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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE INC.

Petitioner,

v.

VoIP-PAL.COM, INC.,

Patent Owner

Case No. IPR2017-01399

U.S. Patent 8,542,815

**PATENT OWNER'S PRELIMINARY RESPONSE TO
PETITION FOR *INTER PARTES* REVIEW**

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35 U.S.C. § 3142, 54, 55, 56

35 U.S.C. § 31561

37 C.F.R. § 42.668

37 C.F.R. § 42.2467

37 C.F.R. § 42.6552

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EXHIBIT LIST

Exhibit No.	Description
2001	Paper 1 in IPR2016-01201 (Petition for <i>Inter Partes</i> Review)
2002	Paper 17 in IPR2016-01201(Patent Owner Response to Petition)
2003	Paper 34 in IPR2016-01201 (Petitioner's Reply to Patent Owner's Response)
2004	Paper 40 in IPR2016-01201 (Patent Owner's Motion to Exclude)
2005	<i>Intentionally Left Blank</i>
2006	Paper 44 in IPR2016-01201 (Petitioner's Opposition to Patent Owner's Motion to Exclude)
2007	Paper 47 in IPR2016-01201 (Patent Owner's Reply to Petitioner's Opposition to Motion to Exclude)
2008	Ex. 1006 in IPR2016-01201, Declaration of Dr. Henry H. Houh
2009	Ex. 2016 in IPR2016-01201, Declaration of Bill Mangione-Smith, Ph.D.
2010	Ex. 2043 in IPR2016-01201, Deposition Testimony of Dr. Henry Houh, January 25, 2017, Vol. I
2011	Ex. 2044 in IPR2016-01201, Deposition Testimony of Dr. Henry Houh, January 26, 2017, Vol. II
2012	Ex. 2047 in IPR2016-01201, Lucent Technologies Merlin Communications Systems, Centrex/PBX Connection, March 1985
2013	Ex. 2048 in IPR2016-01201, Telephone Features, Quick Reference Guide, Definity

Exhibit No.	Description
2014	Ex. 2049 in IPR2016-01201, Valder, “Understanding Telecommunications Networks,” The Institution of Engineering and Technology, 2006, pp. 38-39
2015	Paper 2 in IPR2016-01198 (Petition for <i>Inter Partes</i> Review)
2016	Ex. 1009 in IPR2016-01198, Declaration of Dr. Henry H. Houh
2017	Paper 3 in IPR2016-01201 (Notice of Filing Date Accorded)

Pursuant to 35 U.S.C. § 313, 37 C.F.R. § 42.107 and the Notice of Filing Date Accorded to Petition (Paper 3), dated **May 25, 2017**, Voip-Pal.com, Inc. (“Voip-Pal”) hereby timely submits this Preliminary Response to the Petition for *Inter Partes* Review of U.S. 8,542,815 (the ’815 Patent) (“Petition,” Paper 1) by Apple Inc. (“Apple”).

I. INTRODUCTION

Digifonica, a real party-in-interest to this proceeding and wholly owned subsidiary of Patent Owner Voip-Pal, was founded in 2004 with the vision that the Internet would be the future of telecommunications. As a startup company, Digifonica did not have existing customers or legacy systems. Instead, Digifonica had the opportunity to start from a blank slate. Digifonica employed top professionals in the open-source software community. Three Ph.D.s with various engineering backgrounds held the top positions at the Company. Digifonica’s engineers developed an innovative software solution for routing communications, which by the mid-2000s, it implemented in four nodes spread across three geographically different regions. Digifonica also obtained multiple patents on the technology developed as part of its R&D efforts, including the ’815 Patent, which is the subject of this proceeding.

Petitioner challenges Claims 3-4, 8-9, 11-12, 14-16, 30-31, 35-36, 38-39, 42-43, 61, 65-66, 81, 85-86, 100, and 104-105 of the ’815 Patent on two grounds:

1. Claims 3-4, 8-9, 12, 14-16, 30-31, 35-36, 39, 42-43, 61, 66, 81, 86, 100, and 105 are alleged to be obvious under §103(a) over U.S. Patent No. 7,486,684 to Chu et al. (“Chu ’684”) in view of U.S. Patent No. 6,760,324 to Scott et al. (“Scott”).

2. Claims 11, 38, 65, 85, and 104 are alleged to be obvious under §103(a) over Chu ’684 in view of Scott and in further view of U.S. Patent Publication No. 2002/0122547 to Hinchey et al. (“Hinchey”).

Petitioner also submitted a Declaration by declarant Henry H. Houh, Ph.D. Ex. 1005 (“Houh Declaration”).

As Voip-Pal explains below, Petitioner’s arguments and assessments of the cited art fail to establish a reasonable likelihood that Petitioner would prevail as to its asserted grounds, as required under 35 U.S.C. § 314(a). Accordingly, institution of this proceeding should be denied as to both asserted grounds.

Petitioner’s two grounds fail to provide all claim elements. In particular, none of the references disclose a “caller dialing profile” as recited in the claims, nor do the proposed combinations of references teach or suggest such a feature. In previous IPR proceedings IPR2016-01201 and IPR2016-01198 (“previous IPR proceedings”), Petitioner admitted that Chu ’684 uses the term “subscriber” to mean an enterprise rather than an individual, and that Chu ’684 does not disclose a “caller dialing profile.” Further, Petitioner points to no disclosure of a “caller

dialing profile” in Scott or Hinchey and does not provide any reason why this claim element would be obvious when the references are combined.

Additionally, Petitioner’s proposed manner of combining Chu ’684 with Scott would render the resulting combination inoperative. Specifically, Petitioner’s combination of Chu ’684 with Scott would not work because it would reformat private numbers. Indeed, Petitioner failed to refute these same arguments in the previous IPR proceedings, IPR2016-01201 and IPR2016-01198. An operative combination of Chu ’684 with Scott would need to reformat only numbers to PSTN destinations after call classification, but such a combination would not lead to the challenged claims.

Petitioner also fails to articulate a valid reason to combine the cited references and instead relies on an unsupported alleged deficiency in Chu ’684. Again, Petitioner failed to dispute this fact when Patent Owner raised it in the previous IPR proceedings, IPR2016-01201 and IPR2016-01198. Finally, Petitioner has misconstrued the claims of the ’815 Patent as not requiring an order between steps [1b] and [1d]. According to Petitioners’ obviousness theory, Chu ’684’s alleged disclosure of step [1d] occurs before Chu 684’s alleged disclosure of step [1b]. However, the language of the claim clearly links a result of step [1b] as being used by step [1d], such that [1d] must occur after step [1b].

II. ARGUMENT

A. Introduction to Claimed Subject Matter

The Petition is largely based on an analysis of Claim 1. In Petitioner's claim chart, the other independent claims upon which the challenged claims depend, Claims 28, 54, 74 and 93, cite back to the claim chart for Claim 1. *See* Petition at 32-34, 39-40, 41-43 and 44-46. Claim 1 recites:

1. [1p] A process for operating a call routing controller to facilitate communication between callers and callees in a system comprising a plurality of nodes with which callers and callees are associated, the process comprising:

[1a] in response to initiation of a call by a calling subscriber, receiving a caller identifier and a callee identifier;

[1b] locating a caller dialing profile comprising a username associated with the caller and a plurality of calling attributes associated with the caller;

[1c] determining a match when at least one of said calling attributes matches at least a portion of said callee identifier;

[1d] classifying the call as a public network call when said match meets public network classification criteria and classifying the call as a private network call when said match meets private network classification criteria;

[1e] when the call is classified as a private network call, producing a private network routing message for receipt by a

call controller, said private network routing message identifying an address, on the private network, associated with the callee;

[1f] when the call is classified as a public network call, producing a public network routing message for receipt by the call controller, said public network routing message identifying a gateway to the public network.

By way of technology background, a public switched telephone network (PSTN) uses traditional telephone technology, including dedicated telephone lines from a service provider to transmit calls over a circuit-switched network. Voice over Internet protocol (VoIP) is used for the delivery of digital voice communications and multimedia sessions over Internet protocol (IP) networks, such as the Internet. Digital information delivered over IP networks is packetized, and transmission occurs using IP packets over a packet-switched network.

The method of Claim 1 is directed to classification of telecommunications calls. The method allows a call to be classified for routing as a “public network call” or as a “private network call.” The method determines whether a call is a public or private network call based on whether a match of at least one calling attribute and at least a portion of the callee identifier, meets certain network criteria. For example, a call to a callee may be classified for routing to a traditional circuit switched network (e.g., the PSTN), or to a packet switched network (e.g.,

the Internet), based on a calling attribute *matching* at least a portion of callee information. The method of Claim 1 does not evaluate the callee identifier in isolation, but matches the callee identifier based on attributes in the caller's dialing profile. Each caller has a dialing profile including a plurality of calling attributes and at least one caller attribute is matched with at least a portion of a callee identifier, e.g., a callee phone number, before the system makes a network classification decision, e.g., PSTN or Internet routing.

B. Grounds 1 and 2 Fail Because None of the References Disclose a Caller Dialing Profile

None of the references disclose a “caller dialing profile” as recited in all of the independent claims upon which the challenged claims depend. Claims 1 and 28 recite “a caller dialing profile comprising a username associated with the caller and a plurality of calling attributes associated with the caller,” Claim 54 recites “a caller dialing profile comprising a plurality of calling attributes associated with the caller,” and Claims 74 and 93 recite “a dialing profile”, wherein “each dialing profile associates a plurality of calling attributes with a respective subscriber.”

The Petition fails to establish that Chu '684 discloses such a claim element and further does not cite to any disclosure of such features in Scott or Hinchey. In particular, the claims require that both the profile and the attributes are caller-specific (“caller dialing profile”, “attributes associated with the caller”). However,

the Petition does not identify a profile or attributes that are caller-specific. The Petition argues that: “Chu ’684 discloses using attributes of the caller (e.g., the caller’s dial plan) and information identifying the callee (e.g., dialed digits) to determine whether a call should be terminated to a callee on the private packet network or on the public PSTN” Petition at 15. In the claim chart, the Petition points to the “subscriber’s dial plan” of Chu ’684 and “a dialing plan that emulates the dialing plan provided by the local telephone company in that area” in Scott. Petition at 21-22.

However, as discussed below, Chu ’684 does not disclose a caller-specific dial plan, only an enterprise dial plan, and Petitioner and its Declarant have admitted this in previous IPR proceedings. Further, neither Scott nor Hinchey disclose any caller-specific attributes, and neither the Petition nor Dr. Houh even assert that they do. Thus, the Petition’s only basis for asserting this claim element is mischaracterizing the term “subscriber” in Chu ’684. Because the Petition fails to cite to any attributes “associated with the caller” and has not explained how the enterprise dial plans of Chu ’684 would render that feature obvious, the Petition fails to carry its burden of demonstrating obviousness of the challenged claims.

