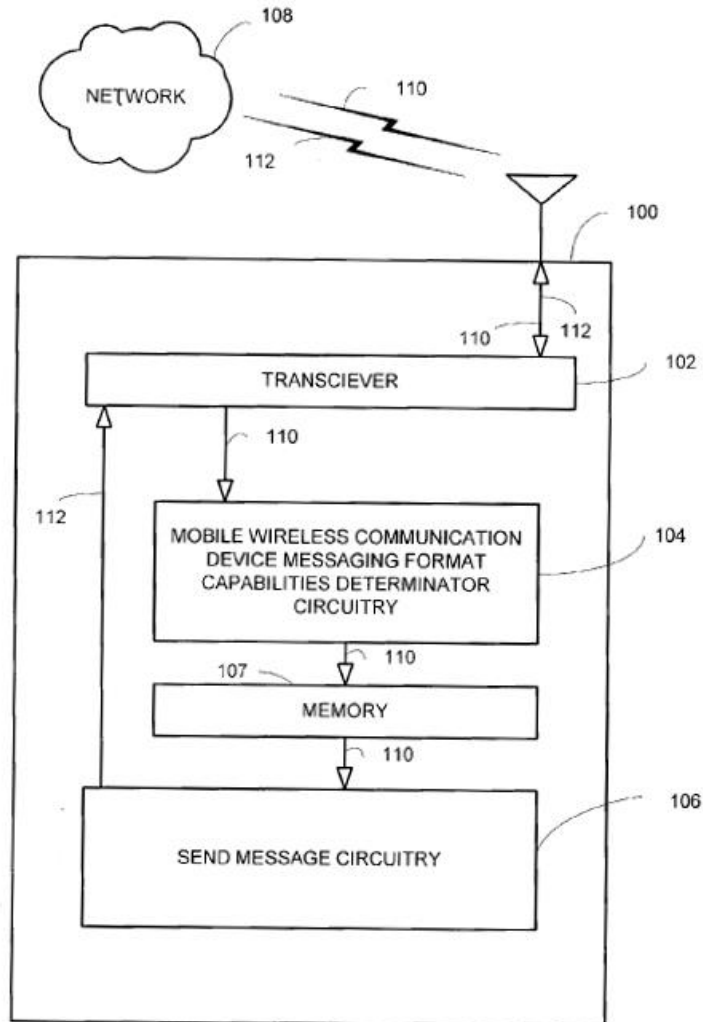
To resolve this problem, before sending a message (e.g., an MMS message) to a recipient device, the sender obtains the recipient devices capabilities *from that recipient device*:

In one embodiment, such devices are also capable of obtaining messaging format capabilities information from a target or recipient mobile wireless communication device, that reflect which types of non-real-time store-and-forward messaging formats a mobile wireless

communication device is capable of processing. Such devices, using the messaging format capabilities information, then send[s] a message to a target mobile wireless communication device in a format that can be processed by the target mobile wireless communication device.

(Ex. 1005, [0022].)

Tsampalis is primarily directed to cellular messaging formats, namely SMS, EMS and MMS. As explained in the reference, Figure 1 of Tsampalis depicts the components of a “cellular telephone, two-way pager, or other device employing non-real-time store-and-forward messaging (e.g., SMS, EMS, MMS messaging).” The mobile device 100 contains a transceiver 102, mobile wireless communication device messaging format capabilities determinator circuitry 104, send messaging circuitry 106 and memory 107.” (Ex. 1005, [0024].) The “first mobile wireless communication device 100 is further connected to network 108,” e.g., a mobile cellular telephone network. (*Id.*)



The sending mobile device requests the second device's messaging capabilities from the second device itself. "In operation, the mobile wireless communication device messaging format capabilities determinator circuitry 104 communicates through the transceiver 102 to the network 108 to obtain second mobile wireless communication device messaging format capabilities information 110." (Ex. 1005, [0025].)

