

CASE IPR2023-00640
U.S. Patent No. 10,880,721

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

T-MOBILE USA, INC.,
Petitioner,

v.

VOIP-PAL.COM, INC.
Patent Owner.

CASE IPR2023-00640
U.S. Patent No. 10,880,721

PATENT OWNER'S PRELIMINARY RESPONSE
PURSUANT TO 37 C.F.R. § 42.107

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TABLE OF ABBREVIATIONS

Abbreviation	Term
VoIP-Pal	Patent Owner VoIP-Pal.com, Inc.
Petitioner or T-Mobile	Petitioner T-Mobile USA, Inc.
Petition	Paper 2 of IPR2023-00640
POSITA	Person of ordinary skill in the art
The '234 patent	U.S. Patent No. 8,630,234
The '721 patent	U.S. Patent No. 10,880,721
The Challenged Patents	The '234 and '721 patents
The Challenged Claims	Claims 1, 2, 6, 9, 14-16, 20, 25, 34, 38-39, 43, 45-46, 49-50, 135-136, and 140 of the '721 patent
PTAB or the Board	Patent Trial and Appeal Board
IPR	<i>Inter Partes</i> Review
WDTX	Western District of Texas
NDCAL	Northern District of California
Buckley	U.S. Patent No. 7,668,159
Bates	U.S. Patent No. 8,731,163
Ejzak	U.S. Patent No. 6,954,654

LIST OF EXHIBITS

EX2003	U.S. Patent No. 8,630,234
EX2004	U.S. Patent No. 10,880,721
EX2005	Original Complaint for Patent Infringement in <i>VoIP-Pal v. T-Mobile USA Inc.</i> , Case No. 6-21-cv-00674-ADA (W.D. Tex.)
EX2006	Executed Summons in <i>VoIP-Pal v. T-Mobile USA Inc.</i> , Case No. 6-21-cv-00674-ADA (W.D. Tex.)
EX2007	Cover Pleading of Plaintiff's Final Infringement Contentions in <i>VoIP-Pal v. T-Mobile USA Inc.</i> , Case No. 6-21-cv-00674-ADA (W.D. Tex.)
EX2008	Cover Pleading of Defendants' Preliminary Invalidity Contentions in <i>VoIP-Pal v. T-Mobile USA Inc.</i> , Case No. 6-21-cv-00674-ADA (W.D. Tex.)
EX2009	Scheduling Order in <i>VoIP-Pal v. T-Mobile USA Inc.</i> , Case No. 6-21-cv-00674-ADA (W.D. Tex.)
EX2010	Joint Claim Construction Statement in <i>VoIP-Pal v. T-Mobile USA Inc.</i> , Case No. 6-21-cv-00674-ADA (W.D. Tex.)
EX2011	Claim Construction Order in Case Nos. 6:21-cv-668-ADA, 6:21-cv-672-ADA, 6:21-cv-674-ADA (W.D. Tex.)
EX2012	Intentionally Omitted

EX2013	Declaration of William Mangione-Smith, Ph.D.
EX2014	Curriculum Vitae of William Mangione-Smith, Ph.D.
EX2015	RFC 3263, “Session Initiation Protocol (SIP): Locating SIP Servers,” June 2002
EX2016	RFC 3323: “A Privacy Mechanism for the Session Initiation Protocol (SIP),” November 2002
EX2017	RFC 3325: “Private Extensions to the Session Initiation Protocol (SIP) for Asserted Identity within Trusted Networks,” November 2002.
EX2018	Internet Draft, “SIP Extensions for Caller Identity and Privacy,” SIP Working Group, Feb. 2002, Expiration 8/31/02 (draft-ietf-sip-privacy-04)
EX2019	Cover Pleading of Defendants’ Final Invalidity Contentions in <i>VoIP-Pal v. T-Mobile USA Inc.</i> , Case No. 6-21-cv-00674-ADA (W.D. Tex.)
EX2020	Second Amended Scheduling Order in <i>VoIP-Pal v. T-Mobile USA Inc.</i> , Case No. 6-21-cv-00674-ADA (W.D. Tex.)
EX2021	Email from WDTX Clerk dated March 1, 2023

EX2022

Emails from counsel for Patent Owner to Counsel for Petitioner dated May 12, 2023 and May 23, 2023

EX2023

Internet Draft, “Obtaining and Using Globally Routable User Agent (UA) URIs (GRUU) in the Session Initiation Protocol (SIP),” J. Rosenberg, Expires: Apr. 23, 2006 (draft-ietf-sip-gruu-06)

I. INTRODUCTION

VoIP-Pal respectfully requests that the Board deny institution of Petitioner's Petition for numerous independent reasons. First, the Board should exercise its discretion and deny the Petition under 35 U.S.C. § 314(a) because all of the factors that the Board considers when exercising its discretion weigh against institution. Factor one weighs against institution because a stay of the district court case is unlikely. Factor two weighs against institution because the district court case will reach trial well before a final written decision issues. Factor three weighs against institution because the parties have made significant investments in the district court case, including completing expert discovery and filing dispositive motions. Factor four weighs against institution because there is significant overlap between the district court cases involving Petitioner and the issues raised in this IPR. Factor five weighs against institution because the parties in this proceeding are the same as they are in the district court case. Factor six weighs against institution because Petitioner sought a tactical advantage by delaying filing the Petition until after the petition that Petitioner seeks to join was instituted despite being aware of the asserted prior art over a year earlier.

Second, even if the Board determines under its discretion that it should institute review, which the Board should not, the Board should deny the Petition because Petitioner is not reasonably likely to prevail on any Challenged Claim.

None of the grounds show that the Challenged Claims are unpatentable as anticipated under 35 U.S.C. § 102(b) or obvious under 35 U.S.C. § 103(a). Ground 1 is improper because it seeks to establish obviousness based on a single prior art reference without a proper evidentiary basis. Grounds 2-4 also fail to establish that a POSITA would be motivated to combine the asserted prior art to arrive at the claimed invention. Accordingly, all grounds to institute review should be denied.

II. U.S. PATENT NO. 10,880,721

The Challenged Patents share a common specification and describe novel systems, apparatuses, and methods for providing an access code to roaming mobile communication devices such as smartphones, to enable access to suitable communication routing infrastructure, wherein the selection of the communication channel for a call or the point of access to the network can be optimized based on the calling device's current location. An embodiment enabling a mobile device to initiate a call to a callee is shown generally in Figure 1 at 10.

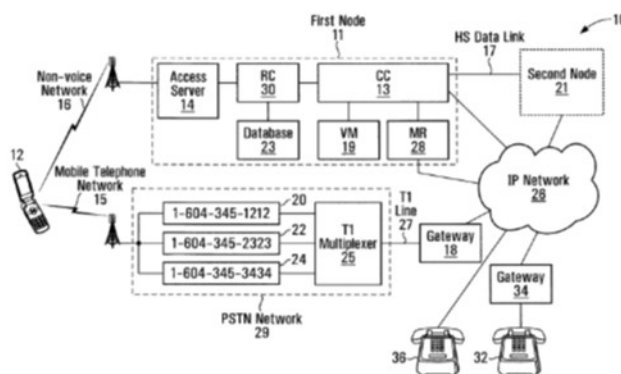


FIG. 1

In one embodiment, in response to a call being placed, a mobile device 12 transmits an access code request message including a location identifier to an access server 14 in communication with a routing controller (“RC”) 30. The RC identifies a geographical area associated with the mobile device 12, generates an access code based on the request, including the location identifier, and causes the access code to be transmitted to the mobile device. The mobile device 12 uses the access code it received to initiate a call using a channel identified by the access code, which could be a phone number or IP address. For example, the mobile device 12 could initiate a call to a phone number 20-24 associated with a (PSTN-based) gateway 18 to reach the IP network 26. In some embodiments, the access code is not a PSTN phone number but could be an IP address, for example, an (IP-based) gateway (e.g., 18) could provide a channel and/or the call could proceed via IP network 26. EX1001 at 9:9-47, 13:49-57, Figs. 1-8. The infrastructure used to connect the call to the network is optimally selected based on a location of the mobile device 12 (e.g., a gateway may be chosen to minimize proximity and/or transmission times given the mobile device’s current location).

III. FACTUAL BACKGROUND

On June 25, 2021, VoIP-Pal filed a complaint for patent infringement against Petitioner in the WDTX. EX2005. The complaint asserted that Petitioner willfully

infringed the Challenged Patents. *Id.* at ¶¶42-44, ¶¶55-57. VoIP-Pal promptly served Petitioner on June 28, 2021. EX2006.

On July 26, 2022, VoIP-Pal served its final infringement contentions. EX2007. In its final contentions, VoIP-Pal asserts that Petitioner infringes claims 1, 10, 11, 19, 20-22, 24-25, 28, 30-33, 35, 37-40, 43, 45-48, 51, 53, 54, 61, 62, 64, 65, 70, 72, and 75 of the '234 patent. *Id.* at 1. VoIP-Pal also asserts that Petitioner infringes claims 1, 6, 15, 16, 20, 25, 34, 38, 39, 45, 46, 49, 50, 51, 63, 67, 77, 103, 104, 109, 110, 124, 136, 139, and 140 of the '721 patent. *Id.* VoIP-Pal has since narrowed the asserted claims in the district court case to claims 32, 38, 51, and 62 of the '234 patent and claims 77, 130, 133, and 138 of the '721 patent. EX2022.

On January 25, 2022, Petitioner served its preliminary invalidity contentions. EX2008. Petitioner served final invalidity contentions on July 26, 2022. EX2019. In its contentions, Petitioner asserts that the Challenged Patents are anticipated by Buckley and rendered obvious by the combination of Buckley and 59 other references, including Bates. *Id.* at 29, 48-49; *see also* EX1005 and EX1009. Petitioner also asserts invalidity under 35 U.S.C. §§ 101, 112. EX2019 at 146-174.

On March 7, 2022, the WDTX entered a scheduling order in the district court case setting trial for May 16, 2023. EX2009. The WDTX has since continued the trial until October 17, 2023. EX2020.

The WDTX issued a claim construction order on June 3, 2022. EX2011.

In direct response to the WDTX complaint, on June 3, 2022—almost a year after VoIP-Pal filed suit—Petitioner filed copycat petitions for *inter partes* review asserting that all of the asserted claims of the Challenged Patents are invalid. *See* IPR2022-01178, Paper 3; IPR2022-01179, Paper 3; IPR2022-01180, Paper 1; IPR2022-01181, Paper 1. The Board denied the petitions. *See* IPR2022-01178, IPR2022-01179, IPR2022-01180, IPR2022-01181 (Paper 11 in each).

On January 31, 2023, the Board instituted review of a separate set of petitions filed against the Challenged Patents. *See* IPR2022-01231, Paper 10; IPR2022-011232, Paper 12; IPR2022-01234, Paper 10; IPR2022-01235, Paper 10. On February 28, 2023, Petitioner again filed copycat petitions for *inter partes* review, including this petition, asserting that all of the asserted claims of the Challenged Patents are invalid.

