UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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MICROSOFT CORPORATION

Petitioner v.

UNILOC 2017 LLC

Patent Owner

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IPR2019-01026

Patent 6,993,049

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PATENT OWNER RESPONSE TO PETITION

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I.   INTRODUCTION

Uniloc 2017 LLC ("Uniloc" or "Patent Owner") submits this Response to the Petition filed by Apple, Inc. ("Petitioner") for inter partes review of United States Patent No. Patent 6,993,049 ("the '049 patent" or "EX1001").

II.   THE '049 PATENT

The '049 patent is titled "Communication system." The '049 patent issued January 31, 2006, from U.S. Patent Application No. 09/876,514 filed June 7, 2001. The inventors of the '049 patent observed that at the time of the invention, there was an increasing interest in enabling devices to interact via wireless communication links, thereby avoiding the need for extensive cabling. An example of a communication system which may be used for such wireless links is a Bluetooth network. Ex. 1001, 1:9–15.

One application for which use of Bluetooth was proposed was the connection of controller devices to host systems. A controller device, also known as a Human/machine Interface Device (HID), is an input device such as a keyboard, mouse, games controller, graphics pad or the like. Certain HIDs did not typically require a link having high data throughput, though they might require a very responsive link.

A Bluetooth system may be capable of supporting the throughput requirements of certain HIDs. However, the degree of responsiveness required could be more difficult to achieve. An active Bluetooth link could offer a reasonably responsive service, but this required both the setting up of a link and

its maintenance, even during periods of inactivity. Id., 1:27–39. Setting up a link required a HID to join, as a slave, the piconet including the host system (which would typically act as piconet master, i.e. a base station). Joining the piconet required two sets of procedures, namely 'inquiry' and 'page'. Inquiry allowed a would-be slave to find a base station and issued a request to join the piconet. Page allowed a base station to invite slaves of its choice to join the net. Analysis of those procedures indicated that the time taken to join a piconet and then to be in a position to transfer user input to the master could be several tens of seconds. Id., 1:52–61.

According to the invention of the '049 Patent, there is provided a communications system comprising a primary station and at least one secondary station, wherein the primary station has means for broadcasting a series of inquiry messages, each in the form of a plurality of predetermined data fields arranged according to a first communications protocol, and means for adding to an inquiry message prior to transmission an additional data field for polling at least one secondary station, and wherein the or each polled secondary station has means for determining when an additional data field has been added to the plurality of data fields, for determining whether it has been polled from the additional data field and for responding to a poll when it has data for transmission to the primary station. Id., 2:22–35.

III. RELATED PROCEEDINGS

Patent Owner identifies the following proceedings and district court

determinations involving the '049 patent:

Case Filing Date	Case Name	Case Number	Court
2/23/2018	*Uniloc USA, Inc. et al v. Samsung Electronics America, Inc. et al*	2-18-cv-00040	EDTX
2/28/2018	*Uniloc USA, Inc. et al v. Logitech Inc. et al*	5-18-cv-01304	NDCA
11/6/2018	*Uniloc USA Inc et al v. LG Electronics USA Inc et al*	5-18-cv-06738	NDCA
11/12/2018	*Apple Inc. et al v. Uniloc 2017 LLC*	IPR2019-00251	PTAB
4/3/2019	*Uniloc USA, Inc. et al v. Apple, Inc.*	5-19-cv-01695	NDCA
5/6/2019	*Microsoft Corporation v. Uniloc 2017 LLC*	IPR2019-01026	PTAB
8/22/2019	*LG Electronics Inc. et al v. Uniloc 2017 LLC*	IPR2019-01530	PTAB
5/1/2019	*Uniloc USA, Inc. v. LG Electronics USA, Inc.*	19-1835	CAFC

Claim Construction Memorandum Opinion and Order, *Uniloc USA, Inc. et al v. Samsung Electronics America, Inc. et al*, 2-18-cv-00040, Dkt. 82 (E.D. Tex. Apr. 5, 2019) (construing claims and determining claims 1 and 8 are indefinite) (submitted as Ex. 1027).

Amended Order Granting Motion to Dismiss, *Uniloc USA Inc et al v. LG Electronics USA Inc et al*, 5-18-cv-06738, Dkt. 109 (N.D. Cal. Apr. 9, 2019) (determining '049 patent is invalid under 35 U.S.C. § 101) (submitted as Ex. 1008).

IV.   THE LEVEL OF ORDINARY SKILL IN THE ART

The Petition alleges that "[a] person of ordinary skill in the art in 2000 ("POSITA") would have had at least a Master's Degree in electrical or computer engineering with a focus in communication systems or, alternatively, a Bachelor's Degree in electrical or computer engineering and at least two years of experience in wireless communication systems." Pet. 10. The use of "at least," with no upper limit, is improper, as Petitioner's proposed definition could encompass an expert with any level of education and experience. Given that Petitioner fails to meet its burden of proof in establishing anticipation or obviousness when applying its own definition, as best understood by Patent Owner as indicating no more than a Master's Degree or two years of experience, of a person of ordinary skill in the art ("POSITA"), Patent Owner does not offer a competing definition for POSITA.