In turn, the second device returns that requested information to the sending device. “The second mobile wireless communication device messaging format capabilities information 110 is received back from the network 108 through the transceiver 102 to the mobile wireless communication device messaging format capabilities determinator circuitry 104.” (*Id.*)

The sending device then uses that information to send the message in one of the formats within the capability of the second device. “The send message circuitry 106 operates to send a message in a message format compatible with at least one of the formats identified in the second mobile wireless communication device messaging format capabilities information 110.” (*Id.*)

Figure 2 shows the devices themselves in greater detail and confirms this overall communication flow. “After the first mobile wireless communication device 100 sends the second mobile wireless communication device messaging format capabilities information request 226, the second mobile wireless communication device 200’s remote messaging format capabilities determinator circuitry 208 receives the second mobile wireless communication device messaging format capabilities information request 226.” (Ex. 1005, [0035].) “The second mobile wireless communication device 200 retrieves and sends the second mobile wireless communication device messaging format capabilities information 110 to the first mobile wireless communication

device 100 in response to the information request 226 containing the second mobile wireless communication device messaging format capabilities information 110.” (*Id.*)

In another embodiment, a database local to the sending phone in the first mobile device 100 (i.e., a phonebook) is used to determine the capabilities of the second mobile device. “Here, a local database is examined to see if the messaging capabilities of the second mobile wireless device are stored locally.” (Ex. 1005, [0047].)

Of course, it might be that the second device is not located within the local database. “[T]he method includes the operation of determining whether the second mobile wireless communication device 200 is not found in the local database (e.g., phonebook 222).” (*Id.*) If the second device is not in the database, the sending phone queries the second phone directly as described above. “When the second mobile wireless communication device 200 is not found, . . . the method, as illustrated in block 1106, generates and sends a second mobile wireless communication device messaging format capabilities request 226 to the second mobile wireless communication device 200.” (*Id.*) “[T]he method includes the sending of a second mobile wireless communication device messaging format capabilities list from the second mobile wireless communication device 110 based

on the second mobile wireless communication device messaging format capabilities request 226.” (Ex. 1005, [0048].)

One embodiment of Tsampalis involves querying the Home Location Register regarding the second device’s capabilities. In this embodiment, “while inputting the active message 216, the first mobile wireless communication device 100 will transparently contact the network talking to the address(es), (e.g., the MSISDN(s)), of the recipients(s), and try to talk with their home location register (HLR) to find out if they are capable of receiving an MMS message.” (Ex. 1005, [0061].) The sending device then sends its message according to the information received from the HLR. (*Id.*)

C. Chatterjee (Ex. 1007)

Petitioner cites Chatterjee, EX1007, as a brief history of the development of instant messaging and presence until its publication in 2005. (Pet. at 17.) Specifically, Chatterjee states that “[p]resence provides information about a users’ reachability and willingness accept/reject a brief chat session.” (Ex. 1007, Chatterjee at 1.) In addition, Chatterjee provides a table of instant messaging systems available as of the reference’s publication.

Chatterjee does not explicitly disclose any of the claim limitation but is used in combination with the other prior art references to show that “it was obvious. . .” to identify the claim limitation. (*See e.g.*, Pet. at 55.) Thus, for at least these

reasons, and those reasons below, Chatterjee alone does not teach or suggest any of the claimed subject matter of the '450 patent. Moreover, as explained below, in combination with the other cited references, Chatterjee does not teach or suggest the claimed subject matter of the '450 patent.

IV. LEVEL OF ORDINARY SKILL IN THE ART

While Patent Owner generally agrees with the Petitioner's definition of a person of ordinary skill in the art ("POSITA"), Patent Owner finds that it ignores the knowledge gained from anything other than formal education.

Thus, Patent Owner adopts Petitioner's definition of a POSITA with one addition set forth in bold and italics:

A person of ordinary skill in the art relating to the subject matter of the '450 patent as of the critical date ("POSITA") would have had at least a bachelor's degree in computer science, electrical engineering, computer engineering, or a related field, with 2-3 years of industry experience in computer networking and wireless telecommunications.

A formal university degree may be substituted by equivalent practical experience and education in the field.

V. CLAIM CONSTRUCTION

In an *inter partes* review proceeding, "a claim of a patent . . . shall be construed using the same claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. § 282 (b), including construing the claim in accordance with the ordinary and customary meaning of such claim as

understood by one of ordinary skill in the art and the prosecution history pertaining to the patent.” 37 C.F.R. § 42.100 (b).

The Petition alleges that no claim term requires construction. (Pet. at 5.) This conflicts, however, with Petitioner’s contentions in the parallel district court litigation, in which Petitioner identified multiple terms, including terms from the ‘127 patent, that it asserts require construction. (Ex. 2022, District Court Litigation Dkt. 62 at 3, 10.)

Petitioner’s contradictory positions threaten inconsistent results, potentially because Petitioner may assert (expressly or impliedly) broader constructions to argue invalidity with the Board while advocating narrower constructions to support non-infringement positions in district court. This approach is plainly improper. *See Amgen Inc. v. Hoechst Marion Roussel, Inc.*, 314 F.3d 1313, 1330 (Fed. Cir. 2003) (“It is axiomatic that claims are construed the same way for both invalidity and infringement.”) Petitioner’s gamesmanship should not be rewarded, especially where as here, Petitioner gave the Board no notice that the District Court will soon be addressing a number of these same claim terms.