1. Chu '684 Does Not Disclose A Caller Dialing Profile As Recited In The Claims

a. Overview of Chu '684

Chu '684 discloses a network architecture for providing a voice over IP virtual private network (VoIP VPN) service to an organization (“subscriber”) having multiple IP-based phone systems, or private branch exchanges (IP-PBXs), and a method of connecting all of the IP-PBXs of the organization into a single logical network. Chu '684 at 1:44-46, 3:52-56. The organization typically “subscribe[s] to many services” (e.g., both data and voice services) from the same service provider (SP). *Id.* at 5:3-6. FIG. 2 illustrates a subscribing customer’s IP-PBX communication system with multiple phones and a server 110 located at the subscribing customer’s premises 105 and configured to communicate with a soft-switch 220 and packet switch 210 located at the SP’s central office 205:

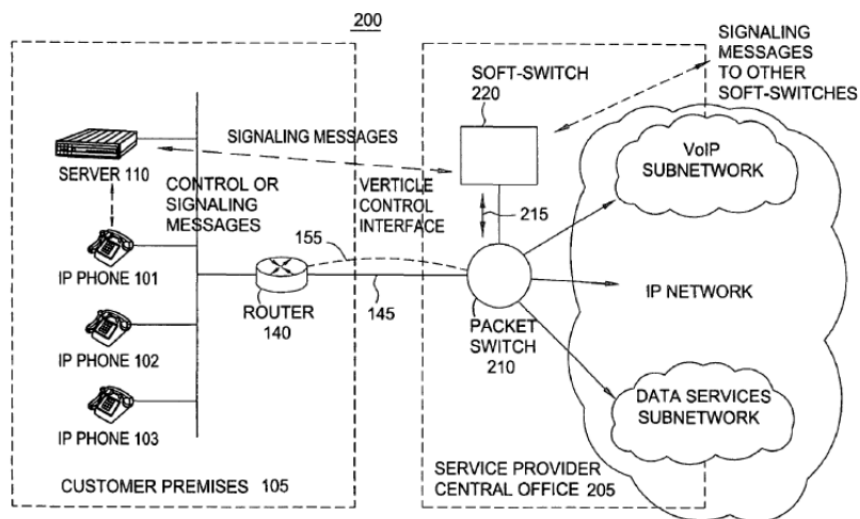


FIG. 2

While many organizations, each with multiple locations, may share the SP's network infrastructure (e.g., soft-switch 220 and packet switch 210), the system of Chu '684 allows each organization to have its own "dial plan" and allows calls to be routed internally to the IP-PBX, to a different IP-PBX, and to the public switched telephone network (PSTN). Chu '684 at 12:60-67 and 8:65-9:1.

b. The "Subscriber" Dial Plans in Chu '684 Are Enterprise Dial Plans

Chu '684 uses the term "subscriber" to refer to an enterprise or corporate entity that controls one or more local IP-PBX systems, and not to an individual person. When Chu '684 refers to an individual, it uses the term "user." All of Chu '684's calling examples disclose that the "user" of an IP phone places or receives calls: the user "picks up the handset" (8:55-56), receives the dial tone (8:58-59), provides the "dialed digits" (8:60-63), is "alerted" of an incoming call (11:1-2), and "picks up" the phone (11:13-17).

In contrast, Chu '684 explains that a "subscriber" is associated with multiple IP-PBX systems, multiple IP addresses and multiple phones:

The VoIP VPN service connects all the IP-PBXs of a subscriber into a single logical network. In one embodiment, the present invention provides a virtual private network service where subscribers can use their own internal dial plan. [...] Similarly, a subscriber can use their own IP address assignment plan in assigning IP addresses to the IP-PBX server and the IP phones.

Chu '684 at 3:55-58, 61-64 emphasis added.

This quote demonstrates that each “subscriber” (i.e., enterprise) controls not just a single phone, but rather an entire “virtual private network” which can include multiple inter-connected IP-PBX systems, each comprising an “IP-PBX server” and “IP phones” (plural) that are assigned respective “IP addresses” (plural) based on the subscriber’s (i.e., enterprise’s) “own IP address assignment plan”. *See also id. at 12:55-57.*

FIG. 2 of Chu '684 illustrates one such IP-PBX system at one particular subscriber location (i.e., customer premises 105), the IP-PBX system including a server 110 and multiple phones 101-103. *Id. at FIG. 2 (below), 4:24-33.*

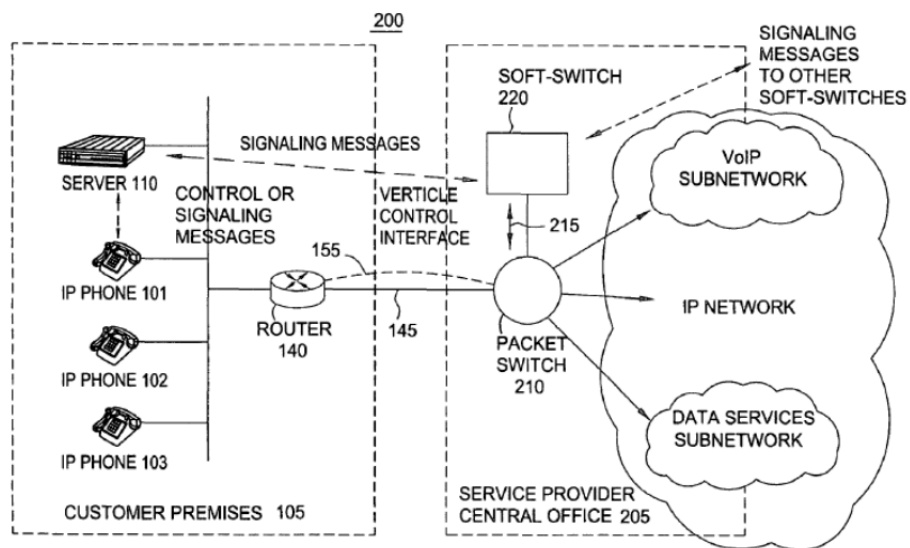


FIG. 2

Moreover, Chu '684 repeatedly discloses that a single “subscriber” [i.e. enterprise] controls multiple “locations” (like Customer Premises 105), each

location having its own respective IP-PBX interconnected via the SP's infrastructure to other IP-PBXs to form an enterprise-wide corporate network. *Id.* at 1:44-45; 3:66-67 (“[c]onnecting IP-PBXs together to form a corporate network”); 12:38-39 (“Multiple locations from the same subscriber may be connected to the same packet switch 210”); 12:59-60 (“establishing a call between two IP phones at two locations of the same subscriber”); 12:64-65; and 15:22-23 (“FIG. 15 depicts... a call between two locations on the same subscriber...”).

Thus, it is clear that the term “subscriber” in Chu ’684 represents an enterprise that controls all of the phones within an IP-PBX network of the enterprise; it does not refer to an individual caller. Chu ’684’s disclosure that each “subscriber” (i.e. enterprise) has its own “internal dial plan” (*id.* at 3:58), is not a disclosure of a user-specific “dial plan”, and is not a disclosure that any user-specific information is contained in a dial-plan. In fact, there is no disclosure or suggestion in Chu ’684 that a subscriber (i.e., enterprise) dial plan would contain any caller-specific information. Rather, Chu ’684 discloses that “subscribers” (i.e., enterprises) have multiple IP phones sharing a common “dial plan.”

c. Petitioner Has Admitted That Chu ’684 Uses the Word “Subscriber” To Mean an Enterprise Rather Than an Individual Caller

In previous IPR proceedings IPR2016-01201 and IPR2016-01198, Petitioner and Petitioner’s Declarant originally misinterpreted the term “subscriber” in Chu

'684 as referring to an individual caller or user, which is how the term is used in the '815 Patent. The Petitions in those previous proceedings and the Declaration of Petitioner's Declarant make no reference to any difference in terminology, despite quoting from both Chu '684 and the '815 Patent. The Petition and Declaration in those proceedings are flawed because Chu '684 is analyzed based on this misunderstanding. *See* Ex. 2001, Ex. 2008, Ex. 2015, Ex. 2016, Ex. 2002 at 59-64.

During his deposition in the previous IPR proceedings, Petitioner's Declarant, Dr. Houh, realized his error regarding the meaning of "subscriber" in Chu '684, and acknowledged that "subscriber" in Chu '684 means "enterprise" whereas the '815 Patent uses the term "subscriber" to mean "individual user":

A. Okay. I see that. So I think there is --
part of the confusion may arise out of the fact that
the '815 patent also uses the term "subscriber," and
the '684 patent uses the term "subscriber."
So -- and they use them in -- I -- I
suppose, different senses, and -- and that the '815
patent uses the term "subscriber" as a -- as an
individual user, and the discussion in '684 does talk
about subscriber as an enterprise.

Ex. 2010 at 16:11-19. *See also* Ex. 2011 at 221:20-222:4, 220:17-24, 178:17-181:4, 223:8-224:8, 215:20-216:6, 214:1-215:19; 217:10-23 and 218:1-220:9.

Dr. Houh's admissions confirm that when Chu '684 makes reference to a "subscriber's dial plan," this means an enterprise's dial plan, not a user's dial plan. Petitioner also admitted in their Opposition To Patent Owner's Motion To Exclude in the previous IPR proceedings, that Dr. Houh had acknowledged the difference in terminology, stating that Dr. Houh was "explaining that the Challenged Patent and Chu '684 use 'subscriber' in 'different senses'" and was "confirming enterprise meaning of 'subscriber' in Chu '684." Ex. 2006 at 11.

Petitioner then asserts that "Petitioner's reliance on these disparate uses of 'subscriber' and Dr. Houh's opinions regarding the same has been entirely consistent throughout this proceeding" (*Id.* at 12, emphasis added), but this is a complete distortion of the facts. Dr. Houh's Declaration filed in the previous IPR proceedings is not consistent with his testimony during deposition and subsequent statements by Petitioner. There is absolutely no acknowledgement in Dr. Houh's Declaration that any difference in terminology exists, despite him using the term "subscriber" in his report (purportedly adopting the '815 Patent's usage of that term) while also quoting the use of the word "subscriber" in Chu '684 (which Dr. Houh later admitted had a different meaning). Ex. 2008. There is no credible

explanation for the interchangeable use of two disparate meanings of subscriber other than that Dr. Houh was unaware of the difference in meaning at the time.

Accordingly, while Petitioner admits that Dr. Houh used the terminology of the '815 Patent "adopted for clarity" in his deposition, it is clear from the Petition and Declaration that Dr. Houh conflated (and failed to clarify) these disparate meanings of "subscriber" before this issue was pointed out by the Patent Owner.

d. Petitioner Has Admitted That Chu '684 Does Not Disclose a Caller Dialing Profile

In the previous IPR proceedings IPR2016-01201 and IPR2016-01198, Petitioner admitted in its Reply that Chu '684 does not disclose caller dialing profiles. After realizing that they had misinterpreted Chu '684 in the original Petition, Petitioner altered their original position in the Petition and stated that it was no longer relying on Chu '684 for caller-specific information stored in dial plans, as they had originally alleged, but was relying instead on the secondary references for caller-specific information. Petitioner stated that:

Patent Owner's second bucket of criticisms is premised on the idea that Chu '684 does not teach user-specific dial plans. See, e.g., Paper 17, Response at 59-64. This is a subtle shifting of attention away from the relevant question because the proposed combinations do not rely on the enterprise dial plans discussed in Chu '684. Rather, the combinations rely on the user-specific profiles taught by the

Secondary References. Indeed, this is the principle [sic] purpose of making the combination in the first place.