V.   PETITIONER DOES NOT PROVE THAT ANY CHALLENGED CLAIM IS UNPATENTABLE

"In an [*inter partes* review], the petitioner has the burden from the onset to show with particularity why the patent it challenges is unpatentable." *Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1363 (Fed. Cir. 2016).

While the Board has instituted *Inter Partes Review* here, as the Court of Appeals has stated:

[T]here is a significant difference between a petitioner's burden to establish a "reasonable likelihood of success" at institution, and actually proving invalidity by a preponderance of the evidence at trial. *Compare* 35 U.S.C. § 314(a) (standard for institution of *inter partes* review), *with* 35 U.S.C. § 316(e) (burden of proving invalidity during *inter partes* review).

Trivascular, Inc. v. Samuels, 812 F.3d 1056, 1068 (Fed. Cir. 2016). As demonstrated herein, Petitioner has failed to meet its burden of proving any proposition of invalidity, as to any claim, by a preponderance of the evidence. 35 U.S.C. §316(e).

Petitioner raises the following obviousness challenges under 35 U.S.C. § 103:

Groun	Claims	Reference(s)
1	11 and 12	Larsson[1] and BT Core[2] and RFC826[3]
2	11 and 12	802.11[4] (obviousness)

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[1] EX1004, U.S. Patent No. 6,704,293.

[2] EX1005, Specification of the Bluetooth System: Wireless connections made easy, Core, Vol. 1.

[3] EX1006, An Ethernet Address Resolution Protocol, IETF Request For Comments No. 826.

[4] EX1007, ANSI/IEEE Std 802.11, Part 11: Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) Specifications.

A. **Claim Construction**

The claims, when properly construed, give rise to a number of independent and fully-dispositive bases to deny the relief requested in the Petition in its entirety.

1. **"additional data field"**

"'When a patent 'repeatedly and consistently' characterizes a claim term in a particular way, it is proper to construe the claim term in accordance with that characterization.'" *Profoot, Inc. v. Merck & Co.*, 663 F. App'x 928, 932 (Fed. Cir. 2016) (quoting *GPNE Corp. v. Apple Inc.*, 830 F.3d 1365, 1370 (Fed. Cir. 2016)). The '049 patent repeatedly and consistently characterizes the term "additional data field" to be "an extra data field appended to the end of an inquiry message."

Figure 5 depicts the additional data field as element 504:
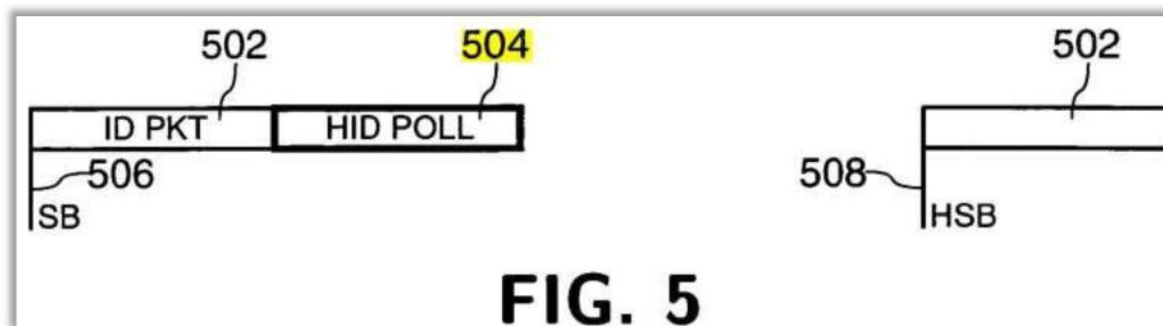
FIG. 5

Ex. 1001, Fig. 5 (highlighting added).

As shown in the screenshot reproduced below, the corresponding description makes clear that the additional data field is an extra field that is appended *to the end of an inquiry message*:

> As mentioned above and shown in FIG. **5**, the applicants propose that the inquiry messages issued by the base station have an extra field **504** appended to them, capable of carrying a HID poll message. The extended field **504** may carry a header that signifies a HID poll to distinguish it from other applications of extended field information, such as context-aware services or broadcast audio (as disclosed in our co-pending United Kingdom patent applications 0015454.2 (applicant's reference PHGB 000084) and 0015453.4 (applicant's reference PHGB 000085) respectively). It will also carry the address of the HID being polled, and may also carry a small amount of information to the HID which might be used to provide supplementary information to a user (such as text on an LCD screen) or feedback (for example, motional feedback in games controllers). By adding the field to the end of the inquiry message, it will be appreciated that non-HID receivers can ignore it without modification. In addition, by using a special DIAC to signify a HID poll, HID devices can be alerted to the presence of the forthcoming poll.

Ex. 1001, 4:59–5:11 (highlighting added).