IV. THE BOARD SHOULD EXERCISE ITS DISCRETION UNDER 35 U.S.C. § 314(A).

A. All Of The *Fintiv* Factors Weigh Against Institution.

Contrary to what Petitioner claims, the six-factor test addressed in *Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 11 at 3 (Mar. 20, 2020){ TA \l "Apple Inc. v. Fintiv, Inc., IPR2020-00019, Paper 11 at 3 (Mar. 20, 2020)" \s "Apple Inc. v. Fintiv, Inc., IPR2020-00019, Paper 11 at 3 (Mar. 20, 2020)" \c 1 } does not favor institution.

Rather, the Board should exercise its discretion and deny institution. Considering the *Fintiv* factors, institution would not be an efficient use of Board resources.

1. Factor One (Evidence exists that a stay will not be granted)

The first factor weighs against institution because, contrary to what Petitioner states, the district has already indicated that it will not stay the parallel action. EX2021. Thus, this factor weighs against institution.

2. Factor Two (Proximity of trial date)

The second factor weighs heavily against institution because the scheduled district court trial date (October 16, 2023) is earlier than January 31, 2024—the projected date of the Board’s final written decision in the Meta IPR, which Petitioner is seeking to join—and far earlier than September 28, 2024—the projected date of the Board’s final written decision if trial is instituted in this IPR. 35 U.S.C. § 316(a)(11){ TA \l "35 U.S.C. § 316(a)(11)" \s "35 U.S.C. § 316(a)(11)" \c 2 }. The Meta IPR, however, has been terminated as to Meta and Samsung and VoIP-Pal have already filed a motion to terminate the proceeding. *See* IPR2022-1231, Paper 20 (PTAB June 21, 2023); IPR2022-1232, Paper 21 (PTAB June 21, 2023); IPR2022-1234, Paper 19 (PTAB June 21, 2023); IPR2022-1235, Paper 19 (PTAB June 21, 2023). Once terminated, Petitioner cannot join the Meta IPR and the Board will not be issuing a final written decision in the Meta IPR. Thus, the Challenged Patents

will be adjudicated far sooner in the district court than they will be by the Board. Accordingly, this factor weighs against institution.

3. Factor Three (Investment in parallel proceeding)

Factor three also weighs against institution because the parties have made significant investments in the district court case. Fact discovery and expert discovery are closed. EX2020. The parties filed dispositive motions on June 2, 2023. *Id.* The WDTX also is due to begin trial on October 16, 2023. *Id.* Although trial in a related case will likely proceed before Petitioner's trial, Petitioner's trial will likely begin soon after. Accordingly, this factor weighs against institution. *See, e.g., Supercell OY v. Gree Inc.*, PGR2021-00034, Paper 10 at 14-15 (PTAB July 7, 2021){ TA \l "Supercell OY v. Gree Inc., PGR2021-00034, Paper 10 at 14-15 (PTAB July 7, 2021)" \s "Supercell OY v. Gree Inc., PGR2021-00034, Paper 10 at 14-15 (PTAB July 7, 2021)" \c 1 } (denying institution where § 101 motion would be briefed and heard by the district court before the institution decision); *Bentley Motors Ltd., et al. v Jaguar Land Rover*, IPR2019-01539, Paper 16 at 9-10 (PTAB Oct. 2, 2020){ TA \l "Bentley Motors Ltd., et al. v Jaguar Land Rover, IPR2019-01539, Paper 16 at 9-10 (PTAB Oct. 2, 2020)" \s "Bentley Motors Ltd., et al. v Jaguar Land Rover, IPR2019-01539, Paper 16 at 9-10 (PTAB Oct. 2, 2020)" \c 1 }(denying

institution where the parties had briefed claim construction and the district court has considered a § 101 motion).

4. Factor Four (Overlap of issues)

Factor four weighs against institution because the Petition presents arguments that significantly overlap with arguments made in the district court. All of the prior art references that Petitioner relies upon overlap with the prior art references that Petitioner relied on in its invalidity contentions. EX2008. In those contentions, Petitioner asserts that the Challenged Claims are invalid in view of Buckley, its primary reference, and Buckley in view of Bates. EX2019 at 29, 48-49.

Although Petitioner stipulates that they will not pursue grounds raised, or that reasonably could have been raised, in this IPR against the Challenged Claims in the district court case, Petitioner's claim construction proposals cite to the claim construction briefing and related documents submitted in the district court case. Indeed, Exhibits 1012, 1013, and 1018 all concern the work that the parties have already invested in the claim construction disputes in the district court case. Almost all the terms that Petitioner offers for construction in its petitions were construed by the WDTX in related cases involving the same Challenged Claims. EX2011. By construing these terms again, the Board will merely be duplicating the efforts of the parties and the WDTX. Given the significant investment by the parties in the district

court case and the substantial overlap with this IPR, this factor weighs against institution.

5. Factor Five (Same parties)

Petitioner and VoIP-Pal are the same parties in the district court case, which weighs against institution.

6. Factor Six (Other factors)

The sixth factor weighs against institution because Petitioner unduly delayed in filing the Petition to obtain a tactical advantage.

VoIP-Pal promptly served Petitioner with the district court complaint on June 28, 2021. EX2006. Yet Petitioner waited until February 28, 2023 to file its Petition—over a year and a half later. At that time, the parties had already served their respective infringement and invalidity contentions and completed fact discovery. EX2009.

This gamesmanship is highly prejudicial to VoIP-Pal, and antithetical to the statutory purpose of IPRs, which is to provide a “quick and cost effective alternative[] to litigation.” *See* H.R. Rep. No. 112–98, pt. 1, at 48 (2011){ TA \l "H.R. Rep. No. 112–98, pt. 1, at 48 (2011)" \s "H.R. Rep. No. 112–98, pt. 1, at 48 (2011)" \c 3 } (emphasis added). Petitioner was fully aware of the district court case timing and elected to wait and see if the Meta petition would be instituted before

filing their Petition, despite having asserted invalidity contentions in the district court case based on the same prior art at least as early as January 25, 2022. EX2008. Petitioner had ample opportunity to file IPRs citing to the prior art that it knew about in January, 2022. It chose not to. Instead, Petitioner chose to file copycat petitions based on different prior art, which the Board denied. *See* IPR2022-01178, Paper 11; IPR2022-01179, Paper 11; IPR2022-01180, Paper 11; IPR2022-01181, Paper 11. The Board should not allow Petitioner to piggyback off of yet another set of petitions based on prior art that it has known about for nearly a year and a half as explained in Patent Owner's Opposition to Petitioner's Motion for Joinder, which Patent Owner incorporates by reference. *See* IPR2023-00638, Paper 8 (PTAB Mar. 28, 2023); IPR2023-00639, Paper 8 (PTAB Mar. 28, 2023); IPR2023-00640, Paper 7 (PTAB Mar. 28, 2023); IPR2023-00641, Paper 7 (PTAB Mar. 28, 2023).

In view of these circumstances, VoIP-Pal respectfully submits that the Board should exercise its discretion to deny institution.

V. CLAIM CONSTRUCTION

Other than the terms specifically addressed below, VoIP-Pal assumes that each term of the Challenged Claims is given its ordinary and customary meaning. VoIP-Pal reserves the right to offer additional constructions should a review be instituted on any of the proposed grounds.

A. “gateway ” (claims 1, 20, 38)

VoIP-Pal submits that the plain and ordinary meaning of “gateway” is that of a device that connects networks. VoIP-Pal denies Petitioner’s assertion that the networks must *necessarily* “use different communication protocols.”

Even if the ’721 patent discloses an *example* of a gateway 18 which bridged different protocols (*i.e.*, PSTN-protocol to IP-protocol), that would not be dispositive of the full scope of meaning of the term “gateway.” The ’721 patent expressly discloses that the communication channels provided by the gateway 18 “need not be PSTN telephone lines.” EX1001 at 9:37-40. And “if the mobile telephone is capable of VOIP communications, the access code may be used to identify an IP address in the IP network.” *Id.* at 13:62-67. The ’721 patent suggests that, in some embodiments, even IP telephone 36 could communicate through an IP-to-IP gateway—a fact that Petitioner has overlooked: “[t]he I/O port 326 further includes a SIP output 338 for transmitting messages to the *gateway* (18 and/or 34) *or VOIP telephone* (36, *for example*) to advise the gateway 18 and/or 34 *or IP telephone* of the IP addresses of the *gateways* which will establish the audio/video path.” *Id.* at 25:36-40 (referring to the call controller in FIG. 15) (emphasis added). This sentence indicates that even the VOIP telephone 36 may require the “IP addresses of the *gateways* which will establish the audio/video path.” *Id.* The ’721 patent thus

entirely refutes Petitioner’s argument. The plain and ordinary meaning of “gateway” is “a device that connects at least two networks,” but there is no requirement that the two networks necessarily have a different protocol. Accordingly, the Board should adopt VoIP-Pal’s construction.

B. “means for causing the wireless apparatus to establish communications with the destination node through the communications channel identified by the access code” (claim 20)

VoIP-Pal agrees that this term should be construed under 35 U.S.C. § 112 ¶6.

The Board should construe the corresponding structure to be:

Mobile wireless device 12 having a microprocessor 52 programmed to implement the algorithm illustrated in FIG. 3, which includes block 149 labeled “Initiate voice/video call using access code.” The wireless device 12 includes I/O port(s) 56 capable of acting as an interface to external networks (70, 72, 15, 16). See FIG. 2.

The WDTX has already adopted this construction of the corresponding structure and rejected Petitioner’s proposed construction. EX2011 at 2 of 3.

Indeed, with respect to I/O ports 56, there should not be a significant dispute between the parties because VoIP-Pal’s proposed construction provides that the I/O ports 56 are capable of acting as an interface to external networks, whereas Petitioner claims that the corresponding structure is a network interface.

To the extent that Petitioner contends that microprocessor 52 is not part of the corresponding structure, Petitioner is mistaken. The specification expressly states that microprocessor 52 initiates a call:

[B]lock 149 directs the microprocessor 52 to initiate a call with the mobile telephone (12) on the mobile telephone network 15 (illustrated in FIG. 1) using the access code received in the access code field 142 of the access code reply message 140 (shown in FIG. 5) to identify the callee. (EX1001 at 13:38-43)

Accordingly, the Board should adopt VoIP-Pal's proposed construction as the WDTX did.

C. “means for communicating ...” (claim 34)

VoIP-Pal agrees that this term is a means-plus-function limitation subject to 35 U.S.C. § 112 ¶6. Petitioner appears to refer to an I/O port of an access server 14 in Figure 6 of the '234 patent as the corresponding structure. Paper 2 at 16, citing EX1001 at 14:40-53, 14:58-64. However, Figure 6 is merely one embodiment of the invention. In some embodiments, the routing controller is combined with, part of or integrated with the access server. EX1001 at 17:37-43, 15:13-16. In such embodiments, the routing controller may be in communication with the mobile telephone via the routing controller I/O port 236, for example. Thus, VoIP-Pal contends that the corresponding structure should be:

An I/O port of an access server, an I/O port of a routing controller and/or at least one processor (*e.g.*, 152 in Figure 6) performing a

method equivalent to process 190, including block 196, in Figure 7, to transmit a request to the routing controller. (EX2010 at 5)

VoIP-Pal's proposed construction properly accounts for alternate configurations given the breadth of the specification's disclosure whereas Petitioner's proposed construction improperly limits the claims to a particular preferred embodiment. *See Kara Tech. Inc. v. Stamps.com Inc.*, 582 F.3d 1341, 1348 (Fed. Cir. 2009) { TA \l "Kara Tech. Inc. v. Stamps.com Inc., 582 F.3d 1341, 1348 (Fed. Cir. 2009)" \s "Kara Tech. Inc. v. Stamps.com Inc., 582 F.3d 1341, 1348 (Fed. Cir. 2009)" \c 1 }.