Ex. 2003 at 23 (emphasis omitted and added). *See also* Ex. 2001 at 14, 21-22.

Further, Petitioner confirmed in their Opposition To Patent Owner's Motion To Exclude that the secondary references were being used for caller-specific information, by stating that: "Petitioner's obvious [sic] combinations rely on the caller specific profiles taught in the Secondary References" Ex. 2006 at 12. This implicitly admits that Chu '684 does not disclose caller-specific information.

Petitioner also admitted that Chu '684 does not disclose caller-specific profiles by abandoning their original line of reasoning from the Petition and adopting a different one with respect to how Chu '684 operates. Specifically, in the previous IPR proceedings, Petitioner's manner for combining the references relied on caller-specific information in Chu '684 to assert that it had the "necessary infrastructure" to allow combination with the secondary references. Petitioner then changed what it referenced as "necessary infrastructure," abandoning what they had originally alleged represented caller-specific information.

In particular, in the previous IPR proceedings, Petitioner's Declarant originally cited to the enterprise dial plans of Chu '684 as evidence that Chu '684 had the "necessary infrastructure" to support reformatting:

Second, the system of Chu '684 already contains the infrastructure needed to support such reformatting. Chu '684 expressly discloses geographically dispersed subscribers each of whom may use subscriber-specific dial plans. Ex. 1003, Chu '684 at 12:60-64. (“Many subscribers, each with multiple locations, can be served by the same packet-switch/soft-switch network. Each subscriber can use their the [sic] own IP address plan as well as their own dial plan.”). One of skill in the art would understand that the purpose of assigning subscriber-specific dial plans, rather than dial plans applicable to all PBX subscribers, is to include subscriber-specific information such as geographic location, area codes, etc.

Ex. 2008 at ¶37 (emphasis added); *see also* Ex. 2001 at 19, Ex. 2008 at ¶42.

However, Dr. Houh's assertion of Chu '684 having the “infrastructure needed” is based on an incorrect reading of Chu '684. Specifically, Dr. Houh contrasts “subscriber-specific dial plans” with “dial plans applicable to all PBX subscribers” which can only make sense if Dr. Houh's use of “subscriber” refers to a user and not an enterprise. If “subscriber” is understood to mean enterprise, this paragraph contradicts Chu '684 itself because the enterprise-specific dial plans of Chu '684 do apply to all users of a given PBX. Chu '684 at 4:24-28, 8:65-9:2. Dr. Houh's quotation of Chu '684 at 12:60-64 refers to “subscribers” (i.e., enterprises) in a manner consistent with the specification of Chu '684 as a whole, in which

users within an enterprise share the same dial plan. Thus, the so-called “necessary infrastructure” asserted in the original Petition was based on Dr. Houh’s mistaken belief that Chu ’684 disclosed caller-specific dial plans.

In his deposition, Dr. Houh abandoned the notion of caller-specific dial plans in Chu ’684 and concocted a completely distinct line of reasoning for why Chu ’684 had the “necessary infrastructure” to support reformatting. Dr. Houh’s new justification was based merely on the fact that individual IP phones are assigned unique E.164 numbers and IP addresses:

I just read that, and now I'm going on to explain. The Chu '684 already has user-level-specific information, such as the E.164 number and the IP address of the phone of that user, so that the -- the Chu '684 has the infrastructure in place already for user-specific information, so that combining it with '366 Chu could be readily done.

Ex. 2010 at 107:12-18; *see also id.* at 12:24-13:2, 19:25-20:2, 22:4-6, 34:2-5, 34:22-35:3, 49:13-16, Ex. 2011 at 226:1-3, 229:6-12, 230:11-13, 242:11-13 247:1-5 278:25-279:6.

In the Reply, Petitioner repeated the revised line of reasoning that Chu ’684 had the “necessary infrastructure” based not on caller-specific *dial plans*, as the Petition had alleged, but based on the existence of caller-specific *phone numbers*:

As Petitioner's expert explained, Chu '684 discloses the infrastructure required to locate a caller-specific dialing profile like those in the Secondary References. Namely, the servers in Chu '684 necessarily maintain user specific information in order to effectively route calls. Accordingly, they are fully equipped to perform caller-specific lookups as contemplated by the combination. See Ex. 2010, Houh Trans. at 19:22-22:24.

Ex. 2003 at 23-24 (emphasis omitted and added).

By abandoning the first line of reasoning and adopting a new one, Petitioner abandoned its prior reliance on Chu '684 as disclosing a caller-specific profile.

e. Despite Previous Admissions, the Present Petition Adopts A Misinterpretation of Chu '684

Despite the Petitioner's eventual acknowledgement of the correct meaning of "subscriber" in Chu '684 in the previous IPR proceedings, the present Petition *reverts* to the previous flawed misinterpretation of "subscriber," again employing inconsistent and misleading terminology. The Petition glosses over this important difference in terminology, obliquely acknowledging it only once:

Chu '684 teaches that public E.164 numbers (direct inward dial numbers) are assigned to users (individual subscribers as "subscriber" is used in the claim) and managed by the subscriber.

Petition at 29, 40, 46-47 (emphasis added).

The Petition and Houh Declaration also use the phrase: “caller’s dial plan” which is a misleading term that never appears in Chu ’684. Petition at 15, Ex. 1005 at ¶40. As noted above, Petitioner and the Declarant have admitted that there is no such thing as a caller’s dial plan in Chu ’684. Chu ’684 only discloses “subscriber” (i.e., enterprise) dial plans.

Similarly to the Declaration, the Petition quotes Chu ’684 with respect to “subscriber” dial plans without clarifying that this means enterprise dial plans. This is misleading because the Petition implies that these teachings of Chu ’684 refer to caller-specific information. Petition at 21, 22, 25, 31, 33, and 47. The Petition also misleads by repeatedly quoting Chu ’684 at 8:65-9:1, which states that “server 110 consults its dial plan.” However, in this quotation, Chu ’684 clearly refers to a dial plan of the server and not a user-specific dial plan, since server 110 is associated with an enterprise location (Customer Premises 105) containing multiple phones (IP Phones 101, 102, 103). Chu ’684 at Fig. 2, 1:22-26, 4:24-30. Petitioner’s usage of this quote is misleading because the Petition does not clarify that this is an enterprise-specific dial plan, not a caller-specific dial plan. Petition at 14, 18, 21, 22, 25, 29, 30, 32.

Furthermore, Petitioner repeats the same flawed reasoning that was presented in the previous IPR proceedings by asserting that:

“... because multiple subscribers can be associated with a single server, a subscriber’s dial plan, in addition to an ID of the server, must necessarily include unique subscriber-specific information such as an E.164 telephone number. . .”

Petition at 22, Ex. 1005 ¶40, emphasis added.

This statement only makes sense if the term “subscriber” in Chu ’684 is misinterpreted to mean caller rather than enterprise. Chu ’684 discloses that a “dial plan” can be identified from the ID of the server 110, and, as shown in FIG. 2, each server is associated with multiple IP phones 101-103. Chu ’684 at 9:31-33. By mistakenly equating Chu ’684’s “subscriber” with the user of a particular phone, Petitioner concocts an artificial requirement that each server would need to utilize multiple dial plans. Chu ’684 provides no such teaching, and a correct understanding of “subscriber” underscores that Chu ’684 had no such requirement. Thus, Petitioner mistakenly concludes that there must necessarily be additional undisclosed information besides a server ID that is used to identify a dial plan, including an ID unique to a phone. Petition at 22, Ex. 1005 ¶40.

However, as the Patent Owner pointed out in the previous IPR proceedings, no such contradiction exists because Chu ’684 does not teach that multiple enterprises may use the same server, but rather that multiple phones (101, 102, 103 in FIG. 2) may use the same server. Since there is only a single server 110 per enterprise location, the server ID alone is sufficient to identify a dial plan shared by

all phones associated with the server. Chu '684 at Fig. 2, 4:25-28, 4:59-63, 9:30-33 and 10:43-47. There is no suggestion in Chu '684 that each phone has its own dial plan, let alone a dial plan that includes a unique ID specific to a phone (*e.g.*, an E.164 telephone number). Thus, it is unnecessary to contradict the explicit statements of Chu '684 (as did the Declaration at paragraph 40).

Accordingly, when the word “subscriber” is properly understood, Chu '684 is internally consistent and it is clear that Chu '684's dial plans do not include user-specific information such as E.164 telephone numbers.

The Petition and Dr. Houh have also reverted to their previous flawed reasoning regarding the “necessary infrastructure” in Chu '684, despite Petitioner having abandoned this line of reasoning in the previous IPRs. Specifically, the Petition states that Chu '684 has the “necessary infrastructure to support such reformatting” by citing to “subscriber-specific” dial plans and contrasting them with “dial plans applicable to all PBX subscribers”. The above-quoted portion of paragraph 37 from Dr. Houh's previous declaration is *word for word identical* to the same portion of paragraph 37 in Dr. Houh's declaration filed in this proceedings. Ex. 1005 at ¶37, Ex. 2008 at ¶37. As explained above, this *conflates* “subscriber” in Chu '684 with “user”, and represents a line of reasoning that Petitioner *abandoned* in the previous IPRs favor of a different justification.

Despite admitting in IPR proceedings IPR2016-01201 and IPR2016-01198 that Chu '684 uses the term “subscriber” to mean “enterprise” while the '815 Patent uses the term “subscriber” to mean user, and despite admitting that there are no caller-specific dial plans in Chu '684, Petitioner and the Declarant have not sought to clarify their position in this proceeding. At the very least, the Petition is materially flawed because the word “subscriber” is used in both senses interchangeably when discussing Chu '684 and the '815 Patent, without any acknowledgement in this proceeding of the fundamental difference in meaning.

As a result of the adoption of an incorrect meaning of Chu '684's “subscriber,” the Petition's argument for the obviousness of Claim 1 fails. Claim 1 recites in part “a caller dialing profile comprising a username associated with the caller and a plurality of calling attributes associated with the caller.” Petitioner equates “subscriber” (i.e., enterprise) with the recited “caller.” However, as explained above, this is a false analogy. Chu '684 wholly fails to describe “a caller dialing profile” as recited in the claims because “subscriber” references an *enterprise*, not a specific *caller*. Any profiles taught by Chu '684 would be attributed to the enterprise, not a specific caller.

f. Enterprise Dial Plans Cannot Be Relied On To Demonstrate The Claims Are Obvious

As noted above, the Petition's argument equating the claimed caller dialing profile with Chu '684's enterprise dial plans is premised on a misinterpretation of "subscriber" in Chu '684. Once this false premise is removed, the Petition's claim chart no longer meets the corresponding claim element, even on obviousness grounds. An enterprise dial plan is fundamentally different than a caller profile, and the Petition does not even attempt to argue that a caller dialing profile containing attributes associated with the caller would be obvious in view of an enterprise dial plan.