The '049 patent clearly defines, including in the example disclosure emphasized above, that the term "*additional data field*" refers to "*an extra data field appended to the end of an inquiry message*". Indeed, the specification explains why appending an extra data field (i.e., in addition to the "predetermined data fields arranged according to a first communications protocol") to the end of the inquiry message is an essential and defining aspect of the claimed invention. Specifically, appending an extra field to the end of the inquiry message is essential at least because "non-HID receivers can ignore it without modification." *Id.* (emphasis added).

None of the mappings applied in the Petition address this aspect of the claimed invention reflected in the recitation, "adding to an inquiry message prior to transmission an additional data field for polling at least one secondary station," as recited in claim 11.

In its Institution Decision, the Board preliminary held that "[i]ndependent claim 11 already has language that accounts for the language Patent Owner seeks to add through claim construction." Paper 7 at 4. The Board clarified that "on this record and for purposes of this Decision, we do not view these two terms [appending and adding] as meaningfully distinct." *Id.* Patent Owner has modified its proposed construction to clarify that "appended" in this context refers to "appended to the end" of the "inquiry message" referenced in the "additional data field" clause. This accurately reflects the thematic disclosure in the '049 patent referenced above, which confirms there is meaningful and purposeful distinction between adding in the abstract and, instead, adding by appending the additional data field to the end of an inquiry message.

Accordingly, the term "*additional data field*" should be construed to mean "*an extra data field appended to the end of an inquiry message.*" Under an appropriate claim construction, Petitioner fails to carry its burden of showing obviousness.

2. "inquiry message[s]"

The '049 patent repeatedly and consistently describes its "inquiry messages" as a specific type of message used, at least in part, to discover other

devices in the vicinity which may request to join a piconet. See, e.g., Ex. 1001 at 4:23–26 ("When a Bluetooth unit wants to discover other Bluetooth devices, it . . . issues an inquiry message . . . ."); 1:56–57 ("Inquiry allows a would-be slave to find a base station and issue a request to join the piconet."); 4:11–13 ("The Bluetooth inquiry procedure allows a would-be slave to find a base station and issue a request to join its piconet."). Under an appropriate claim construction, Petitioner fails to carry its burden of showing obviousness.

B. Larsson Does Not Disclose "<u>adding to an inquiry message</u> prior to transmission <u>an additional data field</u> for polling at least one secondary station," (Ground 1)

The Petition has failed to carry the Petitioner's burden of proving that Larsson discloses the recitation of Claim 11 "<u>adding to an inquiry message</u> prior to transmission <u>an additional data field</u> for polling at least one secondary station" (emphasis added). In the first instance, the Petition's contention that Larsson's disclosure of "piggybacking" meets the required limitation of "*adding* to an *inquiry message* prior to transmission *an additional data field*" (Pet. 32) is insufficient as a matter of law. Larsson discloses that a "source node *piggybacks* a broadcast message in a request for route broadcast message." [Ex. 1004, Fig. 6a, 6:3-7, 7a, 7:50-53]. However, the term "piggybacking" is simply <u>not</u> synonymous with the claim limitations of *adding* to an *inquiry message* "an *additional data field*" and Petitioner provides *no evidence* to support this contention (emphasis added). Instead, Petitioner merely asserts that the term "piggybacking" identified in Larsson in connection with broadcast messaging

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used for route discovery equates to the claim limitation as supported in the '049 Patent, but fails to provide any evidence showing *how* the inquiry message is *altered* – namely, *with an additional data field* (EX1001, 4:59-62). Such attempt to ascribe a detailed limitation to a completely different term points up the Petition's effort at a false equivalence between a term used in a reference and a term that does not even appear in the claim language. Further still, the '049 Patent's solitary use of the term "piggy-back" (EX1001, 4:16) is not interchangeable with the claim limitation "additional data field", but provided separate support and details for the claim term (EX1001, 4:59-62). Tellingly, Petitioner fails to point to any portion of Larsson as disclosing "an additional data field", and Declarant's statement that "a POSITA would have viewed the piggybacked broadcast message as an additional data field added to the request for route message (inquiry message) prior to transmission" because "[t]he '049 Patent describes the same method for adding an additional data field to an inquiry message" (EX1003, 80) is devoid of any analysis and conclusory. Indeed, the Declarant, without providing a line of reasoning, or consideration of possible arrangements that could be provided to fill in the technical details of Larsson's broad and vague use of the term "piggybacking," immediately leaps to the unsupported conclusion that a POSITA would have viewed Larsson's vague mention of piggybacking as teaching specifically an additional data field added to the inquiry message. *Id.* The absence of any reasoning shown by the Declarant in leaping to this conclusion renders Declarant's conclusion to be of little weight.