VoIP-Pal's corresponding structure also properly includes a microprocessor. Petitioner even cites a portion of the specification that expressly states that the access server's microprocessor communicates with the routing controller to obtain an access code:

The process 190 continues at block 196, *which directs the microprocessor 152 to communicate with the routing controller 30 to obtain from the routing controller an access code ...*

EX1001 at 14:40-53 (emphasis added)

Thus, the Board should adopt VoIP-Pal's proposed construction of the corresponding structure.

VI. PRIOR ART OVERVIEW

A. Brief Description Of Buckley

Buckley discloses a Session Initiation Protocol (“SIP”) communication system that includes a circuit-switched (“CS”) network and an Internet Protocol (IP) multimedia subsystem (“IMS”) network. *See* EX1005 at Abstract. The 3rd Generation Partnership Project (“3GPP”) has created the IP-based IMS network architecture to enable communication devices (*i.e.*, user equipment or “UE”) to seamlessly initiate calls to both IP-only subscribers and conventional CS telephony subscribers using either the packet-switched IP network domain or the circuit-switched (CS) cellular network domain; however, Buckley’s patent focuses on processing *CS-originated* IP calls based on SIP that are to be routed using the IMS network infrastructure. *See id.* at 1:22-28; *see also* 3:35-40 (“UE device is capable of operating in multiple modes in that it can engage in both circuit-switched (CS) as well as packet-switched (PS) communications and can transition from one mode [to the other] without loss of continuity”). More particularly, Buckley’s invention addresses the *special situation* in an IMS network where the UE is able to make a voice call to a called party *only* through the circuit-switched (“CS”) cellular network domain, *i.e.*, where the UE *cannot* make an IP-based call for some reason, for example: (1) there is no packet-switched (“PS”) IP network available; (2) the available networks in the packet-switched IP domain do not support Voice-over-IP (“VoIP”) service or lack bandwidth; or (3) the user preferences or subscriber policy prevent usage of the packet-switched IP domain. *Id.* at 1:33-57; *see also* 4:26-30

(AS 114-N facilitates routing of IP SIP calls originated by the UE in the CS domain while connectivity in the PS [packet-switched] domain is not available or the available PS networks are not capable of supporting the VoIP service (*e.g.*, due to bandwidth limitations)), 5:18-22 (Fig. 2 depicting a “first technique” for “effectuating a CS-originated SIP call... to a called party identified by a URI”); 6:55-63 (Fig. 3A generally depicts message flow in first technique); 7:29-30 and 8:22-47 (involvement of intermediary nodes such as I-CSCF and S-CSCF in Fig. 3B in the message flow); 8:53-67; and Figs. 1, 2, 3A-B. In such situations, Buckley’s invention allows a caller’s UE to connect to IP-only subscribers identified with a Uniform Resource Indicator (“URI”), while operating in the circuit-switched (CS) cellular network domain, by enabling the UE to call a IP multimedia routing number (“IMRN”)—namely, an E.164 telephone number—selected by an Application Server (AS) of the IMS and that the system provides to the UE, whereupon the IMS system carries the call to the called party. *Id.*

While Buckley discloses two methods of calling from the CS domain, the Petition focuses on the first method as illustrated in Figures 1, 2, 3A and 3B, namely, Buckley’s first method enables a UE (302) to call the called party (or “callee”) by:

(1) the UE 302 sending a SIP INVITE message (*e.g.*, 312 in Fig. 3A; or 356-362 in Fig. 3B) containing call information including a SIP-URI identifying the

called party to an IMS Application Server (“AS”) network node (308) via other intermediate network elements (*e.g.*, I-CSCF 352 and S-CSCF 354 in Fig. 3B);

(2) the AS 308 selecting an E.164 phone number (referred to as an “IMRN”) and returning it in a message (316 in Fig. 3A; 364, 366 in Fig. 3B) to the UE 302, the AS also mapping the call information including the called party’s URI to the IMRN (*i.e.*, the selected E.164 phone number sent back to the UE); and

(3) the UE placing a call to the IMRN (E.164 number) using the CS network.

B. Brief Description Of Bates

Bates describes an enhanced emergency services method and system that facilitates the use of traditional 9-1-1 emergency services in North America by new, non-traditional cellular and IP communication devices (*e.g.*, VoIP phones that have no registered telephone number in the Public Switched Telephone System (“PSTN”)), thus enabling interoperability of the new non-traditional communication networks with established, traditional PSTN-based emergency services. *See* EX1009 at 1:17-26, 14:26-37, 20:40-65.

In one embodiment, illustrated in Fig. 7, a user communication device initiates a call for emergency services (705) to the service provider (710). The service provider determines the location of the user’s device (715), accesses a pool of temporary telephone numbers (720), selecting one of them based on the location

(725) and associating it with the user device (730), and then routes the call to a Public Service Answering Point (“PSAP”), providing the selected temporary phone number in call information to the PSAP (735). But that is not all. ***The Petition has misleadingly edited its reproduction of Fig. 7 to omit the remainder of Bates’ method.*** *Id.*; Paper 2 at 19-20. Critically, the subsequent (omitted) steps undermine Petitioner’s narrative about what Bates would have taught persons of skill in the art (POSITA) about assigning or using a temporary telephone number. Therefore, the complete method of Fig. 7—***including omitted steps 740-775***—is reproduced below from Bates.

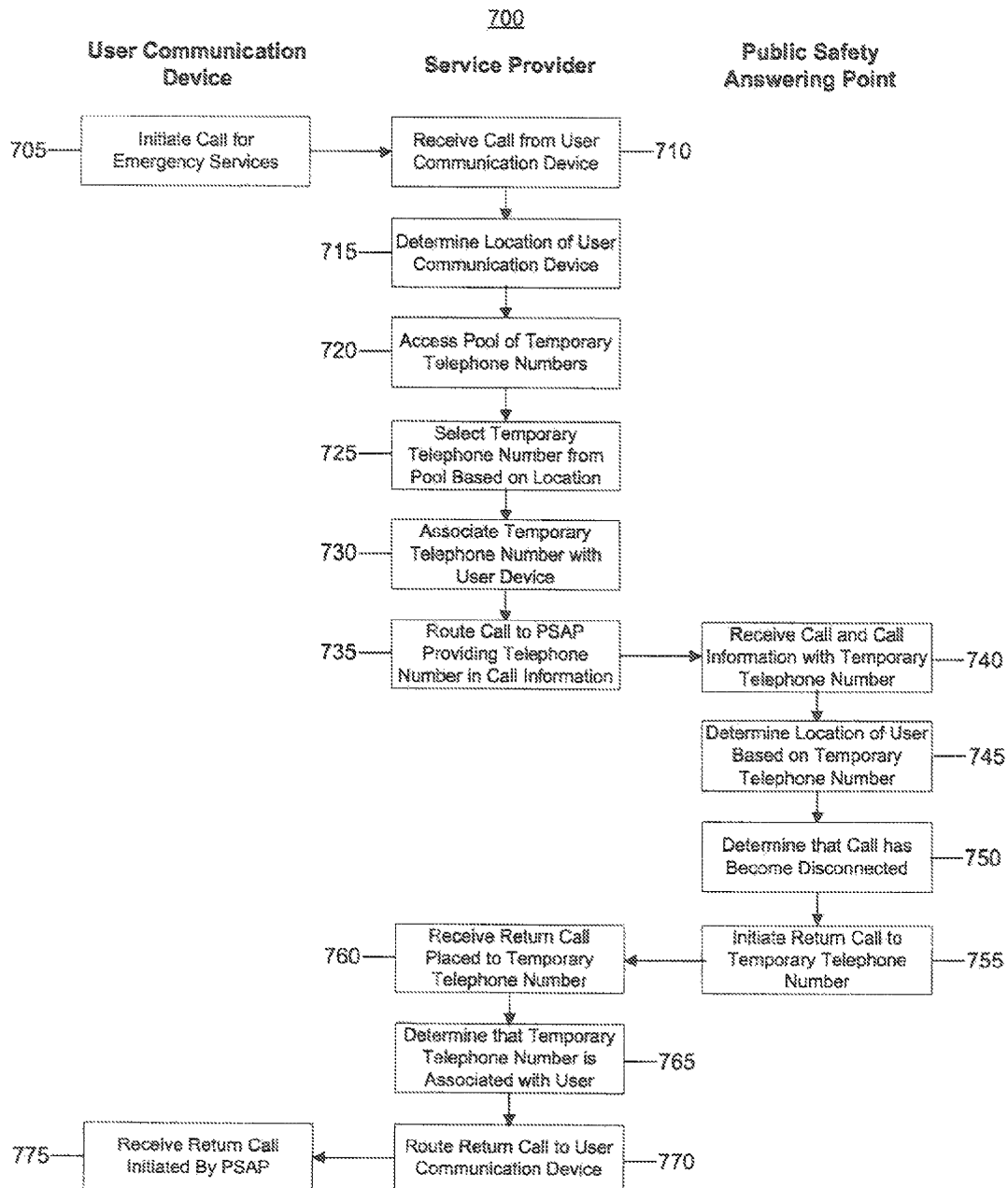


Fig. 7

As shown in the steps that Petitioner omitted, the temporary telephone number is never received or used by the user's device (1st column); instead, the temporary

number is *only used by the PSAP* (3rd column) to: (1) determine the caller's location (745); and (2) if needed, place a *return call* to the caller who initiated the call for emergency services (750-775). Thus, Bates solves the following problems:

(1) "In the event that the emergency services call becomes disconnected," the PSAP is enabled to "place a return call to the temporary telephone number," via the communications service provider, to connect to the user's (non-traditional) device—even if the user's device lacks a registered number in the PSTN (*e.g.*, a voice over internet protocol ("VoIP") phone, accessible only over IP); and furthermore,

(2) the assigned, geographically-correct, temporary phone number enables the PSAP to infer the user's location despite the user's device not providing information sufficient to enable identification of the user and/or the user's location, thus allowing the PSAP to dispatch appropriate emergency services without requiring the user to identify her location or to handle situations where the call is disconnected prior to the user identifying the user's location to an emergency services operator. EX1009 at 3:39-57 and 4:18-34; *see also id.* at 5:59-64, 12:17-31, 14:2-16, 19:31 to 20:65 (describing steps 740-775 in Fig. 7, *omitted by Petitioner*).

Petitioner omits these critical aspects of Bates' problem and solution.

C. Brief Description Of Ejzak

Ejzak discloses techniques for use in a communication system having many of the same network entities as taught in Buckley. *Compare* EX1005, Figure 3A with EX1007 Figure 1 (element 141) and Figure 3 (both including, *e.g.*, IP Multimedia Subsystem (IMS), Mobile Switching Center (MSC), Mobile Gateway Control Functions (MGCF), Interrogating Call State Control Function (I-CSCF), and Serving Call State Control Functions (S-CSCF)). Ejzak discloses PSTN and VoIP call interoperability such that calls can traverse packet-switched networks (like an IP network) and circuit-switched networks (like a PSTN). EX1007, 2:36-40. Ejzak refers to services to establish emergency service calls, and routing call traffic over a least cost path. *Id.*, 7:28-36, 4:46-60.