An enterprise "dial plan" is not a caller specific profile because dial plans are shared by all users of the enterprise's PBX. *See* Chu '684 at Fig. 2, 4:25-28, 4:59-63, 9:30-33 and 10:43-47. In contrast, as its name demonstrates, a caller profile provides the ability to customize caller settings from caller to caller. This is simply not possible with an enterprise dial plan. Dr. Mangione-Smith explained this same issue in the previous IPR proceedings, noting that:

This internal enterprise dial plan would be applicable to all users of an enterprise's PBX. To be clear, Chu '684 does not disclose "user-specific" dial plans, only enterprise dial plans. An enterprise dial plan is intended to be shared by many users, thus by its very nature it cannot be user-specific.

Ex. 2009 at ¶64 (emphasis added)

Thus, an enterprise dial plan provides no ability for individuals to personalize their caller settings. Instead, in enterprise dial plans, calling choices are pre-determined solely by the enterprise. Thus, enterprise dial plans are inferior to personally customizable caller profiles.

The Petitioner did not refute these arguments in the previous IPR proceedings and chose not to rely on Chu '684's enterprise dial plans for the caller dialing profile in their subsequent filings (Ex. 2003 at 23, Ex. 2006 at 12). It is the Petitioner's burden to demonstrate the claims are obvious. By relying on enterprise dial plans of Chu '684 for the attributes associated with the caller, and failing to explain how caller dialing profiles are obvious over enterprise dial plans, Petitioner never demonstrated how all claim elements are met and therefore failed to carry its burden.

2. Scott Does Not Disclose a Caller Profile As Recited In The Claims

a. Overview of Scott

Scott discloses a system of voice communication that couples Gateway Servers, coupled to the PSTN, with a packet switched IP network. The system of Scott also includes Routing Servers and Database Servers. Scott at 2:42-54. Fig. 2 illustrates the overall system of Scott including two Gateway Servers 210 and 220, each coupled to PSTN clouds 205 and IP network 215 that couples the Gateway

Servers together with the Routing Servers 230 and Database Servers 240. Also shown is IP Phone 293, coupled directly to IP network 215.

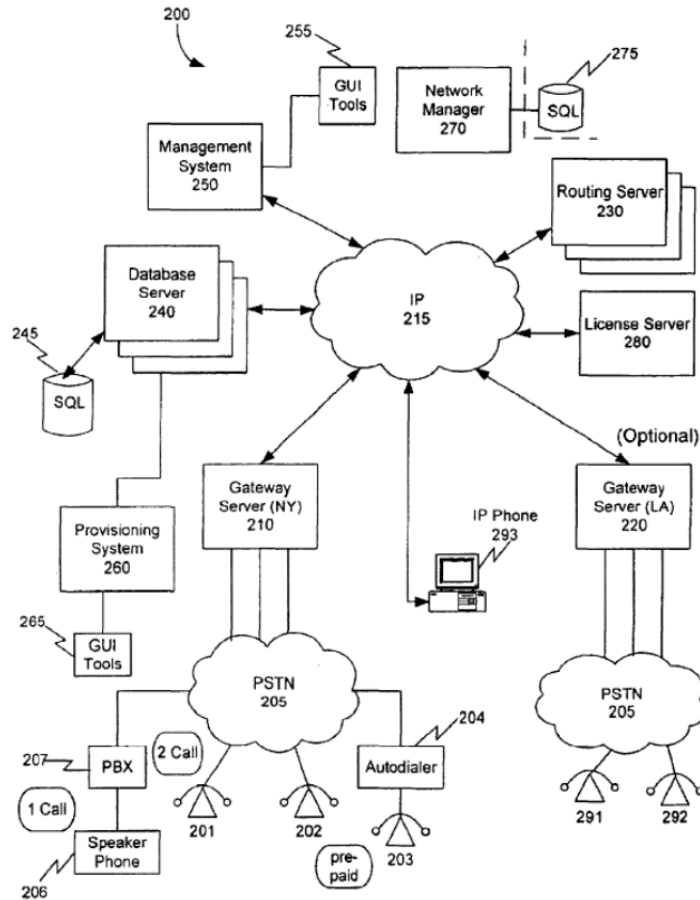


FIG. 2

Scott discloses that a number dialed by a user is translated using an “E.164 translator” to put it into a standard format. This format is used to properly route calls between Gateway Servers. *Id.* at 69:59-73:40. Scott discloses that: “The E.164 parser is a component of the Gateway Server that is responsible for translating digits entered by the user into E.164 form.” *Id.* at 70:16-18.

b. The Gateway Application Settings of Scott Is Not a Caller Dialing Profile

The system disclosed in Scott relies on an “E.164 parser” that utilizes an “E.164 parser table” to translate digits entered by a user. *Id.* The E.164 parser table is stored on Gateway Servers and can be updated to reflect changes to dialing patterns. *Id.* at 75:25-35. A user interface can configure the E.164 parser table for the Gateway Server. *Id.* at 75:36-76:53. The Gateway Server can also be configured with country code and area code settings through the user interface. *Id.* at 67:1-53. The E.164 parser table and the country code and area code settings are configurations for the Gateway Application, which delivers calling services on the Gateway Server platform. *Id.* at 64:56-65:29, 66:11-21. The Gateway Application settings are not caller-specific, as Fig. 2 shows Gateway Server 210 handling calls from phones 206, 201, 202 and 203 through PSTN 205. *Id.* at Fig. 2, 6:30-7:6. Thus, the Gateway Application settings cannot constitute a caller dialing profile as recited in the claims of the ’815 Patent.

c. The Petition Does Not Assert That the Gateway Application Settings in Scott Are Caller-Specific

The Petition does not assert that the Gateway Application settings in Scott are caller-specific. The Petition cites to Scott in connection with claim element [1b], stating that “Scott teaches a ‘country/area code settings panel’ ...”, but makes

no assertion about such a profile is a “caller dialing profile comprising a username” as recited in the claim. Petition at 22.

In addition, the Petition makes no attempt to identify anything corresponding to a “username” in Scott. The only citation to a “username” is in connection with Chu '684, which as explained above does not disclose a caller dialing profile as recited in the claims. Petition at 21-22, Ex. 1005 at ¶40.

3. Hinchey Does Not Disclose a Caller Dialing Profile As Recited In the Claims

a. Overview of Hinchey

Hinchey discloses a telephony system for performing route selection between Gateways coupled to PSTN networks. An Internet Protocol (IP) network 102 is coupled to gateways 116, 120, 124 and 128, and to terminals 148 and 152, as shown in Fig. 1:

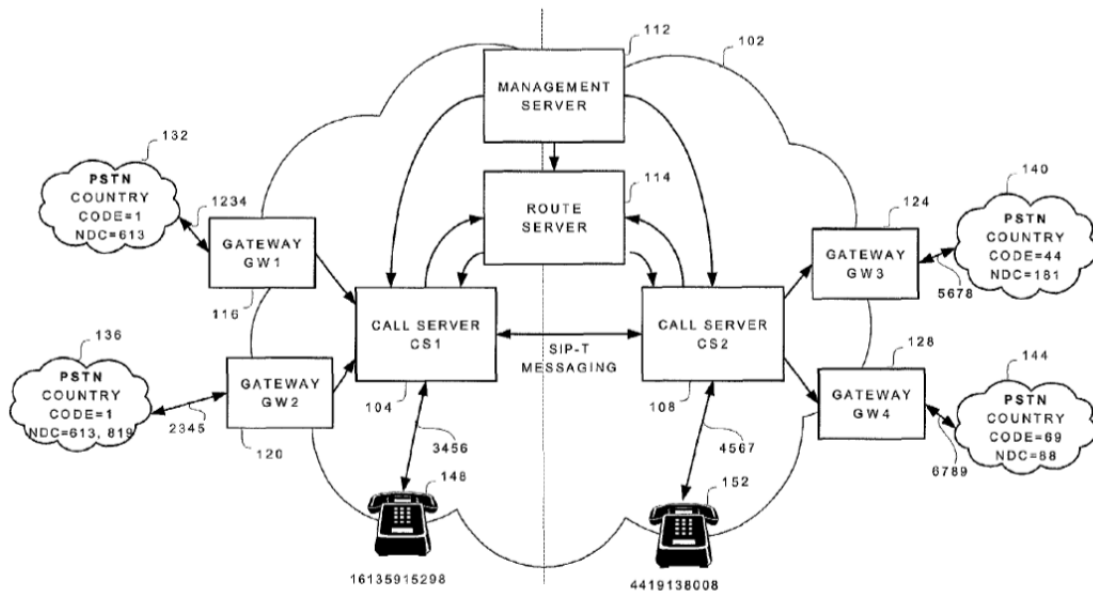


FIGURE 1

Hinchey discloses the use of both the E.164 public numbering plan and private numbering plans. Hinchey at [0042]-[0044]. Hinchey also discloses the use of prefix digits to distinguish between public and private numbering (e.g., ‘9’ to indicate a public number and ‘6’ to indicate a private number). *Id.* at [0047]. Hinchey further discloses a translation component and a call plan schema to interpret dialed digits. *Id.* at [0058].

b. The “Dial Plan Schema” of Hinchey Is Not a Caller Profile

Hinchey discloses “Input (Dial Plan) Schemas” 312 which contain “rules for interpreting a called alias or service code in the form of dialed digits.” Hinchey at [0058], Fig. 3, Tables 2-3. Hinchey discloses that “Schemas are defined by a management server 112 (see FIG. 1), and contain information defining the digit

patterns that are valid within the dial plan and the interpretation of those digit patterns”. *Id.* at [0058].

Hinchey does not disclose or suggest dial plan schemas are caller-specific. Rather, the dial plan schemas are defined by a management server 112 and utilized by a translations server 300 that is hosted by a call server 104, 108. Hinchey at [0054], Fig. 1, Fig. 3. Accordingly, there is no evidence that Hinchey’s dial plan schemas constitute a “caller dialing profile” as recited in the claims.

c. The Petition Does Not Assert That the Dial Plan Schemas of Hinchey Are Caller-Specific

The Petition does not assert that the dial plan schemas disclosed in Hinchey are caller-specific. The Petition does not cite Hinchey against any independent claim of the ’815 Patent, instead only citing it in connection with dependent claims 11, 38, 65, 85 and 104. Hinchey is only described with respect to the applied reformatting rules. Petition at 48-50, 52. Similarly, Petitioner’s Declarant describes Hinchey’s reformatting without mentioning whether it would constitute a caller dialing profile as recited in the claims. Ex. 1005 at ¶¶52-55.

Accordingly, Petitioner does not dispute that neither Scott nor Hinchey disclose a caller dialing profile. Further, as explained above, Petitioner has already admitted in the previous IPR proceedings that Chu ’684 does not disclose a caller dialing profile. Therefore, both obviousness grounds fail.

C. Grounds 1 and 2 Fail Because Petitioner has Misconstrued Claim 1 as Not Requiring an Order of Steps [1b] and [1d]

Petitioner has implicitly construed Claim 1 of the '815 Patent as not requiring a specific order between steps [1b] and [1d]. In fact, a proper construction of Claim 1 is that [1d] must occur after [1b]. Thus, Petitioner's combination is flawed, and the grounds fail. Additionally, because the parties' dispute regarding the obviousness of the claims is predicated on conflicting claim constructions, the Board must resolve claim construction before reaching a conclusion on obviousness.