While the above is sufficient, additional reasons exist for determining that Petitioner has failed to carry its burden of proving that Larsson teaches the recitation at issue. Unlike the '049 Patent, Larsson is directed to a route discovery technique (i.e., not a device discovery technique required by the recited "inquiry message"). Larsson's "broadcast message for route discovery" is aptly named because its purpose is to discover an optimal route to a *known destination node which is already joined to a piconet*. See, e.g., Ex. 1005 at Abstract; 4:23–25; 4:37– 47; 5:36–37; 5:44–45. Referring to Figure 3, Larsson states that "if node 303 were the source node then the broadcast message [for route discovery] would be sent to nodes 301, 302 and 304." Figure 3 and its corresponding description disclose that the recipient nodes 301, 302, and 304 were previously joined to the same piconet 1 to which the source node 303 is joined. See, e.g., id. at Figure 3, 1:67–2:1. Thus, Larsson is directed to discovering a route to a known recipient device already joined to a piconet, as opposed to discovering recipient devices that may seek to join.

Larsson's "broadcast message for route discovery" has not been proven by the Petitioner to teach an "inquiry message" as that term is used in the '049 patent. As explained above, the '049 patent repeatedly and consistently describes its "inquiry messages" as a specific type of message used, at least in part, to *discover other devices in the vicinity which may request to join a piconet*. See §VI.A.3, supra. The Petition thus relies on an incorrect construction of the term "inquiry message" as allegedly covering Larsson's entirely distinct route discovery

messages. The Petition has not and cannot prove obviousness through reliance in an incorrect claim construction. *See Synopsys*, 669 Fed. Appx. at 569.

Next, the Petition argues that Larsson "confirms" that its "piggybacked" messages require an additional data field purportedly because Larsson "teaches RfR messages 'of a fixed length' and when the message is 'longer than the normal fixed length' it indicates the presence of additional 'piggybacked data.'" Pet. 33 *citing* EX1004, 7:58-61. The Petition's reliance on this brief four-line passage of Larsson, described by Larsson as an alternative protocol in which a request for route message is of a fixed length, is also misplaced. Nothing in that brief passage of Larsson discloses or even indicates an additional data field added to the "RfR message". All that is disclosed is that the "RfR message" is longer than the "fixed length," and that a "length indicator" will indicate a length longer than the normal fixed length. The presence of the length indicator merely teaches that there is additional data in the message, but is utterly silent as to the presence of an additional data field as required by the claim language.

Moreover, the Declarant provides no evidence of any weight to support Petitioner's reliance on this four-line alternative embodiment. The Declarant merely makes the conclusory statement, repeating the language of the claim, that Larsson's piggybacked RfR messages require an additional data field, followed by a slight rearrangement of the four-line passage of Larsson, with no line of reasoning to provide any evidence of how a POSITA, reading this passage of Larsson, would arrive the conclusion that Larsson had somehow disclosed the

precise language of the claim. EX1003, ¶75.

Indeed, contrary to the Petition's conclusory assertions, the passage of Larsson cited by the Petition itself indicates that it is merely additional data included in the "RfR message": "in a protocol where the request for route message is of a fixed length, a length indicator which indicates a length longer than the normal fixed length will implicitly indicate that the request **contains piggyback data**." EX1004, 7:58-61 (emphasis added). As expressly disclosed by Larsson itself, it is just **data** that accounts for the longer than "fixed length" message. There is no indication that Larsson's "piggyback data" is anything other than merely more data, as opposed to the additional data field required by the claim language, and the Petition does not show otherwise.

Finally, the Petition purports to rely on Petitioner's declarant for support (Pet. 33), however, the Petitioner's declarant merely parrots the exact conclusory (and unsupported) statements of the Petition. *Compare* Pet. 33 *with* EX1003, ¶ 75. That is insufficient. 37 C.F.R. § 42.65(a) ("Expert testimony that does not disclose the underlying facts or data on which the opinion is based is entitled to little or no weight."); *Alza Corp. v. Mylan Labs., Inc.*, 464 F.3d 1286, 1290 (Fed. Cir. 2006) ("legal determinations of obviousness, as with such determinations generally, should be based on evidence rather than on mere speculation or conjecture."); *In re Magnum Oil Tools Int'l Ltd.*, 829 F.3d 1364, 1380 (Fed. Cir. 2016) ("[A] petitioner cannot employ mere conclusory statements" and "must instead articulate specific reasoning, based on evidence of record . . . ."). As

noted above, the Declarant does nothing more than announce the alleged equivalence of the claim language and the brief passage of Larsson, with no line of reasoning or technical basis to demonstrate why a POSITA would arrive at that conclusion of equivalence.

In sum, the Petition should be denied because there is nothing in Larsson or the Petition that provides evidence that Larsson discloses "adding to an inquiry message prior to transmission an additional data field for polling at least one secondary station", as the claim language requires.