Ejzak uses SIP messaging within this architecture. *Id.*, 8:58-66. For example, during Ejzak's call messaging and routing process, a callee identifier (such as an E.164 telephone number) is received in a SIP Invite message, and Ejzak's network entities are able to select from, and analyze, sets of attributes associated with that callee identifier. *Id.* Ejzak's servers determine from those attributes whether the callee identifier is associated with a device that can receive calls routed over packet-switched networks (*e.g.*, IMS or IP) or circuit-switched networks (*e.g.*, PSTN).

Ejzak queries a Domain Name System (DNS) using the callee identifier (E.164 number). DNS "provides a standardized database and a standardized protocol to store and retrieve information about domain names from the database." *Id.*, also

EX1007 8:29-36. As such, “[q]ueries are sent to DNS [], which responds with the associated resource records [*e.g.*, IP addresses] for the requested input.” *Id.* Thus, the DNS replies with the appropriate IP address from available IP addresses, to enable communications over an IP network or to route the call to a PSTN gateway for communication over a PSTN. EX1007, 8:63-9:6. Notably, even if the callee identifier is associated with a PSTN, the DNS may respond with a set of attributes for SIP service for that callee identifier. EX1007, 9:8-12.

VII. NONE OF THE GROUNDS SHOW A REASONABLE LIKELIHOOD OF PREVAILING ON A CHALLENGED CLAIM.

Even if the Board does not exercise its discretion and deny institution, which it should, the Board should deny the Petition to institute review of the Challenged Claims because none of the grounds raised provide a basis for the Board to find that there is a reasonable likelihood of prevailing on any claim challenged in the Petition. Below, VoIP-Pal provides examples of why these grounds clearly fail to render the Challenged Claims unpatentable, and expressly reserves the right to provide additional reasons and support should a review be instituted on any proposed ground.

The '721 Patent's claims recite a method of establishing communications between a wireless device and a destination node of a communications network in which the device receives access to an IP network enabling a call to a called party (“callee”) by using an “access code” that is based on the location of the wireless

device. This “access code” can provide a point-of-access to an IP communication network proximate to caller’s current location, even as the device roams (moves from one geographical area to another), which may in turn allow the caller to circumvent traditional roaming and/or long-distances charges from wireless carriers.

T-Mobile’s Petition (Paper 2) purports to be a “copycat” of a previous Petition filed on June 30, 2022 by Meta (Case No. IPR2022-01234); indeed, T-Mobile purports to provide “*reasons set forth below, which are identical to* the petition filed by Meta Platforms, Inc. in *Meta Platforms, Inc. v. VoIP-Pal, Inc.*, IPR2022-001234...” However, the reasons provided are *not identical* to Meta’s IPR. Significantly, unlike a previous “copycat” Petition, filed by Samsung (IPR2022-01392), T-Mobile has *deleted* a paragraph giving an overview of Meta’s case against the ’234 Patent and including a key unproven assertion at the heart of Meta’s original Petition—that the technique patented in the ’721 Patent was “well-known in the prior art,” in particular, in “art that disclosed using the phone’s location to select a temporary, local number from a pool, and using that number to route calls to a destination node.” Compare IPR2023-00640, Paper 2 (T-Mobile) at 1 (*omitting* above-cited allegation) *versus* IPR2022-01234, Paper 3 (Meta) at 1 and IPR2022-01392, Paper 1 (Samsung) at 1 (both *including* the above-cited allegation).

The fact that T-Mobile, unlike Samsung, attempts to burnish its copycat Petition by making substantive changes to Meta’s Petition, while *misrepresenting*

to the Board that it is “identical” to Meta’s Petition, is an ***additional reason*** for the Board to use its discretion to deny T-Mobile’s Petition in these proceedings.

Notably, the Petition fails to supply evidence of such prior art. Neither Buckley, nor Buckley in combination with Bates and/or Ejzak, discloses or suggests “using the phone’s location to select a temporary, local number from a pool, and using that number to route calls to a destination node.” *Id.* Indeed, Buckley provides *no* discussion of using a phone’s location for any purpose, let alone for providing location-based access to network infrastructure. Petitioner resorts to hindsight-based arguments as to what persons of skill in the art (“POSITA”) would have allegedly *recognized* or found obvious to do.

Ground 1 improperly asserts obviousness based on a single prior art reference and therefore is not reasonably likely to prevail. Numerous pre- and post-*KSR v. Teleflex* Federal Circuit decisions have limited when a single reference can make an invention obvious. *See Arendi S.A.R.L. v. Apple Inc.*, 832 F.3d 1355 (Fed. Cir. 2016){ TA \l "Arendi S.A.R.L. v. Apple Inc., 832 F.3d 1355 (Fed. Cir. 2016)" \s "Arendi S.A.R.L. v. Apple Inc., 832 F.3d 1355 (Fed. Cir. 2016)" \c 1 }; *K/S HIMPP v. Hear-Wear Techs., LLC*, 751 F.3d 1362 (Fed. Cir. 2014){ TA \l "K/S HIMPP v. Hear-Wear Techs., LLC, 751 F.3d 1362 (Fed. Cir. 2014)" \s "Hear-Wear, LLC, 751 F.3d at" \c 1 }, *cert. denied*, 135 S. Ct. 1439 (2015); *In re Kotzab*, 217 F.3d 1365 (Fed. Cir. 2000){ TA \l "In re Kotzab, 217 F.3d 1365 (Fed. Cir. 2000)" \s "In re

Kotzab, 217 F.3d 1365 (Fed. Cir. 2000)" \c 1 } (reference teaching one sensor per valve did not render obvious claims for one sensor for multiple valves, despite “simplicity” of proposed modification extending a sensor to multiple valves); *In re Laskowsky*, 871 F.2d 115 (Fed. Cir. 1989){ TA \l "*In re Laskowsky*, 871 F.2d 115 (Fed. Cir. 1989)" \s "*In re Laskowsky*, 871 F.2d 115 (Fed. Cir. 1989)" \c 1 } (applying legal standard that, for obviousness over single reference, prior art must “suggest[] the desirability of the modification”). Put simply, under this line of authority, “common sense” to achieve the claimed invention must have a documentary basis in the record, lest a decision maker use impermissible hindsight-based reasoning. These holdings take inspiration from Supreme Court directives in *KSR v. Teleflex* to avoid hindsight. *See KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 421 (2007){ TA \l "*KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 421 (2007)" \s "*KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 421 (2007)" \c 1 }. They also distinguish decisions where all of the claim limitations existed in a proposed multi-reference combination. *See, e.g., Hear-Wear*, 751 F.3d at { TA \s "*Hear-Wear*, LLC, 751 F.3d at" } 1366. For example, in *K/S HIMPP v. Hear-Wear*, the claims recited a connector with a multipronged plug, but no documentary evidence existed in the record of multipronged plugs. *Id.* at 1363-1365. The Federal Circuit rejected the appellant’s attempt to invoke undocumented “basic knowledge” or “common sense” to modify a single prior art reference. *Id.* at 1366 (“[T]he Board cannot accept general

conclusions about what is ‘basic knowledge’ or ‘common sense’ as a replacement for core factual findings in a determination of patentability.”). The Federal Circuit held that a decision maker may not hold a claimed invention obvious over a single prior art reference that fails to disclose a core structural claim limitation, unless contemporaneous documentary evidence suggested that a POSITA would have modified the reference with the missing item. *Id.*

Hear-Wear specifically discussed why the “flexible approach” to determining obviousness required by the Supreme Court’s *KSR* decision does not weaken the requirement of documentary evidence when dealing with a single-reference modification theory. “In contradistinction to *KSR*, this case involves the lack of evidence of a specific claim limitation, whereas *KSR* related to the combinability of references where the claim limitations were in evidence.” *Id.* The same holds true here. Petitioners impermissibly seek to invalidate the ’721 patent by inviting the Board to speculate about what a POSITA might have done to supply core structural claim limitations otherwise missing from the alleged prior art—without proper documentary evidence or evidence of the desirability of the asserted modification.

A. Ground 1: Claims 1, 2, 6, 9, 14-16, 20, 25, 34, 38-39, 43, 46, 49-50, And 135-136 Are Not Rendered Obvious By Buckley.

Claim 1 of the ’721 Patent recites, among other things:

“transmitting an access code request message to an access server, the access code request message including the destination node identifier and a *location identifier identifying a geographical location of the wireless device;*”

“receiving an access code reply message...including *an access code based on the location identifier* in the access code request message, the access code identifying a communications channel on a gateway through which communications between the wireless device and the destination node can be conducted...” and

“...causing the wireless device to use the access code received in the access code reply message to initiate communications from the wireless device to the destination node through the channel identified by the access code, wherein *the access code is based on the location identifier* transmitted in the access code request message.”

[emphasis added (EX1001, 35:1-31)]

Based on Buckley alone, Ground 1 alleges the obviousness of the independent claims of the '721 Patent, namely, claims 1, 20, 38 and 50. Each of the independent claims generally recites “a location identifier identifying a geographical location of the wireless device,” the “location identifier” being used to obtain an “access code” from an “access server” that is used to “initiate communications” through a channel to the destination node, wherein the “access code” is “based on the location identifier.” Buckley fails to disclose or even suggest anything akin to these claim limitations. Petitioner’s arguments are an audacious patchwork of unproven assumptions and speculations about what a POSITA would know or do.

Petitioner’s arguments fail for a multitude of reasons, as explained below:

1. Buckley itself never discloses or suggests that the caller's URI or P-Preferred-ID can or should be used to identify the calling phone's location, nor would a POSITA have had any reasonable expectation of success in trying to do so.

2. Petitioner fails to carry its burden to prove that either the caller's URI or P-Preferred-ID *necessarily* disclose a location *of the caller's phone*.

3. Petitioner fails to prove that Buckley selects IMRNs based on location information, nor does Buckley's disclosure of "mapping" suggest this.

4. Petitioner fails to establish any plausible motivation for a POSITA to modify Buckley so as to provide the claimed invention.

(a). Buckley fails to disclose identifying a location of the caller's phone

Buckley fails to disclose *any* notion of geographical location, let alone a "location identifier" that is used to obtain an "access code" in order to enable a local call. Given this stark reality, the Petition is forced to argue that certain parts of Buckley's SIP Invite message may *inherently* disclose the location of the calling phone, namely, the caller's SIP URI and a telephone URI in the P-Preferred-ID field. *See* Paper 2 at 25-26. Buckley says *absolutely nothing* about using these parameters to infer a phone's location. Unfazed by Buckley's silence, Petitioner argues that "a POSITA would have recognized" how to find the phone's location from these two parameters, essentially, by geo-locating the IP address of the URI hostname or by extracting geographical aspects of the caller's phone number. *Id.* Thus, the very

structure of the Petitioner’s argument—invoking what a POSITA allegedly “would have recognized”—concedes that Buckley fails to disclose identifying a location of a mobile phone or device, necessitating Petitioner’s convoluted POSITA arguments.

(b). Petitioner fails to prove that a SIP INVITE inherently discloses the location of the caller’s phone.