1. Step [1d] depends upon step [1b]

In the '815 Patent, "classifying" in step [1d] is based on "said match" which refers to "match" in step [1c], which recites, *inter alia*, "determining a match when at least one of said calling attributes matches" Thus, "classifying" in step [1d] occurs after "determining a match" in step [1c]. The "classifying" in step [1d] must also occur after "locating a caller dialing profile" recited in step [1b] because "calling attributes" as recited in step [1c] finds antecedent basis in step [1b]. "[A] claim 'requires an ordering of steps when the claim language, as a matter of logic or grammar, requires that the steps be performed in the order written, or the specification directly or implicitly requires' an order of steps." *Mformation Techs.*,

Inc. v. Research in Motion Ltd., 764 F.3d 1392, 1398 (Fed. Cir. 2014) (citations omitted).

2. The Board Must Resolve a Claim Construction Dispute

Because the merits of Petitioner’s obviousness argument as to the timing of the “classifying” step depends on the proper construction of Claim 1, the Board must resolve claim construction before reaching a conclusion on the Petition’s obviousness theory. “Just as district courts must, ‘[w]hen the parties raise an actual dispute regarding the proper scope of ... claims, ... resolve that dispute,’ ... the Board also must resolve such disputes in the context of IPRs.” *Homeland Housewares, LLC, v. Whirlpool Corporation*, No. 16-1511, 2017 WL 3318764, at *2 (Fed. Cir. Aug. 4, 2017), citing *O2 Micro Int’l Ltd. v. Beyond Innovation Tech. Co.*, 521 F.3d 1351, 1360 (Fed. Cir. 2008) and *CSR, PLC v. Skullcandy, Inc.*, 594 F. App’x 672, 678 (Fed. Cir. 2014).

3. Petitioner Cites to Steps Performed in the Wrong Order

The feature of Chu ’684 that Petitioner asserts as corresponding to the step of “locating” in Claim 1 of the ‘815 Patent occurs *after* the feature that Petitioner asserts corresponds to the “classifying” step, contrary to the method of Claim 1.

Petitioner cites to Chu ’684 at 8:65-9:1 as disclosing “classifying.” Petition at 23-25. This sentence is in Chu ’684’s discussion of a determination made by the

server *before* communicating with the soft-switch. Referring to the process depicted in FIG. 6, Chu '684 states:

At step 608, after receiving all the dialed digits from the phone 101, server 110 consults its dial plan to determine whether the call is local, to another on-net phone, or to a phone that is on the PSTN. In this example, the call is to another on-net phone in another location. The server 110 then sends an SIP “invite” message to soft-switch 220 at the central office 205.

Chu '684 at 8:65-9:4 (emphasis added)

Petitioner cites to Chu '684 at 4:59-63, 9:30-33, 12:60-66 and 3:56-64 as teaching the step of “locating.” Petition at 21-22. Petitioner argues that “consult[ing] the dial plan for this subscriber,” corresponds to the locating step. *Id.* (citing Chu '684 at 9:30-33). But “consult[ing] the dial plan for this subscriber,” relates to a dial plan lookup that occurs *after* the soft-switch 220 has been contacted:

At step 610, upon receipt of the SIP “invite” message from the server 110, the soft-switch 220 consults the dial plan for this subscriber. The dial plan to use can be determined from the ID of the server 110.

Chu '684 at 9:30-33 (emphasis added)

Thus, Chu '684 teaches that “classifying” step 608 at the server is performed before the “locating” step 610 at the soft-switch. However, as discussed above in regard to Claim 1, “classifying” as recited in step [1d] is based on information

determined in the preceding “locating” step [1b]. Thus, Chu ’684’s “classifying” step 608 is distinct from “classifying” in element [1d], and, therefore, Petitioner’s obviousness theory fails for this additional reason.

D. Grounds 1 and 2 Fail Because Petitioner’s Proposed Combination Would be Inoperative

Applying the reformatting of Scott to the private and PSTN numbers in Chu ’684, as proposed by Petitioner, would render the resulting system inoperative because it would erroneously reformat private numbers. Instead, a PHOSITA would apply the reformatting of Scott to only PSTN numbers *after* classification because such a system would be operative. However, such a combination was purportedly not considered by Petitioner. The operative combination of Scott with Chu ’684 does not render the claims of the ’815 Patent obvious because it performs the step of reformatting after the step of classification. The only plausible explanation for Petitioner selecting an inoperative combination of the references over an operative combination is that Petitioner’s choice of the manner of combining Chu ’684 with Scott was informed by the claims of the ’815 Patent and not the teachings of the references themselves. Absent impermissible hindsight, there is no reason to combine the references to meet the claimed methods.

1. **Petitioner Has Proposed a Manner of Combining Chu '684 With Scott That Does Not Work**

Petitioner's proposed combination of Chu '684 with Scott renders Chu '684 inoperative. Petitioner specifically argues in its claim chart that Scott's "reformatting" would be combined with Chu '684 by inserting the "reformatting" *before* what Petitioner asserts is the "classifying" step of Chu '684 (element [1d]):

"Once the callee identifier is reformatted as taught by Scott, Chu '684 determines whether the callee is a private packet network subscriber or a public PSTN customer"

Petition at 24 (emphasis added)

Such a combination would be inoperative because it would erroneously reformat private numbers. The reformatting rules of Scott are directed solely to public telephone numbers. These rules would not be appropriate for private numbers and would cause private numbers to be rejected or corrupted unless the system of Scott was modified to allow private numbers to pass through unchanged.

Chu '684 discloses the use of *private telephone numbers* from a "private numbering scheme" (or "private numbering plan") for placing private network calls. Chu '684 at 9:13-20, 16:50-52. This "private numbering plan" is distinct from, and works in parallel with, the "public E.164 number plan" used for placing calls using public telephone numbers. For example, Chu '684 includes instructions for determining "whether the number plan is the private numbering plan *or* the

public E.164 number plan.” Chu ’684 at 9:16-17 (emphasis added); *see also id.* at 16:50-54 (“dialed digits” may be a “private number from a private numbering scheme” *or* a “public telephone number”) and 13:8-9 (distinguishing between the “private telephone number” and “E.164” number of a particular IP phone). Chu ’684 thus discloses that private numbers follow a numbering scheme distinct from public numbers.

Chu ’684 does not disclose or suggest a private telephone number would follow PSTN conventions such as using an “area code.” A skilled person would understand that Chu ’684’s “private numbering scheme” within an organization is not dictated by PSTN conventions because, as noted above, Chu ’684 distinguishes the handling of private numbers from public numbers. Petitioner fails to address how private telephone numbers in Chu ’684’s system would remain valid under Petitioner’s proposed combination with Scott.

Scott discloses reformatting dialed digits using an “E.164 translator” or “E.164 parser” that converts dialed digits representing public phone numbers into a standard format conforming to E.164 conventions. Scott at 65:41-43, 69:59-66, 70:15-35. Scott’s E.164 translation is specific to public phone numbers: “E.164 pattern tables are used to translate numbers to an E.164 form. The E.164 parser system is based on emulating the telephone number interpretation typically performed by PSTN switches.” *Id.* at 72:36-39. *See also id.* at 69:59-7:8, 16:64-67.

Petitioner proposes reformatting the digits dialed by a user in the system of Chu '684 based on the E.164 translation disclosed in Scott and then feeding those digits back into Chu '684 at step 608. Petition at 24-25. In both the present proceeding and in the previous proceedings, IPR2016-01201 and IPR2016-01198, Petitioner's proposed modifications to Chu '684 in light of a secondary reference insert PSTN number reformatting into Chu '684 before the classification at step 608.

Thus, Petitioner's manner of combining Chu '684 with Scott is inoperative for the same reasons that the proposed combination was inoperative in the previous proceedings IPR2016-01201 and IPR2016-01198. Specifically, applying Scott's reformatting to Chu '684's private and public numbers would result in mishandling of private numbers. This problem was explained in detail by Patent Owner's expert Dr. Mangione-Smith in the previous IPR proceedings. Ex. 2009 at ¶¶76-84. As Dr. Mangione-Smith states: "A skilled person would appreciate that a private number should not be fed into an algorithm or method which is designed for matching or manipulating public numbers, because the private numbers could be misclassified. ... This is an error that is committed in the combinations proposed by Petitioner." Ex. 2009 at ¶81. The present Petition makes the identical error, namely proposing to reformat Chu '684's private *and* public numbers using a scheme intended only for public numbers. Thus, Petition's proposed combination

of Chu '684 and Scott would result in a system in which private numbers would be improperly modified (corrupted), rejected, or misclassified, resulting in a system that could not reliably complete private network calls.

A PHOSITA would have understood this and would have avoided combining the references in the manner suggested by Petitioner to avoid this problem. In this proceeding, Petitioner does not acknowledge this shortcoming of the proposed modification, much less provide some manner in which a PHOSITA might overcome this problem. If a proposed modification would render the prior art invention being modified inoperable for its intended purpose, then there is no suggestion or motivation to make the proposed modification. M.P.E.P. 2143.01(V) (citing *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984)). The Petition's proposed combination would be inoperable. Accordingly, the Petition provides no suggestion or motivation to make the proposed modification.

2. Petitioner Acknowledged In the Previous IPR Proceedings That the Manner of Combination Was Defective

Petitioner's proposed manner of combining Chu '684 and Scott effectively causes all dialed digits, irrespective of whether they are public or private numbers, to be fed into a reformatting algorithm designed only for reformatting public numbers. The identical issue was brought up in the previous IPR proceedings. Petitioner's Declarant acknowledged in his deposition that a simple combination of

Chu '684 with a PSTN reformatting algorithm would not work, but struggled to describe what algorithmic changes were needed to correct the problem.

Petitioner's Declarant attempted to address some problems arising from the Petition's proposed combination during his deposition. Instead of explaining how the proposed combination of references would handle real-world example calls, Petitioner's Declarant concocted a patchwork of inconsistent *ad hoc* solutions that aren't taught in any reference. In analyzing certain hypothetical scenarios, Dr. Houh found it necessary to adopt new theories (not present in the Petition or Declaration) of how Chu '684 would be combined with a PSTN based reformatting algorithm. Dr. Houh's new theories were justified only by conclusory statements based on hindsight about what a skilled person would do. Ex. 2011 at 133:15-156:5; Ex. 2009 at ¶67.

For example, Dr. Houh was asked to analyze Petitioner's proposed combination for a private number starting with "1" (extension "101"). Ex. 2011 at 133:15-143:10. When asked if matching the NDD would lead to corruption of "101", Dr. Houh responded that a skilled person would know how to avoid corruption by testing the number of digits dialed. *Id.* at 139:8-21 and 140:8-12 (otherwise it "would not make sense"). Dr. Houh thus proposed inserting a new length test not taught by the references simply to circumvent corruption, thereby

departing from the algorithm actually taught in the secondary references. *Id.* at 138:20-139:25.

In another example, Dr. Houh was asked to analyze German-style dialing (which allows 4-digit PSTN numbers) in a PBX system with 4-digit extensions. *Id.* at 143:11-149:14. Dr. Houh recognized that, in this scenario, the “length test” he had added was inadequate to avoid dialing errors (i.e., 4-digit private extensions would be misclassified and corrupted because they cannot be distinguished from PSTN numbers based on length alone).