Indeed, while the '049 patent has a solitary use of the term "piggy-back," stating: "it is possible to piggy-back a broadcast channel on the inquiry messages" EX1001, 4:15-18, all this passage discloses that it is possible to use the **broadcast channel** for another purpose. What the passage doesn't describe is *how* the inquiry message is altered – *with an additional data field*. That description happens later in the '049 patent (*see* EX1001, 4:59-62); **(3)** As further made clear by the passage cited by the Petition, the patentees knew the difference between the term "piggy-back" and "additional data field", and did not use them interchangeably; and **(4)** The Petition's alleged (false) equivalence between a term used in a reference and a term that does not appear in the claim language at all is flawed. At the very least it is an impermissible *ipsissimis verbis* test. *In re Bond*, 910 F.2d 831, 832 (Fed. Cir. 1990).

However, Larsson does not disclose any such adding to an *inquiry message* an *additional data field*, and the Petition merely offers conclusory

statements and conjecture in a failed attempt to support its position. Further still, the Petition clearly fails to establish the recitation under a proper claim construction of "an extra data field appended to the end of an inquiry message".

What Petitioner identifies as "piggybacked data" (Pet. 25) is plainly deficient to prove Larsson's alleged teaching of "adding to an inquiry message prior to transmission an additional data field for polling at least one secondary station," as recited in claim 11. This is at least because, as the intrinsic evidence itself confirms, the couplet "data field" and the word "data" (in isolation) are distinct terms of art. In addition, merely adding data to an already existing data field of a message clearly fails to demonstrate a disclosure of adding an additional data field to that message.

The intrinsic evidence refutes Petitioner's incorrect and undefended premise that the couplet "data field" and the word "data" (in isolation) are interchangeable terms of art. *See In re Smith Int'l, Inc.*, 871 F.3d 1375, 1382 (Fed. Cir. 2017) ("[T]he protocol of giving claims their broadest reasonable interpretation . . . does not include giving claims a legally incorrect interpretation" "divorced from the specification and the record evidence.") (citing *Microsoft Corp. v. Proxyconn, Inc.*, 789 F.3d 1292, 1298 (Fed. Cir. 2015)).

The teachings of the '049 patent underscore the distinction. For example, the '049 patent expressly and repeatedly distinguishes the additional data field (e.g., data field 504) from the data that it carries. See, e.g., Ex. 1001 at 4:60–62

("the inquiry messages issued by the base station have an extra field 504 appended to them, capable of carrying a HID poll message."), 4:62–63 ("The extended field 504 may carry a header that signifies a HID pol"), 5:2–6 (the extended field 504 may also carry "the address of the HID being polled" and "a small amount of information"), 6:19–21 ("The HID receives, at step 604, data from the extra field 504 then tests, at step 606, whether it has been polled by the host system.").

In addition, the '049 patent emphasizes that certain embodiments achieve a rapid response, in part, because secondary stations can efficiently determine the appropriate response to an inquiry message by first accessing whether an additional data field has been added (i.e., regardless of the specific data contained in that field). *See, e.g., id.* at Abstract, 2:31–35; 2:53–57; 2:67–3:4. This inventive concept is also reflected throughout the claims. *See id.* at 7:29–8:50. The '049 patent further emphasizes the significance of adding an additional data field (as opposed to just adding data) by teaching that "[b]y adding the field *to the end of the inquiry message*, it will be appreciated that non-HID receivers can ignore it without modification." Id. at 5:6–9. Petitioner has not and cannot meet its burden of proof through its conclusory assertions that conflate together what the '049 patent expressly and repeatedly distinguishes. Pet. 25 ("the piggybacked data . . . is a data field for polling.") (emphasis added). Indeed, the Petition does not even assert that Larsson teaches adding the additional data field to the end of the inquiry message. Petitioner's Declarant similarly never alleges that Larsson

discloses adding an additional data field at the end of an inquiry message.

For at least the above reasons, the Petitioner has failed to meet its burden of demonstrating that Larsson teaches the recitations at issue.

C. **802.11 Does Not Disclose "<u>adding to an inquiry message</u> prior to transmission <u>an additional data field</u> for polling at least one secondary station," (Ground 2)**

Here, the Petition points to 802.11's so-called "targeted" probe request. Pet. 48. Initially, it is important to note that the Petition admits that 802.11's probe request message comes in two varieties, a "broadcast" type, which seeks responses from all available access points, and a so-called "targeted" type, which only "polls **<u>a specific</u>** access point". Pet. 48 (emphasis added). As such, by relying on the so-called "targeted" probe request type here, the Petition cannot coherently rely on the "broadcast" type to challenge the previous claim limitation "the method comprising the primary station broadcasting a series of inquiry messages" (the Petition's [11.2]).

Regardless, the Petition fails to show that 802.11 discloses this claim limitation, which requires "<u>adding to an inquiry message</u> prior to transmission <u>an additional data field</u> for polling at least one secondary station". As noted above, the Petition here relies on 802.11's "targeted" probe request type. And the Petition argues 802.11 discloses this limitation because in 802.11's "broadcast" probe request type the "SSID information field" has a "zero length", compared to the "targeted" probe request type where the "SSID information field" contains

data. *See* Pet. 48-49.