In fact, the Board has previously found that such actions run afoul of 37 C.F.R. §42.104(b)(3) because Petitioner failed to explicitly explain its construction positions or adequately justify its contradictory claim construction positions. *See, e.g., Cambridge Mobile Telematics, Inc. v. Sfara, Inc.*, IPR2024-00952, Paper 12

(P.T.A.B. Dec. 13, 2024) (informative) (denial under §42.104(b)(3) for using contradictory constructions in Petitioner and District Court regarding means-plus-function claims). The Board should deny the Petition here for the same reasons.

For purposes of this Preliminary Response only, Patent Owner merely addresses the arguments as presented by Petitioner. However, multiple claims are currently being considered and construed by the District Court. Patent Owner reserves the right to propose constructions of the claims should *inter partes* review be instituted.

VI. PETITIONER IS UNLIKELY TO PREVAIL WITH RESPECT TO ANY CHALLENGED CLAIM

For each independent claim and most dependent claims, Petitioner has identified a single Ground for alleged invalidity, namely the Horvath-Tsampalis-Chatterjee. But as set forth below, that alleged combination fails to disclose each element of the independent claims, and thus cannot invalidate any independent claim.

Petitioner variously adds Kansal, Lin, Ben Yoseph and Ribaldo to the combination of Horvath-Tsampalis-Chatterjee for the remaining dependent claims, but never addresses the independent claim elements with these added references. Accordingly no combination of these references is even asserted to disclose all the elements of any independent claim. In short, as set forth below, the Petition should be denied.

A. Ground 1A Fails to Demonstrate a Likelihood of Invalidity of Any Challenged Claim

1. Petitioner's Reliance on "IM" Services Is Unavailing

For the combination of Horvath-Tsampalis-Chatterjee, Petitioner attempts to equate aspects of the '450 patent invention to instant messaging services. Specifically, Petitioner misconstrues what packet-switched messages ("PSMS") are, improperly conflating them with "IM." The Petitioner asserts the PSMS is the same as an instant messaging service. As a result, Petitioner fails to demonstrate that the instant messaging cited prior art disclosed the *use of a mobile phone number* for determining whether the second receiving mobile phone is *an instant messaging subscriber*. (Pet. at 18 ("Likewise, a POSITA would have reasonably expected success implementing the combination, especially since the resulting system could be implemented with conventional software and hardware techniques (*e.g.*, general-purpose processors on mobile devices executing programmable instructions) with messaging formats (*e.g.*, SMS, MMS, IM) that were well-defined and commonly implemented by the Critical Date of the '450 patent.").)

For instance, after summarizing Horvath and Tsampalis (and their combination) and recognizing various shortcomings in the combination of the two, Petitioner introduces Chatterjee and its description of "IM&P" (instant messaging and presence) technology. (Pet. at 11, 20, 24-25.) Thereafter, this shorthand of "IM" is utilized throughout the Petition to reference various purported capabilities

of “instant messaging” systems. These IM systems are then referenced throughout to purportedly meet certain features of the patent claims. (*E.g. id.* at 11, 22-23, 30.)

Notably, the ‘450 patent specification discusses instant messaging systems of the time (which it refers to as Mobile Instant Messaging (MIM) systems) and describes the IM systems’ deficiencies. These same deficiencies are also present in Petitioner’s cited references.

For example, many IM services required users to maintain a persistent connection with the Internet during a chat session. (Ex. 1001, ‘450 patent at 1:65-2:5.) In fact, Chatterjee describes tracking whether users are “active” and thus whether they can receive messages—the exact opposite of the ‘450 patent invention. (Ex. 1007 at [0001], [0006].) The ‘450 patent departed from conventional IM systems by doing away with the requirement of registering a username or handle. (Ex 1001, ‘450 patent at 3:2-12.)

At the same time, Petitioner confusingly relies on Horvath describing an instant message service. This is based on Horvath’s use of the acronym “IMS”. (Pet. at 29, 31, and 35 (citing Ex. 1004, Horvath at [0034]).) In isolation IMS may be understood to mean “Instant Messaging Service.” However, in Horvath, the acronym “IMS” is defined as “Internet Protocol multimedia subsystem”. (*See Ex.*

1004, Horvath at [0034].) Thus, Horvath’s IMS is not an instant message service as Petitioner appears to believe.