Q. So if we return to Figure 6, assuming that the -- the settings are set for the country of Germany and the user has dialed an extension 2-002, how would that be handled in Figure 6?

A. Well, I mean, let me just say this:

You're talking about all sorts of variations and all sorts of country codes, and it – it does say in Germany that the minimum local length is 4. And so in -- in that particular case, it -- you know, in that particular case, one of ordinary skill in the art would want to figure out how to resolve certain of these situations, and -- and it appears that that particular number would be considered a local call, in which case other steps in Figure 6 would happen. But that doesn't mean this combination

doesn't work. It works totally fine within boundaries of -- of understanding these kinds of issues.

And so if one were a PBX manufacturer in Germany, one would probably limit the extensions to three-digit extensions or have another dial plan. For example, forcing one to dial a certain way for internal calls versus external calls, such as what many PBXs do, which requires one to dial nine. But one may require someone to dial eight before dialing an internal extension, for example. That happens to be that four-digit thing.

Ex. 2011 at 143:19-144:19 (emphasis added).

Again, Dr. Houh found it necessary to propose new theories not previously stated, such as that a PBX manufacturer might prohibit using 4-digit extension numbers. In a desperate attempt to salvage the inoperable combination, Dr. Houh also proposed an alternative combination that the system might require the use of prefix digits to distinguish between PSTN and internal numbers such that reformatting would only apply to PSTN numbers. But this new combination contradicts Dr. Houh's original proposed combination. In the new combination, the dial plan would be processed in step 608 of Chu '684 to classify the call *first* (as "public" or "private"), and then reformatting would occur afterward *only* for public numbers. This order of steps is opposite the originally proposed order.

Regardless, Dr. Houh acknowledged that a simple combination of the unmodified secondary reference with Chu '684 would result in improper treatment of private numbers, but asserted that one could “figure out how to resolve certain of these situations.” *Id.* This admission confirms that the combination as proposed without making such unspecified changes would not work.

Dr. Mangione-Smith explained Dr. Houh admission that changes would need to be made to the secondary reference to accommodate private numbers: “Dr. Houh presented multiple inconsistent versions of the combination in different scenarios that were presented to him to analyze in response to various problems identified by his questioner. Dr. Houh did not adhere to the specific reformatting algorithms that were disclosed in [the secondary references] but instead, proposed the addition and deletion of many algorithmic steps in the different scenarios.” Ex. 2009 at ¶67. Likewise, Chu '684's system, if combined with Scott's unmodified algorithm, would erroneously interpret a digit string starting with “1” as a national call. Scott at 67:7-35.

Dr. Houh, in the present proceeding, is not unaware of these difficulties in combining the references, but his Declaration is silent as to how to remedy the inoperability of the combination. The best explanation is that he has no solutions.

Accordingly, Petitioner's proposed method of inserting a public number reformatting algorithm *before* Chu '684's step 608 would not work unless

unspecified changes were made to the reformatting algorithm. Indeed, the very need for Dr. Houh to devise numerous *ad hoc* solutions to various conflicts between the use of private and public numbers in the previous IPR makes it clear that Petitioner's proposed combination would be inoperative.

3. Petitioner Has Not Refuted the Patent Owner's Previous Arguments Regarding the Inoperative Nature of the Proposed Combinations

As pointed out above, in the previous IPR proceedings, the Declarant acknowledged that inserting a PSTN number reformatting algorithm into the system of Chu '684 before classification would corrupt private numbers and therefore the algorithm would need numerous changes. The Patent Owner pointed out this defect in the proposed combination in its Response and in the Declaration submitted by expert Dr. Mangione-Smith. Ex. 2002 at 50-57, Ex. 2009 at ¶¶76-84.

Yet, despite the testimony by Petitioner's Declarant during his deposition, Petitioner never submitted any new evidence or expert testimony to fix the proposed combination in the previous IPR proceedings. Petitioner's Reply makes no mention of how to address the problem of corrupting private numbers or the acknowledged need for changes to the proposed combination and does not even attempt to address the Patent Owner's arguments that the proposed system is inoperative. Ex. 2003. Thus Patent Owner's explanation that the proposed combination is inoperative remains unrefuted. The identical reasoning applies to

the present case because (a) Petitioner similarly asserts that the PSTN number reformatting algorithm of Scott would be combined with Chu '684 in the same manner as the secondary references in the previous IPR proceedings, (b) Petitioner similarly fails to recognize that Chu '684 cannot be simply modified according to Scott's teachings without corrupting private numbers, and (c) Petitioner similarly makes no attempt to clarify what further modifications beyond the teachings of Scott would be necessary to avoid the problem.

4. Reformatting Only Calls Destined for the PSTN Would be the Operative Manner of Combination

As explained below, the PBX in Chu '684 uses a prefix digit to allow user-specified classification of dialed digits into either public or private numbers. Scott discloses reformatting of only PSTN numbers. Thus, an operable way of combining Scott with Chu '684 that avoids corrupting private numbers would be to simply apply Scott's reformatting only to PSTN numbers, *after* the call is classified as a public call. This sensible manner of combining the references was not considered by Petitioner though it results in an operable system. Further, this sensible combination does not meet the elements of the independent claims.

a. Chu '684 Classifies Calls Using a Prefix Digit As Is Standard For PBX Systems

Petitioner relies on step 608 in Chu '684 as providing the step of classifying in claim element [1d]. Chu '684 at 8:65-9:1. Chu '684 provides no express

teaching about how step 608 would work. In the absence of any teaching, a PHOSITA would rely on PBX practices well-known in the art, namely: a PHOSITA would expect the server 110 to determine that a called number is a PSTN public number if the dialed digits start with the PSTN prefix (e.g., “9”), and then interpret the rest of the digits as a PSTN dialing string that follows the “public E.164 number plan”. The evidence for this conclusion is laid out in the previous IPR proceedings by Dr. Mangione-Smith, who shows that virtually all PBX systems followed the convention of using a prefix digit to classify calls, thus a PHOSITA would expect this feature in Chu ’684’s PBX. Ex. 2009 at ¶¶30-47, 72, Ex. 2012, Ex. 2013, Ex. 2014. This conclusion is reinforced by Hinchey, which discloses the co-existence of both public and private numbering schemes and the use of prefix digits to distinguish between them. Hinchey at [0047].

b. Petitioner’s Assertion That Chu ’684 Does Not Operate Like a Conventional PBX is Unsupported

In the previous IPR proceedings IPR2016-01201 and IPR2016-01198, the Patent Owner explained in the Response that Chu ’684 classifies calls using a prefix digit as is standard for PBX systems. Ex. 2002 at 48. The Patent Owner also provided expert testimony of Dr. Mangione-Smith in support of the explanation. Ex. 2009 at ¶¶30-47, 72. Dr. Mangione-Smith relied on numerous publications as supporting evidence. *Id.*

Petitioner asserted in their Reply that Chu '684 did not rely on a prefix digit to classify calls, but did not submit any expert testimony or other evidence to support their allegation, only attorney argument. Ex. 2003 at 17-21. The attorney argument in the Reply is fundamentally flawed. Petitioner cites only to a single passage in Chu '684 (Chu '684 at 13:12-20) as supposed evidence that Chu '684 doesn't utilize a prefix digit, but that passage of Chu '684 in no way supports Petitioner's allegation. Petitioner relied on Chu '684 at 13:15-18:

“From the dialed digits (of a destination phone that is being called, PSTN phone 1301), ingress soft-switch 220, determines that this call is for the PSTN.”

Ex. 2003 at 18.

This passage merely states that Chu '684 can determine that a call is destined for the PSTN based on the dialed digits. The passage does not state that those dialed digits do not include a dialed prefix digit. The passage, which describes soft-switch 220, is also irrelevant because the “classification” step relied upon in the Petition occurs in a completely different piece of hardware, server 110.

Notably, Petitioner cited no other teachings in Chu '684 that support their allegation that Chu '684 does not utilize a prefix digit. One would expect that if Chu '684, which discloses a PBX system, were to employ a mechanism that deviated from the standard way that PBX systems operated, the authors of the

specification would have made a point of describing such a mechanism. Petitioner thus argued that the system of Chu '684 operates in some unusual and undisclosed way to classify calls rather than relying on practices ubiquitous in PBX systems. As the Patent Owner explained in the previous IPR proceedings, while Chu '684 does not explicitly disclose the use of a prefix digit, there is nothing in Chu '684 that is inconsistent with the use of prefix digits, and there is no teaching in Chu '684 of any other method. Furthermore, Petitioner provided no explanation for how the system of Chu '684 would otherwise classify calls. Accordingly, the attorney arguments provided in the Reply of the previous proceedings regarding the lack of prefix digits are unsupported and should be ignored.

In the present IPR, Petitioner, having the opportunity to provide more explanation and evidence on how Chu '684 might classify calls without a prefix digit, fails to do so. Petitioner's Declarant is similarly silent. Petitioner provides no evidence of what a PHOSITA would know about classifying calls in Chu '684 without a prefix digit, nor any refutation of Patent Owner's evidence that a PHOSITA would be lead to use a prefix digit. The use of a prefix digit in Chu '684 to classify calls would lead to a combination with Scott such that reformatting occurs *after* classification, in contrast to the claims at issue in this proceeding.

c. Petitioner's Declarant Admitted That Using a Prefix Digit With Chu '684 Would Solve The Corruption Of Private Numbers

In the previous IPR proceedings IPR2016-01201 and IPR2016-01198, Petitioner's Declarant struggled to explain how an algorithm designed to reformat PSTN numbers would avoid corrupting private numbers. During his deposition, During his deposition, Dr. Houh was asked about whether using a PSTN prefix digit (e.g., "9") would be a solution that would allow a private number to pass through the reformatting step without being changed or misinterpreted. Dr. Houh agreed that this would work:

Q. (By Mr. Thomas) Would the -- I'm trying to understand the use of a prefix digit. If you used a prefix digit like 9, would that be a solution that would allow a PBX extension to pass through the reformatting step without being changed or misinterpreted as a PSTN number?

MR. HART: Object to form.

A. Well, I mean, typically when -- when one dials a nine on a PBX, that's a signal to the PBX that the intention is to dial an outside number. And not internal, like a line on the same PBX.

And so one knows that if nine is the -- the number to get an outside line, that the intention of the user is to dial out to the PSTN. So, you know,

I -- I think your question is: Would you pass those through unaltered? But I think when you know the intention of the user -- when one of ordinary skill in the art knows that intention, that the point of the -- of the [secondary reference] is to reformat calls to the -- to the PSTN. And so it would be, in the combination, one – even if the user dialed nine, the rest of the digits could be easily passed through the algorithm of the [secondary reference] when one has dialed a fully compliant outside line number.