However, Petitioner's argument fails for at least two reasons, (1) the "SSID information field", even when its length is zero, is nonetheless an existing field in 802.11's probe request, therefore merely pointing to the times when the "SSID information field" is of non-zero length does not disclose adding "an additional data field" as required by the claim language; and (2) the Petition ignores the previous claim limitation which recites the inquiry messages having a plurality of predetermined data fields, upon which this claim limitation adds to.

First, as noted by the Petition itself, the "SSID information field" *is* an existing field in 802.11's probe request, regardless of type. That under the "broadcast" type the "SSID information field" has a "zero length" does not change the fact that it **is still in fact an existing and predetermined field of the probe request**. This is confirmed by the Petition's own duplication of 802.11's Figure 35:

Figure 35—SSID element format
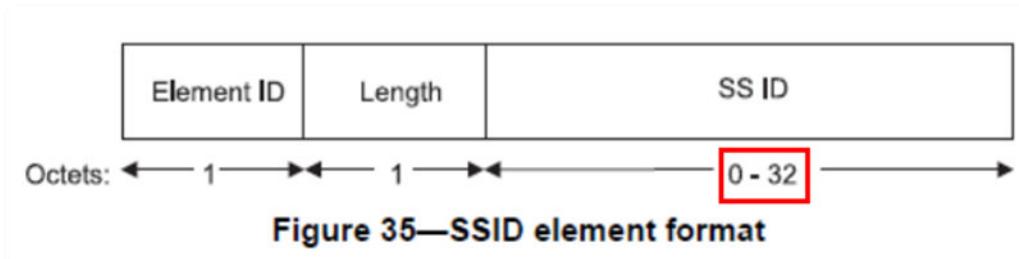
Pet. 45 *citing* EX1007, Fig. 35 (red box added).

As shown by the Petition's own reliance on 802.11's Figure 35, the "SSID information field" can be length *zero* to thirty-two octets. In other words, a "zero length" is a valid length for the "SSID information field", that the field can

sometimes be of zero length and other times be of non-zero length does not change the fact that the "SSID information field" is an existing and predetermined part of the probe request. Therefore, merely pointing to the times when the "SSID information field" is of non-zero length does not disclose "adding to an inquiry message prior to transmission an additional data field", as the claim language requires.

Second, and furthermore, 802.11's "SSID information field" cannot be the "additional data field" required by this claim limitation because the Petition ignores the previous claim limitation which recites: "broadcasting a series of inquiry messages, each in the form of a plurality of predetermined data fields arranged according to a first communications protocol".

As the Petition itself confirms, the "SSID information field" is an existing and predetermined part of 802.11's probe request because sometimes it has non-zero length (*see e.g.*, Pet. 48), meaning the "SSID information field" is one of a "predetermined data fields". And therefore, the "SSID information field" cannot be an "additional data field" to be added to the inquiry message, as this claim limitation requires.

The Board, in the Institution Decision, determined that:

We find that the parties' competing positions creates a genuine issue of material fact—i.e., whether a zero-length SSID information field is an existing field. According to Petitioner's declarant, "[a] POSITA would understand that '0 length' means that nothing is included for this SSID field, i.e., there is no SSID field." Ex. 1003 ¶ 102. At this stage of the

proceeding, we view evidence in the light most favorable to Petitioner. *See* 37 C.F.R. § 42.108(c). Although we encourage the parties to develop this issue further during trial, on this record, Petitioner provides adequate evidence that 802.11's targeted request teaches the claimed additional data field.

However, the fact that the variable lengths of the SSID information field include a 0 length option does not mean that there is no SSID field. In fact, the 0 length SSID field *conveys information* to the receiving devices, namely, that the message is a broadcast message. It is thus not accurate to say that the 0 length SSID information field is absent, or that nothing is included, as the 0 length field conveys information. It is not correct to state that a non-zero length SSID information field is an *additional* field, as the non-zero length field is simply an *alternative* to the 0 length field, which alternative conveys different information from the 0 length field.

In contrast to the 0 length SSID information field that specifically conveys information, the 802.11 specification provides for other fields that do not convey information. Those fields are "[r]eserved fields and subfields," which "are set to 0 upon transmission and are *ignored upon reception*." EX1007, 34. Those fields, having been set to 0, can properly be ignored, in contrast to the 0 length SSID information field, which is acted on by the receiving device. Indeed, Table 20 provides a list of Element IDs, in which several reserved fields, those having element IDs 7-15, those having element IDs 17-31, which are particularly reserved for challenge text extension, and the reserved fields

having element IDs 32-255 are shown:

Table 20—Element IDs

Information element	Element ID
SSID	0
Supported rates	1
FH Parameter Set	2
DS Parameter Set	3
CF Parameter Set	4
TIM	5
IBSS Parameter Set	6
Reserved	7–15
Challenge text	16
Reserved for challenge text extension	17–31
Reserved	32–255

A POSITA would understand that the reserved fields in element IDs 7-15 are set to 0, convey no information, and are ignored by the receiving device. In contrast, as explained above, the SSID information field, whether 0 length or of a greater length, always conveys information that may be acted upon by a receiving device.