As explained above, the Petition argues that a POSITA would have recognized that certain parts of Buckley’s SIP Invite message inherently disclose the location of the calling device, but the Petitioner fails to carry its burden to prove that assertion. “[T]he burden of proof is on the petitioner to prove unpatentability by a preponderance of the evidence, and that burden never shifts to the patent owner.” *Dynamic Drinkware, LLC v. Nat’l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015). “A party must, therefore, meet a high standard in order to rely on inherency to establish the existence of a [missing] claim limitation in the prior art in an obviousness analysis—‘the limitation at issue necessarily must be present, or the natural result of the combination of elements explicitly disclosed by the prior art.’” *PAR Pharma., Inc. v. TWI Pharmas., Inc.*, 773 F.3d 1186, 1195–96 (Fed. Cir. 2014).

Here, Petitioner ignores the technical literature that a POSITA would have known defined *how* a caller’s URI and P-Preferred-ID are used in a SIP-based system. The expert Declarant’s conclusory assertions about the SIP URI and P-

Preferred-ID should be given no weight under 37 C.F.R. § 42.65(a) because the Declarant has failed to sufficiently discuss the relevant technical literature including:

1. RFC 3261, “SIP: Session Initiation Protocol,” EX1010 [cited by EX1005 (Buckley) at 5:29];

2. RFC 3263, “Session Initiation Protocol (SIP): Locating SIP Servers,” June 2002, EX2015 [cited as FN[4] in document #1 (RFC3261)];

3. Internet Draft, “Obtaining and Using Globally Routable User Agent (UA) URIs (GRUU) in the Session Initiation Protocol (SIP),” J. Rosenberg, Expires: Apr. 23, 2006 (draft-ietf-sip-gruu-06), EX2023 [cited in EX1005 (Buckley) at 5:30];

4. RFC 3323: “A Privacy Mechanism for the Session Initiation Protocol (SIP),” November 2002, EX2016. [cited in document #3 (“draft-ietf-sip-gruu-06”), cited by Buckley, EX1005, at 5:30]; and

5. Internet Draft, “SIP Extensions for Caller Identity and Privacy,” SIP Working Group, Feb. 2002, Expiration 8/31/02 (draft-ietf-sip-privacy-04), EX2018.

As discussed below, these documents undermine the Petitioner’s allegations that the caller’s URI and P-Preferred-ID necessarily indicate a location of the caller’s phone. But a finding of obviousness requires that a person of ordinary skill in the art would have been motivated to combine the prior art in the way claimed by patent claims *and* would have had a reasonable expectation of success in doing so. *In re NuVasive, Inc.*, 842 F.3d 1376, 1381–82 (Fed. Cir. 2016).

(i) The caller's SIP URI is not a "location identifier"

As Buckley discloses, with reference to RFC 3261, "a typical SIP address may take on the form of sip: <username>@<hostname>." EX1005 at 5:26-29. Petitioner's Declarant asserts that "RFC 3261 (EX1010 at 149), which is cited in Buckley (EX1005, 5:25-33), teaches that the host name [of a URI] can contain a IP address," an example of which is "sip:alice@192.0.2.1". EX1003 at ¶¶80, 99, 167 (emphasis in original). Declarant then jumps to the unwarranted conclusion that "Buckley teaches transmitting *the wireless device's IP address* (as the hostname) when transmitting the location identifier in the SIP invite message." EX1003 at ¶99 (emphasis added); *see*, likewise, Paper 2 at 34 ("Buckley teaches transmitting the wireless device's IP address (as the hostname)..."). To be sure, "192.0.2.1" is an IP address—but *of what*? Declarant gives no explanation or citation to prove the assertion that it is the *wireless device's* IP address or otherwise an IP address that is indicative of the location of the mobile telephone. Buckley does not say that, and the assertion is not self-evidently true.

A POSITA would have known from the literature that a SIP network can use various intermediate elements having an IP address—some specifically designed to *protect* IP address privacy. EX1010 at Abstract, 8, 13 ("A proxy server receives SIP requests and forwards them on behalf of the requestor"). *See also* EX2018, Internet Draft, "SIP Extensions for Caller Identity and Privacy," SIP Working Group, Feb.

2002, Exp.8/31/02), <<https://datatracker.ietf.org/doc/html/draft-ietf-sip-privacy-04>>, at pp. 23-25 (“§8.2 Complete Privacy Example” ... “The Figure below illustrates *how IP address privacy can be achieved* by inserting a trusted intermediary, an *anonymizer...*”), (“*A Contact header field must be set to point to the anonymizer...”), (“An alternative [is to use] “a back to back User Agent thereby *trivially hiding IP address information* in the SIP signaling itself.”) [emphasis added]. Other privacy mechanisms and methods are recommended in RFC 3323. EX2016. Buckley, too, expressly discloses a “Privacy” indicator among the call parameters. EX1005 at 4:51, 5:52, 6:24, 6:67, 7:40. Petitioner gives no thought as to whether such network elements may be assigned an IP address *not* indicative of the phone’s location, confounding Petitioner’s theory.

Moreover, Buckley cites RFC 3261 (EX1010), which in turn cites RFC 3263 (EX2015), along with an Internet Draft on GRUUs/instance IDs (EX2023). EX1005 at 5:29-30. These RFCs would teach a POSITA that the hostname portion of a SIP URI may represent a *SIP server* that is identified using the special DNS procedures in RFC 3263, looking-up SRV and NAPTR resource records. EX1010 at 13, 61, citing RFC 3263 (“SIP: Locating SIP Servers”). *See also* EX1010 at 48 (recommending that the “host” name be a fully-qualified domain name, rather than a numeric IPv4 address). Moreover, Buckley’s use of GRUU and instance IDs (Figs. 3A-B) requires SIP servers or proxies. *See* EX1005, Figs. 3A (312), 3B (356);

compare EX2023, §6 (“When a request is sent to the GRUU, it routes to a server that can make sure the request is delivered to the UA instance”); §8.1 (“the proxy for the domain that owns the GRUU will translate the GRUU”); §11 (“proxy to execute services and features on behalf of a UA instance represented by a GRUU”).

Petitioner has not shown, from the relevant RFCs and Internet drafts, any requirement for an intermediate SIP server or proxy to be located proximate Buckley’s phone or to have an IP address that is indicative of the phone’s location.

In summary, the Petitioner invites the Board to believe that the caller’s URI represents “the wireless device’s IP address” but provides no evidence from Buckley. Nor do the Petitioner and its Declarant provide any evidence of this assertion from relevant IETF RFC’s or drafts. Worse still, they fail to acknowledge, let alone discuss, the many privacy mechanisms and techniques known to a POSITA that could ensure that the caller’s URI *does not* disclose the phone’s IP address. Finally, a POSITA would know that a URI may dereference to a SIP server/proxy. For all these reasons, it is respectfully submitted that a POSITA who was aware of Buckley and the relevant IETF RFC’s/drafts, would not have assumed that a caller’s URI inherently and *necessarily* provides an IP address indicative of the mobile phone’s location, as required by Petitioner’s theory.

Accordingly, the Petitioner has failed to carry its burden of proof for a finding of obviousness. Petitioner fails to meet the “high standard [required] in order to rely

on inherency to establish the existence of a [missing] claim element” to prove its claim that the caller’s URI in Buckley *necessarily* provides an IP address that is capable of acting as a “location identifier” of the phone. *See PAR Pharma., Inc. v. TWI Pharms., Inc.*, 773 F.3d 1186, 1195–96 (Fed. Cir. 2014).

(ii) The caller’s P-Preferred-Identity is not a “location identifier”

Perhaps out of an abundance of caution, the Petition also relies on another value that it alleges is a “location identifier,” P-Preferred-Identity, which in Buckley may be the calling line identity (CLI) associated with the user, allegedly representing a telephone number. Paper 2 at 25-26, citing EX1005 at 9:3-6, 9:20. Notably, again, Buckley fails to disclose or even suggest anywhere that the P-Preferred-Identity field be used as a means of locating the user. Again, Petitioner relies on the notional POSITA to plug the holes in its case for obviousness, arguing that “[a] POSITA *would have recognized* that the telephone number includes a geographic location identifier” such as a country or area code portion of the P-Preferred-ID header field. Paper 2 at 25 [emphasis added], citing EX1005 at 9:3-6, 9:20.

Inexplicably, the Petition and Declarant fail to discuss or even cite the relevant IETF document *defining* P-Preferred-ID and a related parameter, P-Asserted-ID, namely, RFC 3325: “Private Extensions to the Session Initiation Protocol (SIP) for Asserted Identity within Trusted Networks,” November 2002 (EX2017). RFC 3325 explains that the “P-Preferred-Identity” header field is sent to a trusted proxy to carry

the identity the user sending the SIP message wishes to be used for the “P-Asserted-Header” field value that the trusted element will insert. EX2017 (RFC 3325) at 9. In addition to using a Tel URI, RFC 3325 also permits in some cases two values to be provided in the header, one of which may be a SIP URI or SIPS URI. *Id.* Second, RFC 3325 discloses that a user may have *multiple* valid identities, such that the P-Preferred-ID is used to specify which *one* of the identities for the authenticated user should be asserted. *Id.* at 5. If the entity sending the P-Preferred-ID is not trusted, a proxy *may* use the P-Preferred-ID as a hint for which identity should be asserted, the proxy can *add* a P-Asserted-ID header of its own construction, or it can *reject* the request, whereupon the proxy removes the user-provided P-Preferred-ID header before forwarding the message. *Id.* Finally, RFC 3325 discloses a privacy mechanism whereby a caller’s privacy request within a SIP INVITE results in the removal of P-Asserted-Identity header fields before they are transmitted outside a trust domain. *Id.* at 5-6 (“Requesting Privacy”) and 7-8. RFC 3325 never indicates that using P-Preferred-ID to try to infer location is reliable or valid.

Apart from the lack of any suggestion in Buckley or RFC 3325 to use P-Preferred-ID for identifying a location of the caller’s phone, Petitioner’s proposal is fraught with other difficulties that Petitioner and its Declarant fail to address.

To start, even in instances where the P-Preferred-ID contained the actual phone number of the mobile phone, that would still not be a “a location identifier identifying a geographical location of the wireless device,” as recited in the claims.

As discussed in the enclosed expert declaration, phone numbers once had geographical meaning for landline phones (*i.e.*, wireline phones in a *known, fixed* location). *See* EX2013 at ¶21. But phone numbers no longer have a geographical meaning for mobile phones. As empirical evidence from telephone researchers verifies, mobile phone numbers do not reliably identify where people live; at best, they identify *a (fixed) location of a rate center* associated with the mobile phone’s billing account. *Id.* ¶¶12-14, 21. Nor does a phone number identify location when the phone is *mobile*. Mobile usage not confined to an area either in principle or in practice. When a mobile phone travels, its changing location cannot be identified by its phone number, which is static; *e.g.*, you cannot update a mobile phone’s “area code” dynamically in response to travel. *Id.* ¶¶15, 21. Empirical evidence indicates that mobile phones are very popular for travel and regular commuting crossing state lines and area code boundaries. *See Id.* ¶¶12, 15. Indeed, wireless carriers have popular regional and national plans which span multiple area codes, because as Verizon put it, “We’ve found that ***most wireless users*** are regional who frequently travel to nearby states and make numerous calls within the city they’re visiting.” A POSITA thus would understand that that a static number could not identify a *mobile*

phone's location. *Id.* ¶¶1, 8, 21. A typical mobile phone can function within any jurisdiction, even if one's own wireless carrier *does not have network coverage there and no ability to assign phone numbers with that geographical area.* *Id.* ¶16. Whether during commuting, traditional "roaming," or when traveling abroad, one's phone number cannot function as a "location identifier" serving to "identify[] a [geographical] location of the mobile phone [*i.e.*, wireless device]." *Id.* ¶17.