Ex. 2011 at 155:6-156:4 (emphasis added)

Thus, Dr. Houh acknowledged that using a prefix digit allows PSTN digits to be “easily passed” through a PSTN-based reformatting algorithm (i.e., without having to make the changes that he described elsewhere in his deposition). Dr. Houh also testified that one way to avoid corruption of 4-digit German-style PSTN numbers would be to use two different prefix digits, e.g., 9 for PSTN numbers and a different prefix digit, e.g., 8, for internal calls. *Id.* at 143:19-144:19. Thus, reformatting only PSTN numbers after classification using a prefix digit would solve the corruption problem. It is clear that this manner of combining the references is superior to the inoperable combination proposed by Petitioner.

d. Petitioner's Proposed Combination Is Based on Hindsight

The Petition's claim chart states that: "Once the callee identifier is reformatted as taught by Scott, Chu '684 determines whether the callee is a private packet network subscriber or a public PSTN customer" Petition at 24. Petitioner's proposed combination thus performs Scott's reformatting before the classifying step of Chu '684's server 110. But, as explained above, this would be inoperable. The Petition does not explain why it would have been obvious to combine the references in this manner when the "easily" operable manner of combining references would be to reformat dialed digits after classification, e.g., at the soft-switch 220, at the PSTN gateway 1302, or in equipment downstream of the PSTN gateway, such that reformatting is only performed on PSTN numbers.

Dr. Houh was asked in his deposition why he proposed reformatting before classification rather than after classification. He did not provide any justification for his proposed manner of combination and merely answered with a conclusory statement belying his use of hindsight that "that's the way the combination works", while acknowledging that "I suppose there are alternatives". Ex. 2010 at 97:20-98:14. Dr. Houh admitted that he hadn't even considered a combination that performed reformatting after classification: "I haven't considered, really -- I mean, the steps you'd take. I'd have to think about, you know, whether that makes sense or could be done that way." Ex. 2011 at 247:12-248:22.

Only referencing the '815 Patent and its claims would lead to Petitioner's proposed manner of combining Chu '684 with Scott. Without making other changes which Petitioner has not explained or specified, such a manner of combination is inoperative. Furthermore, a different manner of combination, which does not read on the claims, is more logical and is operative. The use of Claim 1 as the blueprint for combining references constitutes impermissible hindsight. *In re McLaughlin*, 443 F.2d 1392, 1395 (C.C.P.A. 1971).

E. Grounds 1 and 2 Fail Because Petitioner's Proposed Motivation to Combine is Flawed

Petitioner articulates a flawed motivation to combine Chu '684 with Scott. Specifically, Petitioner asserts that users in Chu '684 are unable to place calls "as if they were dialing from a standard PSTN phone". Petition at 19. Petitioner cites no supporting evidence that Chu '684 suffers from this alleged deficiency. In fact, as explained above, a user in Chu '684 would simply dial a prefix digit (e.g. "9") and then dial using standard PSTN conventions as though they were dialing from a standard PSTN phone as expected by the local PSTN switch. Petitioner, facing this same argument in the previous IPR proceedings, did not refute it. Thus, because the motivation to combine is unsupported, the combinations fail.

1. Petitioner Cites to a Non-Existent Deficiency in Chu '684 as a Reason to Combine References

In the previous IPR proceedings IPR2016-01201 and IPR2016-01198, Petitioner alleged, as they do in this proceeding, that: “a POSITA would have recognized that allowing users to place calls as if they were dialing from a standard PSTN phone would be desirable, creating a system capable of supporting a more intuitive and user-friendly interface.” Petition at 19. *See also* Ex. 2001 at 19. This statement repeats almost identical assertions in Dr. Houh’s Declarations in both previous IPR proceedings and the present one. Ex. 1005 at ¶¶35-39, Ex. 2008 at ¶¶35-39.

In the previous IPR proceedings, the Patent Owner explained in the Response that there was no citation to Chu '684 to support the alleged deficiency. Ex. 2002 at 64. Dr. Mangione-Smith also explained in his Declaration that Dr. Houh “fails to adequately explain the deficiency being addressed” and that in the system of Chu '684 “the users would dial PSTN ‘public numbers’ based on the location of the customer premises 105.” Ex. 2009 at ¶66. The Patent Owner also filed a motion to exclude Dr. Houh’s testimony based on the fact that:

“Dr. Houh’s assertion in Ex. 1006 of [a] deficiency in Chu '684 is based on no evidence that Chu '684’s system failed to allow users to ‘place calls as if they were dialing from a standard PSTN phone’.

Indeed, this alleged deficiency in Chu '684 is unsupported by any citation to Chu '684 or explanation.”

Ex. 2004 at 1

Thus, for the identical reasons stated in the previous IPR proceedings, Petitioner has failed to provide articulated reasoning with some rational underpinning to support the legal conclusion of obviousness as required by *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007). The Declaration, at best should be accorded little or no weight under 37 C.F.R. § 42.65(a) as being unsupported by evidence. Accordingly, Petitioner's reason to combine does not originate from either reference, but is instead an unsupported artificial construct.

2. Petitioner's Arguments That Users of Chu '684 Cannot Dial As If On the PSTN Are Unsupported

In the previous IPR proceedings, Petitioner did not refute, in their Reply, the Patent Owner's arguments that Chu '684 did not possess the alleged deficiency discussed above. Ex. 2003. Only in the Opposition To Patent Owner's Motion To Exclude did Petitioner address this issue, and without any expert testimony or evidence, only with unsupported attorney argument. Ex. 2006 at 7-11. But the attorney argument is fundamentally flawed.

First, Petitioner asserts that “IP phones, conversely, are not tied to any specific physical location and thus do not inherently provide the user an option to dial short form numbers.” *Id.* at 8. However, this assertion is made with no

support and contradicts Chu '684's express teachings. The IP phones disclosed in Chu '684 are specifically tied to the physical location of customer premises 105, as Dr. Mangione-Smith explained in his Declaration. Chu '684 at 4:24-28, Ex. 2009 at ¶66. Petitioner's attorney argument is not only unsupported, it is wrong.

Petitioner also stated that "some additional functionality must be provided to an IP-based telephony service to allow users to dial as if they were calling from a PSTN phone." Ex. 2006 at 8. Again, this is attorney argument without any citations to any evidence and without any support by expert testimony. This unsupported argument is also wrong. As Dr. Mangione-Smith explained, the IP phone system of Chu '684 is no different in this respect than traditional PBX systems and would be capable of PSTN dialing based on the PSTN conventions of the installed location. Ex. 2009 at ¶66; *see also* Ex. 2007 at 1-4.

Thus, Petitioner's unsupported and incorrect allegations did not refute the Patent Owner's argument presented in the previous IPR proceedings, and they do not provide support for the present proceeding. Instead, the Petition's stated motivation to combine Chu '684 with a secondary reference is based on an alleged deficiency in Chu '684 that does not actually exist. Petitioner's only arguments to the contrary lack evidence, and are merely an attempt to cover over a flaw in the Petition via unsupported attorney argument.

F. This Follow-On Petition Should be Denied Under 35 U.S.C. §§ 314(a) and/or 325(d)

This is not Petitioner's first Petition attacking this patent. Petitioner first challenged this patent on June 15, 2016. Ex. 2017 (IPR2016-01201 Paper 3 Notice of Filing Date Accorded). Petitioner filed this second Petition one year later, on May 9, 2017, the last day before Petitioner would have been statutorily barred from filing another petition.¹ Petitioner similarly filed serial petitions against related U.S. Pat. No. 9,179,005. A summary of these serial challenges is provided in the table below:

<u>Patent</u>	<u>IPR #1 Case No.</u>	<u>Filed</u>	<u>Ind. Claims</u>	<u>FWD Due</u>	<u>IPR #2 Case No.</u>	<u>Filed</u>	<u>Ind. Claims</u>
'815	IPR2016-01201	6-15-16	1, 27, 28, 54, 74, 93	11-21-17	IPR2017-01399	5-9-17	1, 28, 54, 74, 93
'005	IPR2016-01198	6-15-16	1, 26, 50, 74, 94, 99	11-21-17	IPR2017-01398	5-9-17	1, 26, 50, 74

By waiting nearly an entire year, Petitioner had the benefit of learning from the various papers and developments in the first IPR, including Patent Owner's Preliminary Response, the Board's Institution Decision, Patent Owner's Response, and seven depositions.

¹ Voip-Pal served Apple with a complaint alleging infringement of the '815 Patent on May 9, 2016.

Petitioner's manipulation of the proceedings to submit an additional, last-minute, Petition without explanation for the belated filing is a cynical attempt to abuse the Board's processes in the hopes of further draining Patent Owner's resources. Indeed, this same Petitioner has attempted similar serial attacks on Patent Owners in the past, which the Board has found inappropriate. *See, e.g., Apple Inc. v. Immersion Corp.*, IPR2017-00896, slip op. at 17 (P.T.A.B. Aug. 17, 2017) (Paper 10) ("Petitioner's strategy of morphing its challenges over multiple petitions based on the Board's feedback imposes inequities on Patent Owner.") and *Apple Inc. v. Immersion Corp.*, IPR2017-00897, slip op. at 12 (P.T.A.B. Aug. 17, 2017) (Paper 11) ("We view Petitioner's strategy in this particular case as burdensome to Patent Owner and the Board with no persuasive explanation of why it should be allowed."). This approach of serially attacking the same patent is indefensible and should be denied under 35 U.S.C. §§ 314(a) and/or 325(d).

Further, as explained below, all of the claims challenged in the present Petition depend from independent claims challenged in the first Petition. Thus, this present Petition is a thinly veiled attempt to get a second bite of the apple by attacking the same independent claims challenged in the first Petition. Moreover, Petitioner will be estopped from challenging these independent claims well before any significant post-institution developments in the present proceeding could arise. This manipulation of the proceedings in order to waste Board and Patent Owner

resources represents an independent reason why the Board should deny this petition under 35 U.S.C. §§ 314(a) and/or 325(d).

1. The Petition Is Unjustified Under the Factors For 35 U.S.C. § 314(a)

The Board has provided the following factors as relevant to that concern when deciding whether to exercise their discretion to not institute review under 35 U.S.C. § 314(a):

(a) whether the same petitioner previously filed a petition directed to the same claims of the same patent;

(b) whether the petitioner knew or should have known of the prior art asserted in the later petition when it filed its earlier petition;

(c) whether at the time of filing of the later petition, the petitioner already received the patent owner's preliminary response to the first petition or received the Board's decision on whether to institute review in the earlier petition;

(d) the length of time that elapsed between when the petitioner had the patent owner's or Board's analysis on the earlier petition and when petitioner filed the later petition; and

(e) whether the petitioner provides adequate explanation why we should permit another attack on the same claims of the same patent. *See Akamai Technologies, Inc. v. Limelight Networks, Inc.*, IPR2017-00358, slip op. at 9

(P.T.A.B. May 2, 2017) (Paper 9); *Xactware Sols., Inc. v. Eagle View Techs., Inc.*, IPR2017-00034, slip op. at 7–8 (P.T.A.B. April 13, 2017) (Paper 9).