Moreover, the frames in the MAC sublayer of the 802.11 protocol are described as a sequence of fields in a specific order. The 802.11 protocol explains that [e]ach figure in Clause 7 depicts the fields/subfields as they appear in the MAC frame and in the order in which they are passed to the physical layer convergence protocol (PLCP), from left to right." EX1007, 34. Thus, after the SSID information field, of whatever length, form 0 to 32 bits, the next field is the first field of Figure 36:
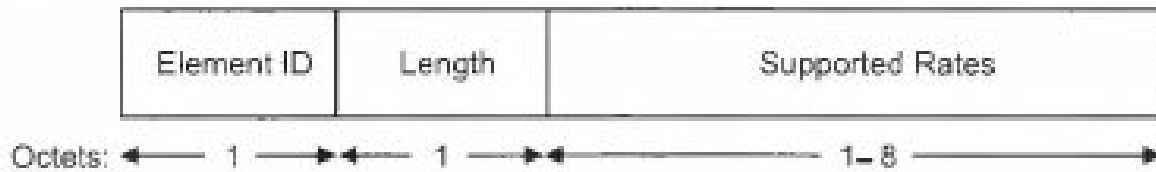
Figure 36—Supported rates element format

EX1007, 56. Thus, after the SSID information field, which is the final field of Figure 35, the next field is the Element ID field of the Supported Rates element. The Petitioner's approach would have the field sequence in the MAC frame proceed directly from the Length field of the SSID element to the Element ID field of the Supported rates element, with no SSID information field. Notably, the Declarant does not attempt to explain how the MAC frame format would be affected by an absent, as opposed to a 0 length, SSID information field, and thus the Declarant's analysis does not provide the requisite record basis for finding that 802.11 teaches the cited recitation.

Indeed, the SSID element is an example of an information element, which are listed in Table 20 above, EX1007, 55 and all have a standard format shown in Figure 34:
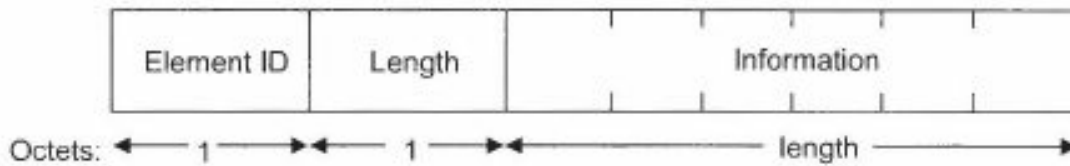

Figure 34—Element format

All information elements thus have an element identification field and length field of fixed length, and a variable-length information field, which information field varies by the type of information element. EX1007, 55. The Declarant

provides no record basis to reconcile the concept of regarding the SSID information field as absent, when in fact the SSID element is only one of several elements that have a standard format including an information field.

In view of the foregoing additions to the record from the 802.11 specification, it is clear that the Petition fails to carry the burden of showing that 802.11 teaches the recitation "adding to an inquiry message prior to transmission an additional data field for polling at least one secondary station." (Ground 2).

D.   Dependent claim 12

Because challenged dependent claim 12 depends from independent claim 11, at least the same deficiencies of the Petition identified above are also equally applicable to dependent claim 12.

VI.   APJS ARE UNCONSTITUTIONALLY APPOINTED PRINCIPAL OFFICERS

As determined in *Arthrex, Inc. v. Smith & Nephew, Inc.*, 941 F.3d 1320 (Fed. Cir. 2019), "APJs have substantial power to issue final decisions on behalf of the United States without any review by a presidentially-appointed officer." Patent Owner submits that APJs are principal officers under the Appointments Clause of the Constitution for this reason, but undisputedly are not appointed through the constitutionally-mandated mechanism of appointment for principal officers.

Patent Owner submits that the *Arthrex* decision's remedy (invalidation of the statutory limitations on removal of APJs) impermissibly re-writes the statutes governing APJs. As argued by Arthrex in its en banc petition:

Given the adjudicative nature of IPRs, Congress would not have intended the IPR process to be run by decision-makers who lack the key attributes of impartiality and independence mandated by the Due Process Clause and the Administrative Procedure Act ("APA"). Patents are property entitled to due process protections. *See* [*Oil States Energy Servs., LLC v. Greene's Energy Grp., LLC*, 138 S. Ct. 1365, 1379 (2018)]. Such protections include independent and impartial decision-makers. *See Schweiker v. McClure,* 456 U.S. 188, 195 (1982) ("As [the Supreme Court] repeatedly has recognized, due process demands impartiality on the part of those who function in judicial or quasi-judicial capacities"). This Court has likewise described as an "indispensable ingredient []of due process" an opportunity to be heard by a "disinterested decision-maker." *Belden, Inc. v. Berk-Tek LLC*, 805 F.3d 1064, 1080 (Fed. Cir. 2015) (citations omitted).