The historical meaning of country or area code is further undercut by Voice-over-IP (VoIP) technology, which relates to the field of invention of the Challenged Patents. The "area code" portion of a phone number that is assigned to a VoIP phone does not necessarily convey the location of the phone or the phone's owner. *Id.* ¶18. Indeed, for at least 20 years, "area code" prefixes have been assigned to "virtual phone numbers" without regard to the actual location of a VoIP phone (or its owner). *Id.* It is well-established that the "area code" portions of "virtual phone numbers" did not identify the location of their phones. Indeed, one of the typical reasons for a user or business to choose a particular "area code" prefix was to allow incoming callers to call inexpensively or for free by matching the rate center or calling area of the VoIP phone number to that of their family, friends or clients. *Id.* ¶18. It is also possible to create virtual phone numbers in other countries.

Moreover, even *if* the P-Preferred-ID contained a valid E.164 phone number, what is to say that the caller wouldn't attempt to use a non-geographic number (*e.g.*,

“1-800-xxxx”) or the main switchboard number of a company that would not accurately represent the location of the caller’s phone? *See* <<https://www.lincmad.com/nongeographic.html>> (non-geographic numbers). It will be recalled that a user may have multiple identities that could be requested in P-Preferred-ID, but this means it could be set to the “wrong” identity—one that doesn’t represent the currently used phone. Also, the P-Preferred-ID that is requested could be substituted or rejected, as described above.

In each of the foregoing cases, P-Preferred-ID *fails* to function as a “location identifier” of the mobile device, even if it is a “valid” E.164 number.

Elsewhere, the Board has accepted the above argument that a phone number cannot function as a “location identifier.” Paper 11 of IPR2022-01072, IPR2022-01073 and Paper 10 of IPR2022-01074, IPR2022-01075 (non-institution decisions).

But even if the P-Preferred-ID contained an accurate phone number, it is worth noting that the phone number does not have to be an *E.164* telephone number that is valid on the PSTN. Buckley cites RFC 3966 as allowing a variety of different types of Tel URIs, the first of which is an E.164 phone number on the PSTN, but the latter two of which are “local phone number(s)” which are only valid within a particular context, such as a website (“example.com”) or in relation to a phone prefix. EX1005 at 5:34-44. It is uncertain whether geographic information could be extracted from such numbers. For example, what “area code” does phone extension of “7042” at

“example.com” have? *Id.* Likewise, the Petitioner’s cited example (“+1-555-1001”) does not appear to be a valid E.164 number, thus parsing it for geographical information is impossible. Still further, RFC 3325 includes a privacy mechanism whereby a caller can request that his identity be suppressed (*e.g.*, akin to *67 caller ID blocking), and Buckley’s system expressly supports the privacy feature. *See* EX2016; *compare* EX1005 at 4:51, 5:52, 6:24, 6:67, 7:40.

Finally, while it is true that, in *some* specific instances, the P-Preferred-ID may be a telephone number, this need not *always* be the case according to Buckley. Buckley confirms that the P-Preferred-ID may alternatively contain an Address-of-Record (AOR), which could simply be a typical URI having the form of sip:<username>@<hostname>. *See* EX1005 at 5:25-33, 5:45-58, 6:63-67, 7:39-40; EX1010 at 19. RFC 3325 also confirms this, as discussed above. However, interpreting a SIP URI does not necessarily yield an IP address indicating a location *of the phone*, as explained above with reference to RFC 3261 and RFC 3263. Petitioner has not even considered how to handle these perfectly plausible scenarios.

In summary, a valid P-Preferred-ID need not provide a phone number phone number *of the mobile phone*, need not provide an *E.164-format* phone number, nor even provide a phone number at all (*e.g.*, as per the relevant RFCs and Buckley, the P-Preferred-ID could be a URI such as an AOR). But *even if* the P-Preferred-ID did provide the phone number *of the mobile phone itself* (which need not be the case),

the phone number cannot function reliably as a “location identifier identifying a geographical location of the wireless device” while roaming. Petitioner has built their entire theory on one speculative example in a single embodiment in Buckley without taking into account that Buckley and the RFCs permit a broader range of P-Preferred-Identity values, many of which *will not work* as Petitioner proposes. A POSITA would recognize the lack of a reasonable expectation of success, indeed, the foolishness of Petitioner’s proposal to rely on P-Preferred-ID to infer location.

Accordingly, the Petitioner has not identified that the cited prior art discloses or suggests a “location identifier” that necessarily identifies a location of the mobile phone as it roams. Consequently, the Petitioner’s obviousness attack should fail.

(c). Petitioner fails to show IMRNs are mapped to location information

Petitioner argues that Buckley’s disclosure of “mapping” the selected IMRNs to received call information and “construct[ing]” the IMRN based on received information from the caller is allegedly (somehow) tantamount to a disclosure of providing an “access code” based on a phone’s “location identifier” as claimed:

“...Buckley teaches the IMRN can be constructed based on ‘some relationship(s) to one or more of the parameters received in a message ... from the UE device’ or ‘may be mapped to *all the received SIP call information*’ in the SIP Invite message. ... And, [this] would include the caller’s SIP URI and, additionally, the P-Preferred-Identity.” (Paper 2 at 28-29. [emphasis in original])

Petitioner's argument speculates and conflates "mapping" and "constructing". But Buckley's invention does not require identifying the location of a calling phone. While Buckley generates an IMRN (E.164 number) for the caller, Buckley doesn't say that this number is based on the caller's location. Rather, all the IMRN's are equally tied to the AS node 308 servicing the caller. EX1005 (Buckley) at 4:48-49, 5:64 to 6:5, Figure 2 (204) and Figure 5 (504). Therefore, as a threshold issue, "mapping" in Buckley, whatever it may involve, does not depend on location.

Buckley is vague and non-comittal about what call information is mapped. First, Buckley indicates that mapping only happens "in some embodiments." EX1005 at 6:2-3. Second, the "SIP call information" that is mapped is an open-ended grab-bag of parameters. *Id.* at 5:45-58. On its face, this long list of parameters appears unrelated to the phone's location, nor does Buckley suggest otherwise. And even if (*arguendo*) some parameters might be related to the phone's location, others are not. Consequently, Buckley's mapping of "all" the parameters would not suggest to a POSITA any sort of mapping for the specific purpose of identifying a location.

Furthermore, Buckley discloses "mapped" information being used *after* the IMRN has been provided to the UE device, to setup a SIP session with the called party. *Id.* at 6:1-3, 6:6-7, 6:19-26. Since Buckley discloses a use for "mapped" call information *after* the IMRN is selected, the Petitioner cannot prove that the mapping is used for IMRN *selection*. Even if "at least a portion" of the call information is

mapped to the IMRN, this could be simply associating a selected IMRN “with the call reference number,” or the “called party’s SIP URI,” which is necessary for later “effectuating the SIP session with the called party” identified by that SIP URI. *Id.* at 5:64-6:3, 6:19-23, 39-41 (“The IMRN is then interrogated against the record to retrieve the called party’s URI for establishing a SIP session with the called party”).

Completing a call to a called party is sufficient motivation or reason for “mapping” call information (or at least a portion of it), as Buckley expressly teaches. *Id.* at 6:31-43, 7:54-56. However, Buckley says nothing about mapping for purposes of selecting an IMRN based on *location*, and the Petitioners’ wishful reading of such a function into Buckley goes far beyond what Buckley actually says about mapping. Paper 2 at 28-29, citing EX1005 at 3:4-12, 4:41-49, 6:1-3.

Finally, Buckley’s vague disclosure that the IMRN may be “constructed” based on some relationship(s) to one or more of the parameters” avails nothing. Paper 2 at 28; EX1005 at 3:4-12, 4:41-49, 6:1-3. Buckley’s disclosure is, once again, an indefinite, open-ended list of possibilities. For example, at 3:4-12, Buckley says the E.164 number may be generated by at least one of: (a) dynamic sequential assignment, (b) random selection, (c) using an unspecified algorithm having an unspecified relationship to one or more unspecified parameters, but the methods are “not limited to” even these vague possibilities. Buckley provides no guidance whatsoever here—certainly no criteria related to location—as Petitioner itself later

concedes in Ground III (“Buckley does not expressly teach all such ‘relationship(s)’ [for mapping] the received information to an IMRN”). Paper 2 at 65. Buckley’s abstruseness would not have rendered the claimed invention obvious to a POSITA.

For all the foregoing reasons, Petitioner’s argument—that it would have been obvious to a POSITA in view of Buckley to benefit from the “mapping” of a grab-bag of parameters to IMRN, based on alleged location information embedded in call information (of which Buckley was oblivious), to somehow avoid long-distance charges—is a mishmash of hindsight, speculation, and wishful thinking.

(d). A POSITA would not be motivated to modify Buckley.

Despite all the above-mentioned holes in Petitioner’s argument, even if it were *possible* to reliably infer a phone’s location from the caller’s URI and P-Preferred-ID parameters, *why* would a POSITA do this? And *what* would the POSITA do with the location information once he or she had inferred it and why? In particular, Buckley discloses no method or algorithm for incorporating location information in its “IMRN selection process,” so the Petitioner carries the legal burden to establish a motivation or reason for a POSITA to modify Buckley to supply such features, even though Buckley’s invention would not have needed it. No explanation is given.

Petitioner’s argument for Ground I is silent on modifications. Unlike Ground II-IV, where there is a section entitled “Motivation to Combine” which asserts that “[a] POSITA would have been motivated to modify Buckley...”, in Ground I there

is no assertion of why or how it would have been obvious to modify Buckley *taken as a single reference* to provide the invention. Thus, the argument is incomplete.

Perhaps Petitioner *assumes* that a POSITA would have found it obvious to modify Buckley to supply any element of the claims-at-issue that is missing or not expressly disclosed to achieve the benefits disclosed in the Patent-at-issue—and invites this Board to supply the missing explanation—but such hindsight-based reasoning cannot meet the legal standard for a finding of obviousness. Tellingly, Petitioner attacks the same claims in Ground III as in Ground I, because Buckley alone does not render the claims obvious and requires modification or combination.

Also, “recognizing” the benefits of the Patent-at-issue is insufficient. One must make specific modifications to Buckley’s system to enable making calls to IMRN’s chosen based on a current location of the phone. However, Buckley fails to even disclose a method of obtaining a current location. As described above, the caller’s URI and P-Preferred-ID parameters cannot reliably fulfil the function of a “location identifier... of the phone.” Part of the reason why is that these parameters were never intended to be used for such purposes. Petitioner’s proposed use of them for unintended purposes is one reason why there are so many scenarios in which these parameters are unsuitable to derive location data for a mobile phone. Indeed, Petitioner’s proposed use of these parameters is hindsight in light of Patent Owner’s

claims, and not based on anything disclosed by Buckley or IETF RFCs/drafts. Buckley is completely silent on the issues at the heart of Petitioner's Ground I.