As detailed below, each of these factors weight toward denial of the Petition.

a. Same petitioner, same independent claims

Petitioner previously filed a petition against the '815 Patent (IPR2016-01201). This second Petition states it is challenging a different set of claims. Petition at 1. However, as Petitioner admits, the claims challenged in this second petition all depend from independent claims challenged in the first Petition. *Id.* In view of this, Petitioner further admits that the Petition includes a demonstration of how the elements of those independent claims are obvious over the cited references. *Id.* None of the dependent claims challenged in this second Petition have been asserted against Petitioner in litigation, but the independent claims have been. As discussed *infra* in Section II.F.2, the USPTO has taken the position that an attack on a dependent claim is necessarily an attack on the underlying independent claim. Petitioner is using this second Petition as an opportunity for a second challenge of those independent claims. As such, this factor weighs against institution.

b. Petitioner uses the same primary reference, and should have known of the second reference

Petitioner uses the same primary reference that it used in the first Petition,

Chu '684. The secondary reference, Scott, is an issued U.S. patent, which readily could have been identified earlier. Further, Petitioner uses Scott in a manner nearly identical to the manner in which Petitioner used the secondary references in its first Petition. *Compare* Petition at 20-48 *with* Ex. 2001 at 20-36, 41-58. Petitioner does not attempt to explain why Scott could not have been asserted earlier. Thus, this factor weighs against institution.

c. The earlier proceeding was far along when second Petition was filed

Petitioner waited until the eve of the statutory bar to file the second Petition, and by so doing, availed itself of numerous of Patent Owner briefings and the Board's Institution Decision. By May 9, 2017, the first IPR had advanced considerably. In the first IPR, Patent Owner had filed its Preliminary Response (Paper 5), the Board had issued its Institution Decision (Paper 6), Patent Owner had filed its Response (Paper 17) which was accompanied by a substantial amount of evidence and declaration testimony, and the parties had completed all seven of the depositions taken in the proceedings.² Thus, Petitioner had availed itself of every possible briefing and piece of evidence prior to the statutory bar date, maximizing its gamesmanship over the two proceedings. Accordingly, this factor

² Patent Owner deposed Petitioner's sole declarant, Dr. Houh. Petitioner deposed six of Patent Owner's declarants, but only filed deposition transcripts for five of the six depositions. The deposition transcript for Ryan Purita was never filed.

weighs strongly against institution.

d. Nearly a year had lapsed between petition filings

Petitioner filed this second Petition on May 9, 2017. This provided Petitioner substantial time to review Patent Owner's filings and the Board's decision in the first IPR. The Preliminary Response and the Board's Institution Decision were available to Petitioner for nearly 6 months prior to filing the second Petition. Petitioner even had the Patent Owner Response for nearly 3 months before filing the second Petition. Thus, Petitioner had ample time to take advantage of those materials in crafting its arguments in its second Petition. Yet Petitioner attempts no explanation for the delay in filing the second Petition. This factor also weighs strongly against institution.

e. Petitioner does not explain the purpose for its belated second attack

Petitioner provides no explanation for this belated second Petition. Petitioner merely states it is challenging a different set of claims. Petition at 1. But Petitioner provides no reason for why it took nearly a year to stage this second attack. Further, as discussed above, Petitioner admits that all claims challenged in this second Petition depend from independent or dependent claims challenged in the first Petition, and, therefore, this second Petition includes demonstration of how the elements of those previously-challenged independent claims are obvious

over the cited references. *Id.* As discussed *infra* in Section II.F.2, the USPTO has taken the position that an attack on a dependent claim is necessarily an attack on the underlying independent claim. In view of the overlap of the two Petitions, it was incumbent on Petitioner to at least provide a minimal explanation for why the Board should permit this second attack. But Petitioner provides nothing. Petitioner's attempt to maximize the time between these proceedings serves only to waste Board and the parties' resources. Since Petitioner provides no explanation for this second attack, this factor weighs strongly against institution.

f. Conclusion

Petitioner staggered these two petitions for nearly a year. The second Petition attacks dependent claims not asserted in the litigation, but, curiously, all the independent claims upon which these challenged claims depend were challenged in the first Petition. This same Petitioner has attempted similar serial attacks on Patent Owners in the past, which the Board has found inappropriate. *See, e.g.*, IPR2017-00896 (Paper 10) and IPR2017-00897 (Paper 11). Petitioner's invitation to waste Board and parties' resources by serial attacks staggered nearly a year apart should be rejected.

2. **Petitioner will be estopped from maintaining this proceeding**

Petitioner will be estopped from maintaining its challenge of all underlying independent claims in the present proceeding upon issuance of a final written decision in the first IPR. Thus, instituting trial on this second Petition would be a waste of the Board's and the parties' resources.

35 U.S.C. § 315(e)(1) provides:

The petitioner in an inter partes review of a claim in a patent under this chapter that results in a final written decision ... may not request or maintain a proceeding before the Office with respect to that claim on any ground that the petitioner raised or reasonably could have raised during that inter partes review.

As discussed *supra* in Section II.F.1, Petitioner has admitted that all claims challenged in this second Petition depend from independent or dependent claims challenged in the first Petition. Petition at 1. Petitioner claims to “provide[] a mapping” of all such previously-challenged independent or dependent claims. *Id.* Petitioner asserts, however, that it “does not otherwise challenge such claims in the present Petition.” *Id.* Petitioner's assertion is contrary to the USPTO's position on this issue. In front of the Supreme Court in *Cuozzo Speed Technologies, LLC v Lee*, the USPTO has taken the position that an obviousness challenge of a dependent claim (claim 17 in *Cuozzo*) is necessarily a challenge of all claims upon

which it depends (claims 10 and 14 in *Cuozzo*): “the Government replies ... claims 10, 14 and 17 are all logically linked; the claims ‘rise and fall together’” *Cuozzo Speed Technologies, LLC v Lee* 579 U.S. ____ (2016). See also *In re Cuozzo Speed Technologies, LLC* 793 F.3d 1268, 1281 (Fed. Cir. 2015)(“Any grounds which would invalidate claim 17 would by necessary implication also invalidate claims 10 and 14. *Callaway Golf Co. v. Acushnet Co.*, 576 F.3d 1331, 1344 (Fed. Cir. 2009) (‘A broader independent claim cannot be nonobvious where a dependent claim stemming from that independent claim is invalid for obviousness.’).”).

Thus, the USPTO’s position is that, when a dependent claim is challenged as being obvious, such challenge is necessarily also a challenge to the underlying independent claim because the dependent claim’s patentability is “logically linked” to the underlying independent claim, and a challenged dependent claim and its underlying independent claim “rise and fall together”. Accordingly, in this second Petition, Petitioner’s challenge of dependent claims is necessarily also a challenge to the underlying independent claim because the challenged dependent claim’s patentability is “logically linked” to the underlying independent claim, and the independent claim “rise[s] and fall[s] together” with the challenged dependent claim.

Petitioner, upon issuance of a final written decision in the first IPR, will be statutorily estopped from maintaining before the Office its challenge of all independent claims challenged in the first IPR. Since the USPTO's position is that a Petitioner's challenge of dependent claims is necessarily also a challenge to the underlying independent claim, and since Petitioner will be will be statutorily estopped from maintaining before the Office its challenge of all independent claims challenged in the first IPR, Petitioner will necessarily be unable to maintaining its challenge of all challenged dependent claims in the second Petition.

A final written decision in the first IPR is due November 21, 2017, which is prior to the due date for the institution decision in this second IPR. Even if an institution decision for this second proceeding were to issue slightly prior to November 21, 2017, Petitioner will be shortly thereafter estopped from maintaining this second IPR. Accordingly, instituting trial on this second Petition would be a waste of the Board's and the parties' resources.

The Board has denied institution of IPR when this issue was similarly considered in other proceedings. In *Alarm.com Inc., v. Vivint, Inc.*, IPR2016-01124, slip op. at 14 (P.T.A.B. Dec. 5, 2016) (Paper 11) (emphasis added)(citations omitted), the Board held:

We additionally note that each of the challenged claims depends from claims that are already subject to *inter partes* review in Case

IPR2016- 00161, namely claims 9 and 17. Although Alarm.com states that claims 9 and 17 are not being challenged in the instant Petition (see Pet. 1 n.1, 8 n.3), ***the patentability of those claims necessarily also would be at issue if an inter partes review were instituted in this proceeding***, posing a risk of inconsistent or even contrary final written decisions in this proceeding vis-à-vis Case IPR2016-00161.

...

Moreover, the statutory deadline for issuing a final written decision in Case IPR2016-00161 regarding independent claims 9, 17, 25, 27, and 28 of the '654 patent is May 12, 2017, long before any final written decision would issue if we were to institute review in the instant Petition. ***Therefore, even if we instituted an inter partes review in the instant Petition, Alarm.com would be estopped from maintaining this proceeding with respect to those independent claims.***

See also Blue Coat Systems, Inc., v. Finjan, Inc., IPR2016-01441, slip op. at 11 (P.T.A.B. January 23, 2017) (Paper 14) (emphasis added) (citations omitted):

Furthermore, ***because each of the claims challenged in the instant Petition depends from a claim challenged in the related proceeding, consideration of the Petition necessarily requires consideration of claims already challenged in the related proceeding.***

See also Toyota Motor Corporation v. Cellport Systems, Inc., IPR2015-01422, slip op. at 20-21 (P.T.A.B. Dec. 16, 2015) (Paper 8) (emphasis added):

Second, even if we were to institute a second *inter partes* review involving claims 12–21, ***Petitioner might be unable to “maintain” the second inter partes review upon issuance of a final written decision in IPR2015-00633. ... Thus, instituting a second inter partes review may result in a significant waste of time and resources for the parties and for Board.***

This result does not create an unfair result to Petitioner since it was Petitioner, not Patent Owner or the Board, who chose the claims it would challenge in the first Petition. *See Blue Coat Systems, Inc., v. Finjan, Inc.*, IPR2016-01441, slip op. at 13 (P.T.A.B. January 23, 2017) (Paper 14) (“Petitioner’s decision to limit the scope of its earlier challenges appears, instead, to have been a tactical one meant to improve its likelihood of success in [the earlier petitions].”).

Since Petitioner will be estopped from maintaining a challenge of all underlying independent claims in this second proceeding upon issuance of a final written decision in the first IPR, instituting trial on this second Petition would be a waste of the Board’s and the parties’ resources. Accordingly, institution of an IPR trial should be denied for this second Petition.

III. CONCLUSION

The Petition fails to establish a reasonable likelihood that Claims 3-4, 8-9, 11-12, 14-16, 30-31, 35-36, 38-39, 42-43, 61, 65-66, 81, 85-86, 100, and 104-105 of the '815 Patent are unpatentable. Therefore, the Board should not institute trial.

Respectfully submitted,

KNOBBE, MARTENS, OLSON & BEAR, LLP

Dated: August 25, 2017

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CERTIFICATE OF COMPLIANCE

This document complies with the type-volume limitation of 37 C.F.R. § 42.24(a)(1)(i). This Preliminary Response contains 13,986 words, excluding the parts of the document exempted by 37 C.F.R. § 42.24(a)(1).

Respectfully submitted,

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Dated: August 25, 2017

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CERTIFICATE OF SERVICE

I hereby certify that true and correct copies of **PATENT OWNER'S PRELIMINARY RESPONSE TO PETITION FOR *INTER PARTES* REVIEW** and **EXHIBITS 2001-2004 and 2006-2017** are being served on August 25, 2017, via electronic mail pursuant to 37 C.F.R. § 42.6(e) as addressed below:

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