Congress has recognized for decades that independence and impartiality are essential for agency adjudicators. The Administrative Procedure Act provides that a hearing must be conducted in an "impartial manner." 5 U.S.C. §556(b). And Congress expressly provided that administrative law judges may be removed "only for good cause established and determined by the Merit Systems Protection Board." 5 U.S.C. §7521(a). Those tenure protections play an indispensable role in ensuring impartiality. As Justice Breyer explained in *Lucia*:

The substantial independence that the Administrative Procedure Act's removal protections provide to administrative law judges is a central part of the Act's overall scheme. See *Ramspeck v. Federal Trial Examiners Conference*, 345 U.S. 128, 130 (1953); *Wong Yang Sung v. McGrath*, 339 U.S. 33, 46 (1950). Before the Administrative Procedure Act, hearing examiners "were in a dependent status" to their employing agency, with their classification, compensation, and promotion all dependent on how the agency they worked for rated them. *Ramspeck*, 345 U. S., at 130. As a result of that dependence, "[m]any complaints were voiced against the actions of the hearing examiners, it being charged that they were mere tools of the agency concerned and subservient to the agency heads in making their proposed findings of fact and recommendations." *Id.*, at 131. The Administrative Procedure Act responded to those complaints by giving administrative law judges "independence and tenure within the existing Civil Service system." *Id.*, at 132; *cf. Wong Yang Sung, supra*, at 41-

46 (referring to removal protections as among the Administrative Procedure Act's "safeguards . . . intended to ameliorate" the perceived "evils" of commingling of adjudicative and prosecutorial functions in agencies).

Lucia v. SEC, 138 S. Ct. 2044, 2060 (2018) (Breyer, J., dissenting). This Circuit has also recognized the importance of the decisional independence of ALJs and agreed that an ALJ may not be placed in a position where he would be removable "at will." *See Vessel v. Office of Pers. Mgmt.*, 29 F.3d 600, 605 (Fed. Cir. 1994).

Congress would have deemed those protections no less important—and probably even more important—here. Though the *Arthrex* panel determined that APJs are subject to a different removal restriction than the one in the APA, the court correctly determined that Congress granted APJs for-cause removal protections. [Opinion at 16-17]. By doing so, Congress not only acknowledged the longstanding importance of such protections but confirmed that they should apply here to ensure decisional independence and impartiality.

Arthrex, Inc. v. Smith & Nephew, Inc., Appeal 2018-2140, APPELLANT ARTHREX, INC.'S COMBINED PETITION FOR REHEARING AND/OR REHEARING *EN BANC*, D.I. 78 (Fed. Cir.).

In addition, the ability to remove APJs at will is insufficient to render APJs inferior officers. The importance placed on review of the decisions of Court of Criminal Appeals Judges in *Edmond v. US*, 520 U.S. 651 (1997), is inconsistent with *Arthrex*'s determination that invalidation of statutory limitations on the removal of APJs is sufficient to render APJs inferior officers. *See Edmond*, 520 U.S. at 665 ("What is significant is that the judges of the Court of Criminal Appeals have no power to render a final decision on behalf of the United States unless permitted to do so by other Executive officers.").

In view of these issues, only Congress can fix the IPR statutory scheme, and this case must be dismissed. Patent Owner recognizes that the Board has

previously "declin[ed] to consider . . . constitutional challenge[s] as, generally, 'administrative agencies do not have jurisdiction to decide the constitutionality of congressional enactments.'" *Square, Inc. Unwired Planet LLC*, Case IPR2014-01165, Paper 32 at 25 (PTAB Oct. 30, 2015) (quoting *Riggin v. Office of Senate Fair Emp't Practices*, 61 F.3d 1563, 1569 (Fed. Cir. 1995)).

VII. CONCLUSION

For at least the reasons set forth above, Uniloc respectfully requests that the Board deny all challenges in the instant Petition.[5]

Date: February 26, 2020

Respectfully submitted,

By: /s/ Brett A. Mangrum
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[5] Patent Owner does not concede, and specifically denies, that there is any legitimacy to any arguments in the instant Petition that are not specifically addressed herein.

CERTIFICATE OF COMPLIANCE

Pursuant to 37 C.F.R. § 42.24(d), the undersigned certifies that the foregoing complies with the type-volume limitation of 37 C.F.R. § 42.24(b)(2) because it contains fewer than the limit of 14,000 words, as determined by the word- processing program used to prepare the brief, excluding the parts of the brief exempted by 37 C.F.R. § 42.24(a)(1).

Date: February 26, 2020   Respectfully submitted,

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CERTIFICATE OF SERVICE

Pursuant to 37 C.F.R. § 42.6(e), the undersigned certifies that an electronic copy of the foregoing, along with any accompanying exhibits, was served via email to Petitioner's counsel at the following addresses identified in the Petition's consent to electronic service:

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