As a result, Petitioner incorrectly argues:

While SMS, MMS, and EMS feature prominently in Horvath and Tsampalis, a POSITA would have appreciated that additional services were also commonly used for messaging on wireless devices by the Critical Date. APPLE-1003, ¶51. For example, Horvath notes that its “*IMS system* also includes application servers that host and execute services for the wireless device 106,” where the services can include “SMS, MMS, caller ID, call waiting, push-to-talk, voicemail, and the like.”

(Pet. at 19-20.)⁴

This matters because, as the patent explains, the ‘450 patent departed from conventional instant message systems by doing away with the requirement that an instant messaging user register a user name tag or handle for purposes of identifying the user to the system. Instead, the ‘450 patent taught that the mobile phone number of an instant messaging user can be used as the user’s identifier:

The destination address may be a mobile phone number or a numeric “shortcode” or alias representing one or more, or a combination of, phone numbers, email addresses, instant messaging user handles and IP addresses. Therefore, for all users of the messaging service, and unlike conventional MIM clients, the invention utilises a user’s

⁴ Unless otherwise stated, all emphasis in this paper has been added.

mobile phone number as the identifier of the user, and does not require the user to register a user name, tag or handle, thus providing a single number for message sending.

(Ex 1001, '450 patent at 3:3-12.)

All four independent claims recite features similar to claim 1, requiring the mobile phone number of the second (receiving) mobile phone be used to identify whether the second receiving mobile phone is a subscriber of the PSMS. (See Ex. 1001, '450 patent at claims 1, 9, 15, and 24.) This is different from Horvath which requires the IM service user to register a user name tag or handle.

2. The Horvath-Tsampalis-Chatterjee Combination Fails to Disclose at least Elements 1.c and 1.f of Claim 1, and Like Elements from the Other Independent Claims

Petitioner fails to show the disclosure of element [1c] (“transmitting, by the first mobile wireless device, after the subscribing, a request including at least information corresponding to at least one mobile phone number of the second mobile wireless device, to determine whether the second mobile wireless device corresponds to a subscriber of the service”) and element [1f] (“wherein the message format of the service is not a short message service (SMS) message format, a multimedia message service (MMS) message format or an enhanced message service (EMS) message format”) of claim 1, and like limitations of the other independent claims.

Neither Horvath nor Tsampalis discloses the use of a phone number determine the capabilities of a subscriber for messaging in formats other than SMS, MMS and EMS. Horvath limits its discussion to these three formats, and in particular SMS. (Ex. 1004, Horvath, at [0025], [0039].) Thus, Horvath does not disclose claim 1 of the '450 patent (element [1f]), which explicitly excludes these formats, “wherein the message format of the service is *not* a short message service (SMS) message format, a multimedia message service (MMS) message format or an enhanced message service (EMS) message format.” (Ex. 1001, '450 patent at 12:14-18.)

Likewise, looking at [1c] and [1f] together, Tsampalis only discloses the use of a phone number to determine the capabilities of a subscriber for *SMS, MMS and EMS* messaging services, which were the conventional messaging services offered at the time by a typical mobile operator. Nothing in Tsampalis disclosed or suggested deviating from the conventional use of registered “handles” or user names for identification of subscribers in real time instant messaging systems, or other messaging systems beyond conventional SMS/MMS/EMS messaging offered at the time by a typical mobile operator.

Indeed, Tsampalis only discloses determining if the recipient mobile phone is capable of receiving SMS, EMS or MMS messages. (Ex. Apple-1005 at [0002],

[0024], [0060].) Like Horvath, there is no disclosure of any format that is not SMS, MMS or EMS as taught by element [1f] of claim 1 of the '450 patent.

With respect to [1c], Petitioner refers to status or polling information in Chatterjee that are wholly unrelated to any of the claim language. (*E.g.* Pet. at 35 (“In fact, Chatterjee explains that ‘subscribed’ and ‘unsubscribed’ were two known present status indicators. APPLE-1007, 8.”); *id.* at 34 (citing Chatterjee at 5 (“Fetchers pull the value of presence information for a specific presentity.”)).) But this has nothing to do with element [1c] of claim 1. Petitioner simply imagines a connection between: (1) the process of determining *capabilities* of a second phone in Horvath and Tsampalis, and (2) the process of determining status within a typical IM system in Chatterjee. (*Id.* at 33-35.)