If the caller's URI and P-Preferred-ID do not reliably yield location data for the phone, then there is no motivation to add a method (*e.g.*, selecting IMRN's) that is dependent on this unreliable data. As explained in *In re NuVasive, Inc.*, a finding of obviousness requires that a POSITA would have been motivated to combine the prior art in the way claimed by claims-at issue *and* would have had a *reasonable expectation of success* in doing so. See *In re NuVasive, Inc.*, 842 F.3d 1376, 1381–82 (Fed. Cir. 2016). A POSITA would not have had a reasonable expectation of success trying to base IMRN selection decisions on a caller's URI or P-Preferred-ID, let alone any hope of reliably using this information to condition access to the system. Petitioner's argument therefore fails.

1. Buckley does not render claims 2, 6, 9, 14-16, and 135-136 obvious.

Claims 2, 6, 9, 14-16, and 135-136 depend from claim 1. Because Buckley does not disclose or suggest all of the elements of claim 1, Buckley also does not disclose or suggest all the elements of claims 2, 6, 9, 14-16, and 135-136.

2. Buckley does not render claim 20 obvious.

Buckley does not render independent claim 20 obvious at least for reasons similar to those given above in respect of independent claim 1.

3. Buckley does not render claims 25 and 34 obvious.

Claims 25 and 34 depend from claim 20. Because Buckley does not disclose or suggest all of the elements of claim 20, Buckley also does not disclose or suggest all the elements of claims 25 and 34. As discussed above, the limitations of Claim 34 are entitled to interpretation under §112(6) as a means-plus-function claim.

4. Buckley does not render claim 38 obvious.

Buckley does not render independent claim 38 obvious at least for reasons similar to those given above in respect of independent claim 1.

5. Buckley does not render claims 39, 43, 46, and 49 obvious.

Claims 39, 43, 46, and 49 depend from claim 38. Because Buckley does not disclose or suggest all of the elements of claim 38, Buckley also does not disclose or suggest all the elements of claims 39, 43, 46, and 49.

6. Buckley does not render claim 50 obvious.

Buckley does not render independent claim 50 obvious at least for reasons similar to those given above in respect of independent claim 1.

7. Conclusion.

For all the reasons set forth above, Petitioner fails to show any reasonable likelihood that it will prevail on ground 1. Accordingly, the Petition to institute review on ground 1 should be denied.

B. Ground 2: Claims 50 and 140 Are Not Obvious Over Buckley In View of Ejzak.

That Petitioner would attack the same claim 50 (and claim 1 through claim 140) based on *both* Buckley alone (which, in Ground I, was alleged to singlehandedly render the claims obvious) *and* a second obviousness combination that purports to add Ejzak to Buckley, is an admission that Petitioner places little confidence in its single-reference (Buckley) obviousness argument—and for good reason. Nevertheless, the combination of Buckley and Ejzak does not cure the glaring holes in Petitioner’s obviousness arguments based on Buckley alone.

1. No Motivation to Combine.

Petitioner asserts that a POSITA would have been motivated to modify Buckley with the teaching of Ejzak to improve Buckley and to help achieve Buckley’s expressly desired advantages. Paper 2 at 54-55. Petitioner asserts the POSITA would have been motivated to combine Ejzak with Buckley to help achieve seamless transitions between circuit-switched (CS) networks and packet-switches (PS) networks “without loss of continuity” by determining how to route a call that may transition between such networks in accordance with Ejzak’s teachings. *Id.* The Petition also asserts that a POSITA would have been motivated to modify Buckley to query Ejzak’s DNS/ENUM server to identify an IP address for routing

over an IP network to VoIP phones lacking PSTN access. *Id.* Both motivations are moot in that they purport to provide benefits or features that Buckley *already has*.

The one-reference obviousness analysis of Buckley alone (Ground I) was *already* alleged to handle calls between circuit-switched (CS) networks and packet-switches (PS) networks, so it is unclear why Ejzak now provides any further motivation. (In fact, Petitioner cites Buckley 3:35-40 as already handling transitions between circuit-switched (CS) networks and packet-switches (PS) networks “the UE device is capable of operating in multiple modes in that it can engage in both circuit-switched (CS) as well as packet-switches (PS) communications, ***and can transition from one mode of communications to another mode of communications without loss of continuity.***”). Petition at 55. Petitioner’s argument is desperate: it posits a need to achieve such transitions “without loss of continuity” when Buckley’s existing capability to “transition from one mode of communications to another mode of communications without loss of continuity” already exists and doesn’t need help. Buckley’s system also already has the ability to call VoIP phones that are not on the (CS) PSTN but are “IP-only subscriber[s]”. EX1005 at 1:37-53, 1:51-52.

Ejzak discloses PSTN and VoIP call interoperability such that calls can traverse packet-switched networks (like an IP network) and circuit switched networks (like a PSTN). EX1007, 2:36-40. However, Buckley has no problem with calls that traverse packet-switched networks (like an IP network) but focuses its

invention on a *specific problem* for “managing call routing in a network environment including a circuit-switched (CS) network and an IP multimedia subsystem (IMS) network, wherein a CS-originated IP call (*e.g.* based on the Session Initiation Protocol or SIP) is to be routed using the IMS network infrastructure.” EX1005, 1:24-28. Buckley explains “[t]here may arise a situation, however, where a wireless device (*i.e.* a UE device in 3GPP) is able to make a voice call to a called party through only the circuit-switched cellular network domain because either no packet-switched IP network is available, the available networks in the packet-switched domain do not support the Voice-over-IP (VoIP) service, or the user preference/subscriber policy prevents usage of the packet-switched domain for some or all services.” EX1005, 1:33-57, 4:26-30. Thus, Buckley attempts to solve this scenario “wherein a CS-originated IP call (*e.g.* based on the Session Initiation Protocol or SIP) is to be routed using the IMS network infrastructure” by providing an IMRN comprising an E.164 number. *Id.* In other words, Buckley provides the wireless device with a telephone number to use to originate an IP call through only the circuit-switched cellular network domain because “either no packet-switched IP network is available, the available networks in the packet-switched domain do not support the Voice-over-IP (VoIP) service, or the user preference/subscriber policy prevents usage of the packet-switched domain for some or all services.” *Id.*

Ejzak further discloses using E.164 numbers, *e.g.*, to identify IP addresses that are used to route calls over IP networks, using DNS lookups. EX1007, 8:30-36, 8:43-48. Petitioner alleges that “[a] POSITA would have been motivated to modify Buckley with Ejzak because both references are in the field of call routing and are directed to the same problem of improving call routing, including specifically across packet-switched and circuit switched networks.” But it is unclear why Buckley would need additional functionality from Ejzak given that Buckley is initiating a CS call and is already able to route calls across packet-switched and circuit switched networks. *Compare* EX1005 (Buckley), Abstract (“Methods and apparatus for use in processing Session Initiation Protocol (SIP) calls in a network environment which includes a circuit-switched (CS) network and an Internet Protocol (IP) multimedia subsystem (IMS) network”), with EX1007 (Ejzak), 2:35-38 (“[T]he present invention provides a communication system that ... allows for interworking between CS domains and PS domains.”); EX1003 ¶134. *See* Paper 2 at 54.

Buckley’s preferred embodiment specifically includes the capability of seamless transitions between such the circuit-switched (CS) and packet switched domains. There is no issue here. *See* EX1005 (Buckley), 3:35-40 (“Preferably, the UE device is capable of operating in multiple modes in that it can engage in both circuit-switched (CS) as well as packet switched (PS) communications, and can transition from one mode of communications to another mode of communications

without loss of continuity.”). Yet, Petitioner argues that “[a] POSITA would thus be motivated to combine Ejzak with Buckley to help achieve such transitions “without loss of continuity” by determining how to route a call that may transition between such networks in accordance with Ejzak’s teachings. See EX1003 ¶180.” Paper 2 at 55. Petitioner suggest that all that the POSITA need do would be to “modify Buckley to query Ejzak’s DNS/ENUM server with an E.164 address to identify a corresponding IP address that enables routing a call over an IP network, because an IP address would help ensure that calls can be completed to VoIP phones, and packet-switched IP networks, that lack direct PSTN access. EX1003 ¶181.”

However, here a POSITA would readily recognize that the proposed modification has little to no reasonable expectation of success. Petitioner’s allegation that Buckley’s goal of “managing call routing in a network environment including a circuit-switched (CS) network and an IP multimedia subsystem (IMS) network” where a PSTN call may be completed over an IP network or where a particular user device may be operating over only an IP network” has no reasonable expectation of success in combining Buckley with Ejzak to use Ejzak’s DNS system “to identify a corresponding IP address that enables routing a call over an IP network” as this fails to solve the *specific problem* addressed by Buckley of where a wireless device is able to make a voice call to a called party *only through the circuit-switched cellular network domain* because either no packet-switched IP

network is available, the available networks in the packet-switched domain do not support the Voice-over-IP (VoIP) service, or the user preference/subscriber policy prevents usage of the packet-switched domain for some or all services. EX1005, 1:33-57, 4:26-30. Thus, supplying the wireless device in Buckley with a “corresponding IP address that enables routing a call over an IP network” provided by the DNS server in Ejzak is meaningless when the wireless device is incapable of doing so or of originating the call using the packet switched network domain in Buckley but is only capable of using the circuit switched domain. A POSITA would understand there to be no reasonable expectation of success in combining Buckley with Ejzak because (1) Buckley already knows how to ordinarily transition and route calls over the packet switched network domain and has no need of Ejzak’s disclosure; and (2) the proposed combination ignores and purposefully disregards Buckley’s specific need and desire to enable a *circuit switch-originated* call even to IP-only subscriber endpoints. See EX1005 at 1:22-28, 1:33-57, 3:35-40, 4:26-30; see also “Brief Description Of Buckley” section above. A POSITA seized with Buckley’s specific problem would not be motivated to incorporate Ejzak’s inapplicable solution, nor would such a combination arrive at the claimed invention.

2. Buckley and Ejzak does not render claim 50 obvious.

Given Buckley and Ejzak fail to disclose each and every claim limitation recited in claim 50, and the lack of motivation to combine as discussed above, the combination of Buckley with Ejzak does not render independent claim 50 obvious.

3. Buckley and Ejzak does not render claim 140 obvious.

Claim 140 depends from claim 1. Buckley and Ejzak do not render claim 1 obvious at least for reasons similar to those given above in respect of independent claim 50. Because Buckley and Ejzak do not disclose all of the elements of claim 1, Buckley and Ejzak also do not disclose all of the elements of claim 140.

4. Conclusion

For all the reasons set forth above, Petitioner fails to show any reasonable likelihood that it will prevail on ground II. Accordingly, the Petition to institute review on ground II should be denied.

C. Ground 3: Claims 1, 2, 6, 9, 14-16, 20, 25, 34, 38-39, 43, 45-46, 49-50, and 135-136 Are Not Rendered Obvious by Buckley In View Of Bates.

That Petitioner would attack the same claims based on *both* Buckley alone (which was alleged to singlehandedly render the claims obvious) *and* a second obviousness combination that purports to add Bates to Buckley, is an admission that Petitioner places little confidence in its single-reference obviousness argument—and

for good reason. Nevertheless, the combination of Buckley and Bates does not cure the glaring holes in Petitioner's obviousness arguments based on Buckley alone.

1. No Motivation to Combine.

Petitioner asserts that a POSITA would have been motivated to modify Buckley with the teaching of Bates to produce better routing such as routing local calls. *See* Paper 2 at 65. However, it is not apparent why Buckley alone could not have enabled local calls, so it is unclear why Bates now provides any further motivation for modification. (Indeed, Buckley and Bates are both silent on the topic of placing local calls.) Petitioner's proposed motivation is contrived.

Petitioner asserts that "Bates teaches a process for selecting a temporary number from a pool of numbers that enable making a local call." *See* Paper 2 at 19, 62. But this assertion is misleading. Bates says nothing about enabling a local call to be made. Moreover, Petitioner distorts Bates' disclosure and obscures Bates' teaching by only partially reproducing Figure 7 while omitting the steps which explain just how Bates' temporary number is used. (*See* the "Brief Description of Bates" section above). The caller in Bates *never calls* the temporary number.

By way of background, assigning a geographically appropriate temporary number is important to enable Bates' system to seamlessly integrate non-traditional calling devices (such as VoIP phones not having a PSTN number) into the traditional emergency services system. EX1009 at 1:17-26, 14:26-37, 20:40-65 The way

Bates' system does this is, first, it determines the emergency services zone that corresponds to the current location of the user communication device and retrieves an available temporary telephone number corresponding to that emergency services zone from a telephone number database store. *See id.* at 17:5-10. Next, the temporary telephone number is used to determine the location of the user communication device and to route the call to the appropriate public safety answering point ("PSAP") for the location of the device. *See id.* at 12:17-31. The temporary telephone number is also provided to the PSAP, where it serves several additional purposes, namely, it allows the PSAP to determine the location of the caller based on the temporary telephone number, to dispatch emergency services to the user's location in situations where the call becomes disconnected prior to the user identifying his or her location to an operator, and if the 9-1-1 call is disconnected inadvertently, the PSAP can initiate a return call using the temporary number, even if the calling device has no registered PSTN phone number. *See id.* at 20:1-25, Fig. 7 (steps 750-770 omitted by the Petitioner).

Accordingly, Petitioner's assertion that Bates teaches enabling a local call to be made is highly misleading. From the outset, Bates is not analogous to Buckley because, in Buckley, the callee is known and selected by the user; whereas in Bates, the callee (an unknown PSAP) is variable and is selected by the system depending on the caller's location. In Bates, the caller doesn't know which PSAP he or she will

call; the caller simply dials 9-1-1 to request emergency services, and the system forwards the call to the PSAP that is within the caller's emergency services zone.

Moreover, the temporary phone number that is allocated in Bates is not allocated for the purpose of enabling a "local call" of any sort. Rather, it is allocated to allow the system: (1) to seamlessly connect a caller to a PSAP in their emergency services zone; (2) to enable automatic location recognition at the PSAP of the calling device (which may not even have a phone number on the PSTN) so as to optionally dispatch of emergency services to that location; and (3) to call back the 9-1-1 caller if the connection is inadvertently dropped. Whether the temporary phone number is "local" or not is irrelevant; what is important is that the above-mentioned purposes are fulfilled. Emergency service zones are defined in a NENA database based on mapping population density to the availability of fire, ambulance and police services; these zones are not designed with the end-goal of enabling a PSAP (or anyone else) to make local calls. *See id.* at 15:28-38.

Furthermore, Petitioner's truncated and misleading presentation of Figure 7 has obscured the important fact that the temporary phone number in Bates is chosen not for the use of the *caller*—it is for the use of the *PSAP* in the manner described above. In Buckley, however, the IMRN is allocated for the caller's use, not for the called party. Clearly, there is no disclosure, suggestion or motivation to apply Bates' teaching in Buckley to provide an IMRN based on location information that will

enable the *caller* to make a *local* call to the callee. In Bates, the caller never uses the temporary phone number to make *any* call, let alone a local one.

In addition, the proposed combination of Buckley and Bates assumes that Buckley has some way of using or processing information about the location of the phone to select an IMRN—which it does not—but this makes the proposed combination of Buckley with Bates pointless and incoherent. Even if a geographic location of the mobile phone could be reliably determined or provided (as per Bates), Buckley’s system would not be equipped to use this geographic location.

Even if Buckley’s system was modified as per Bates, this would not result in the subject-matter of the claims. At best, Buckley’s modified system would assign a number in an “emergency services zone” for a PSAP’s use in calling back the caller.

Consequently, a POSITA would not be motivated to use Bates’ teaching in Buckley in the manner proposed by the Petitioner because Bates is solving completely different problems and works in a completely different way.

2. Buckley and Bates do not render claim 1 obvious.

As discussed above, neither Buckley nor Bates disclose or suggest producing an “access code” for a caller based on a “location identifier identifying a geographical location of the wireless device” as recited in claim 1. The combination of both references likewise fails to supply these claim elements. Thus, Petitioner has not carried its burden to prove Ground II by a preponderance of evidence.

3. Buckley and Bates do not render claims 2, 6, 9, 14-16, and 135-136 obvious.

Claims 2, 6, 9, 14-16, and 135-13 depend from claim 1. Because Buckley and Bates do not disclose or suggest all of the elements of claim 1, Buckley and Bates also do not disclose or suggest all the elements of claims 2, 6, 9, 14-16, and 135-13.

4. Buckley and Bates do not render claim 20 obvious.

Buckley does not render independent claim 20 obvious at least for reasons similar to those given above in respect of independent claim 1.

5. Buckley and Bates do not render claims 25 and 34 obvious.

Claims 25 and 34 depend from claim 20. Because Buckley and Bates do not disclose or suggest all of the elements of claim 20, Buckley and Bates also do not disclose or suggest all the elements of claims 25 and 34.

6. Buckley and Bates do not render claim 38 obvious.

Buckley does not render independent claim 38 obvious at least for reasons similar to those given above in respect of independent claim 1.

7. Buckley and Bates do not render claims 39, 43, 46, and 49 obvious.

Claims 39, 43, 46, and 49 depend from claim 38. Because Buckley does not disclose or suggest all of the elements of claim 38, Buckley also does not disclose or suggest all the elements of claims 39, 43, 46, and 49.

8. Buckley and Bates do not render claim 50 obvious.

Buckley does not render independent claim 38 obvious at least for reasons similar to those given above in respect of independent claim 1.

9. Conclusion

Accordingly, Petitioner cannot show a reasonable likelihood of prevailing on ground 3, thus the Petition to institute review on ground 3 should be denied.

D. Ground 4: Claims 50 And 140 Are Not Obvious Over Buckley In View Of Bates And Further In View Of Ejzak.

That Petitioner again would attack the same claims based on *both* Buckley alone (which was alleged to singlehandedly render the claims obvious) (Ground I), and a combination of Buckley and Ejzak (Ground II), and a combination of Buckley and Bates (Ground III), and now a fourth attack that purports to now add Ejzak into the combination of Buckley and Bates, is *again* a tacit admission that Petitioner places little confidence in its previous obviousness arguments. Nevertheless, even in throwing everything at the wall in Ground IV, the combination of Buckley, Bates, and Ejzak doesn't cure the glaring holes in Petitioner's obviousness arguments based on Buckley alone (Ground I) or the combinations asserted in Grounds II and III.

1. No Motivation to Combine

As discussed above for Ground II, Petitioner's allegation that Buckley's goal of "managing call routing in a network environment including a circuit-switched

(CS) network and an IP multimedia subsystem (IMS) network” where a PSTN call may be completed over an IP network or where a particular user device may be operating over only an IP network” has no reasonable expectation of success in combining Buckley with Ejzak to use Ejzak’s DNS system “to identify a corresponding IP address that enables routing a call over an IP network” as this fails to solve the specific problem in Buckley of where a wireless device is able to make a voice call (*i.e.*, a circuit switched call) to a called party through ***only the circuit-switched cellular network domain*** because either no packet-switched IP network is available, the available networks in the packet-switched domain do not support the Voice-over-IP (VoIP) service, or the user preference/subscriber policy prevents usage of the packet-switched domain for some or all services. Thus, supplying the wireless device in Buckley with a “corresponding IP address that enables routing a call over an IP network” provided by the DNS server in Ejzak is meaningless when the wireless device is incapable of originating the call using the packet switched network domain in Buckley and only capable of using the circuit switched domain. A POSITA would understand there to be no reasonable expectation of success in combining Buckley with Ejzak. First, Buckley already understands how to transition and route calls over the packet switched network domain and has no need of Ejzak’s disclosure. Second, the proposed combination ignores and purposefully disregards Buckley’s particular need and desire to enable a ***circuit-switched***-originating IP call.

A POSITA would not be motivated to combine Ejzak’s solution to enable a packet-switched originated IP call with Buckley’s solution to enable a circuit switched-originated IP call, nor would such a combination arrive at the claimed invention.

Additionally, as discussed above for Ground III, the proposed combination of Buckley and Bates assumes that Buckley has some way of using or processing information about the location of the phone to select an IMRN—which it does not—however, this makes the proposed combination of Buckley with Bates pointless and incoherent. Even if a geographic location of the mobile phone was reliably determined or provided (as per Bates), Buckley’s system would not be equipped to use this geographic location. Moreover, even if Buckley’s system was modified as per Bates, this would not result in the subject-matter of the claims. At best, Buckley’s modified system would assign a number in an “emergency services zone” for a PSAP’s use in dispatching emergency services or calling back the caller.

A POSITA would not be motivated to use Bates’ teaching or Ejzak’s teaching in Buckley in the manner proposed by the Petitioner because Bates and Ejzak are solving completely different problems and work in completely different ways.

2. Buckley, Bates, and Ejzak do not disclose claim 50.

The combination of Buckley with Bates and Ejzak does not render independent claim 50 obvious at least for reasons similar to those given above in

respect of independent claim 50 in Ground II as well as for reasons similar to those given above in respect of independent claim 50 in Ground III.

3. Buckley, Bates, and Ejzak do not disclose claim 140.

Claim 140 depends from claim 1. Buckley, Bates, and Ejzak do not render independent claim 1 obvious at least for reasons similar to those given above in respect of claim 50. Because Buckley, Bates and Ejzak do not disclose all of the elements of claim 1, Buckley, Bates and Ejzak also do not disclose all the elements of claim 140.

4. Conclusion

For all the reasons set forth above, Petitioner fails to show any reasonable likelihood that it will prevail on Ground 4. Accordingly, the Petition to institute review on Ground 4 should be denied.

VIII. CONCLUSION

In conclusion, the Board should exercise its discretion and deny Petitioner's Petition under § 314(a). Regardless, the Petition is not reasonably likely to prevail on any of the grounds asserted against the Challenged Claims. Accordingly, all grounds to institute review should be denied.

Date: June 30, 2023

Respectfully submitted,

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CERTIFICATE OF WORD COUNT

Under 37 C.F.R. § 42.24, I certify that Sections I-VIII of this Preliminary Response have a total of 13,987 words according to the word count tool in Microsoft Word™.

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Date: June 30, 2023

CERTIFICATE OF SERVICE

I certify that the foregoing **PATENT OWNER'S PRELIMINARY RESPONSE PURSUANT TO 37 C.F.R. § 42.107** was served on June 30, 2023 on the Petitioner by filing this document through the PTAB's P-TACTS System as well as e-mailing a copy to tmobile-voip@perkinscoie.com .

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