Petitioner also relies heavily on Chatterjee to show that formats other than SMS, MMS and EMS are disclosed in, or can be utilized within, Horvath and Tsampalis. In a single paragraph purportedly showing element [1f] of claim 1 is disclosed by Horvath and Tsampalis, Petitioner simply points to IM formats disclosed in Chatterjee. But as set forth above, Horvath and Tsampalis are both addressing messages that flow through the cellular system, and since the system taught in the '450 patent is not a traditional IM system, this reference in Chatterjee teaches away from Horvath and Tsampalis.

In its [1f] discussion, Petitioner also cites its expert's declaration, Ex. 1003, but the expert simply asserts the same arguments made in the Petition. Notably, this obvious parroting by the expert means the declaration is entitled to little if any weight. *Xerox Corp. v. Bytemark, Inc.*, IPR2022-00624, Paper 9 at 15-17 (PTAB August 24, 2022) (designated precedential) (according "little weight" to declaration testimony that contains a verbatim restatement of a petition's conclusory assertions without additional supporting evidence or reasoning).

Indeed, the Petition's extensive reliance on expert testimony that is mostly a verbatim restatement of the Petition is a further factor that favors denial of institution. *See also, Facebook v. Windy City Innovations, LLC*, 973 F.3d 1321, 1340-41 (Fed. Cir. 2020) (affirming the Board's holding that claim was not unpatentable when "the Board considered Facebook's expert's testimony but determined that it did not add materially to Petitioner's unpersuasive attorney argument . . . because it merely repeated Petitioner's argument, nearly verbatim, without citation to the basis for his testimony.")

With respect to the remaining independent claims—claims 9, 15 and 24—Petitioner simply points to its arguments for claim elements [1c] and [1f]. (Pet. at 48, 49, and 51-53.) For these same reasons the combination of Horvath-Tsampalis-Chatterjee does not render any of these independent claims invalid.

Accordingly, the Petition entirely fails to demonstrate the presence of multiple elements of each independent claim in the combination of prior art. Thus, no obviousness combination can be found. *See, e.g., Par Pharm., Inc. v. TWi Pharms., Inc.*, 773 F.3d 1186, 1194 (Fed. Cir. 2014) (need to “prove that all claimed limitations are disclosed in the prior art.”); *Medichem, S.A. v. Rolabo, S.L.*, 437 F.3d 1157, 1164 (Fed. Cir. 2006) (stating that we consider motivation to combine and reasonable expectation of success only “if all the elements of an invention are found in a combination of prior art references”).)

Likewise, since all of the claim elements of one of the independent claims is incorporated into each of the dependent claims, any dependent claim challenged by Ground 1A would include elements that are not disclosed by the alleged combination of Ground 1A. *See, e.g., Par Pharm.*, 773 F.3d at 1194. Therefore claims 3, 4, 7, 10, 11, 12, 13, 22, 26, 27, 28, and 29 are also not rendered invalid by the combination of Ground 1A. Accordingly, no dependent claim is rendered invalidated by Ground 1A.

B. The Dependent Claims Challenged by Grounds 1B-1E Are Also Not Rendered Invalid

Each of the additional prior art references that are added to Ground 1A for Grounds 1B-1E—Kansal, Lin, Ben-Yoseph, and Ribaudó—are cited solely for the purpose of addressing additional elements in the dependent claims. (Pet. at 55-75.)

Petitioner does not assert that these additional references disclose any of the elements of the independent claims.

Since the additional references are not even asserted to disclose any of the elements of the independent claims, any claim element of the independent claim that is not disclosed by the combination of Ground 1A is also not disclosed by adding the additional references. Therefore, claims 2, 5, 6, 8, 14, 16, 17, 18, 19, 20, 21, 23, 25, and 30 are also not rendered invalid by the combinations of Grounds 1B-1E.

VII. CONCLUSION

Pursuant to 35 U.S.C. § 314, Patent Owner respectfully requests that the Board deny institution of *inter partes* review for the reasons set forth above.

Dated: December 10, 2025

Respectfully submitted,
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CERTIFICATE OF COMPLIANCE WITH TYPE-VOLUME LIMITS

This Patent Owner's Preliminary Response consists of 7,151 words, excluding cover page, table of contents, table of authorities, certificate of service, this certificate, or table of exhibits. The brief complies with the type-volume limitation of 14,000 words as mandated in 37 C.F.R. §42.24. In preparing this certificate, counsel has relied on the word count of the word-processing system used to prepare the paper (Microsoft Word).

/ Timothy Devlin /
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Dated: December 10, 2025

CERTIFICATE OF SERVICE

I hereby certify that on December 10, 2025, I caused a true and correct copy of **PATENT OWNER'S PRELIMINARY RESPONSE** to be served via electronic mail on the following counsel for Petitioner:

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