

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SAMSUNG ELECTRONICS CO., LTD.,
Petitioner,

v.

G+ COMMUNICATIONS, LLC,
Patent Owner.

Case IPR2023-00441
Patent 10,448,430

**PATENT OWNER'S PRELIMINARY RESPONSE TO PETITION FOR
INTER PARTES REVIEW OF U.S. PATENT NO. 10,448,430**

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EXHIBIT LIST

Exhibits for Currently Filed Patent Owner's Preliminary Response

Exhibit No.	Description
2001	Samsung Invalidity Contentions App'x B, 2:22-cv-00078-JRG
2002	Samsung Invalidity Contentions Ex. B2, 2:22-cv-00078-JRG
2003	Memorandum Opinion Denying G+ Motion to Dismiss Counterclaims, 2:22-cv-00078-JRG, Dkt. 41 (Sept. 29, 2022)
2004	Memorandum Opinion Denying Samsung Motions to Dismiss, 2:22-cv-00078-JRG, Dkt. 103 (Apr. 28, 2023)
2005	G+ Opening Claim Construction Brief, 2:22-cv-00078-JRG, Dkt. 98 (Apr. 12, 2023)
2006	Samsung Responsive Claim Construction Brief, 2:22-cv-00078-JRG, Dkt. 101 (Apr. 26, 2023)
2007	G+ Reply Claim Construction Brief, 2:22-cv-00078-JRG, Dkt. 106 (May 3, 2023)

CLAIM LISTING 10,448,430 PATENT

No.	Description
Claim 1	
1[pre]	A random access method, comprising:
1[a]	sending, by a first User Equipment (UE) in a UE group, a preamble to an evolved Node B (eNB) over a time-frequency resource,
1[b]	the time-frequency resource comprising a time domain resource and a frequency domain resource;
1[c]	monitoring, by at least one of the first UE or a second UE in the UE group, a Random Access Response (RAR) corresponding to the preamble and sent by the eNB,
1[d]	wherein the first UE is at least one UE in the UE group, and the second UE is all or some UEs in the UE group; and
1[e]	after monitoring, by at least one of the first UE or the second UE, the RAR corresponding to the preamble and sent by the eNB: sending, by at least one of the first UE or the second UE, a message 3 according to a Uplink (UL) grant allocated thereto,
1[f]	wherein the message 3 comprises a number of UEs having random access requests in the UE group or a number of UEs contained in the UE group or a pre-set UE number.
Claim 2	
2[pre]	2. The method according to claim 1,
2[a]	wherein the first UE is at least one of the following: at least one fixed UE; or, at least one UE determined according to a pre-set rule; or, at least one UE notified by the eNB.
Claim 3	
3[pre]	The method according to claim 1,
3[a]	wherein at least one of the preamble, the time domain resource or the frequency domain resource is pre-set, or determined by a group Identifier (ID) of the UE group, or notified by the eNB.
Claim 4	
4[pre]	The method according to claim 3,
4[a]	wherein at least one of the preamble, the time domain resource or the frequency domain resource corresponds to the number of UEs having random access requests in the UE group or the number of UEs contained in the UE group or the pre-set UE number.
Claim 5	
5[pre]	5. The method according to claim 1,
5[a]	wherein monitoring, by at least one of the first UE or the second UE, the RAR corresponding to the preamble and sent by the eNB comprises:

5[b]	descrambling, by at least one of the first UE or the second UE, a Cyclic Redundancy Check (CRC) of Downlink Control Information (DCI) for scheduling the RAR according to a pre-set Random Access Radio Network Temporary Identity (RA-RNTI) or an RA-RNTI corresponding to the preamble, and receiving the RAR, the RAR comprising at least one of at least one Temporary Cell Radio Network Temporary Identity (TC-RNTI) or at least one Uplink (UL) grant; and
5[c]	determining, by at least one of the first UE or the second UE, at least one of a TC-RNTI or UL grant allocated thereto according to at least one of at least one TC-RNTI or at least one UL grant contained in the RAR; or
5[d]	monitoring, by at least one of the first UE or the second UE, the RAR corresponding to the preamble and sent by the eNB comprises:
5[e]	determining, by at least one of the first UE or the second UE, corresponding RA-RNTIs according to at least one of respective IDs or preambles, descrambling a CRC of DCI for scheduling the RAR according to the corresponding RA-RNTIs, and receiving corresponding RARs, the RAR comprising at least one of a TC-RNTI or a UL grant allocated to the first UE or second UE.
Claim 6	
6[pre]	The method according to claim 5,
6[a]	wherein determining, by at least one of the first UE or the second UE, at least one of the TC-RNTI or the UL grant allocated thereto according to at least one of at least one TC-RNTI or at least one UL grant contained in the RAR comprises:
6[b]	determining, by at least one of the first UE or the second UE, at least one of a TC-RNTI or a UL grant allocated thereto according to at least one of an ID of the first UE or the second UE in accordance with a pre-set rule.
Claim 7	
7[pre]	The method according to claim 1, further comprising:
7[a]	after sending, by at least one of the first UE or the second UE, the message 3 according to the UL grant allocated thereto, receiving, by at least one of the first UE or the second UE, a message 4 sent by the eNB.
Claim 8	
8[pre]	The method according to claim 7,
8[a]	wherein receiving, by at least one of the first UE or the second UE, the message 4 sent by the eNB comprises: scrambling a CRC of DCI for scheduling the message 4 by using a TC-RNTI allocated to at least one of the first UE or the second UE.
Claim 9	
9[pre]	The method according to claim 8,
9[a]	wherein the message 4 comprises at least one set of radio resources, radio resources allocated to at least one of the first UE or the second UE are determined by at least

	one of the first UE or the second UE according to at least one set of radio resources in the message 4; or
9[b]	the message 4 comprises a set of radio resources allocated to the first UE or second UE.
Claim 10	
10[pre]	The method according to claim 9,
10[a]	wherein the radio resources allocated to at least one of the first UE or the second UE are further determined by at least one of the first UE or the second UE according to an ID of at least one of the first UE or the second UE in accordance with a pre-set rule.
Claim 11	
11[pre]	The method according to claim 7, further comprising:
11[a]	after receiving, by at least one of the first UE or the second UE, the message 4 sent by the eNB, sending, by at least one of the first UE or the second UE, an indicating signal for notifying the eNB of a successful access of at least one of the first UE or the second UE to the eNB,
	wherein the indicating signal is a Scheduling Request (SR) or an Acknowledgement (ACK) signal.
Claim 12	
12[pre]	The method according to claim 7, further comprising:
12[a]	after receiving, by at least one of the first UE or the second UE, the message 4 sent by the eNB, receiving, by at least one of the first UE or the second UE, indicating information, sent by the eNB, for indicating re-initiation of a random access of at least one of the first UE or the second UE.
Claim 13	
13[pre]	The method according to claim 7,
13[a]	wherein the message 3 and the message 4 comprise a group ID of the UE group or a pre-set field.
Claim 14	
14[pre]	The method according to claim 1, further comprising:
14[a]	before sending, by the first UE in the UE group, the preamble over the time-frequency resource, receiving, by at least one of the first UE or the second UE, Downlink Control Information (DCI) or a paging message or a Radio Resource Control (RRC) message sent by the eNB; or,
	receiving, by the first UE, random access request information sent by the second UE.
Claim 15	
15[pre]	The method according to claim 14,

15[a]	wherein receiving, by at least one of the first UE or the second UE, the DCI or the paging message or the RRC message sent by the eNB comprises at least one of the following: the DCI or a CRC of DCI for scheduling the paging message or the RRC message is scrambled by using a group ID of the UE group;
15[b]	the DCI or the paging message or the RRC message comprises a group ID of the UE group;
15[c]	the DCI or the paging message or the RRC message comprises an ID of at least one of the first UE or the second UE; or
15[d]	the DCI or the paging message or the RRC message comprises at least one of an ID of the preamble, the time domain resource of the preamble or the frequency domain resource of the preamble.
Claim 17	
17[pre]	The method according to claim 1,
17[a]	wherein sending, by the first UE in the UE group, the preamble over the time-frequency resource comprises: periodically sending, by the first UE, the preamble over the frequency domain resource.
Claim 18	
18[pre]	A User Equipment (UE), comprising:
18[a]	a sending unit and a monitoring unit,
18[b]	wherein the sending unit is configured to: send a preamble to an evolved Node B (eNB) over a time-frequency resource, the time-frequency resource comprising a time domain resource and a frequency domain resource;
18[c]	the monitoring unit is configured to: monitor a Random Access Response (RAR) corresponding to the preamble and sent by the eNB; and
18[d]	the sending unit is further configured to: send a message 3 according to a Uplink (UL) grant allocated to the UE,
18[e]	wherein the message 3 comprises a number of UEs having random access requests in a UE group or a number of UEs contained in the UE group or a pre-set UE number.

I. INTRODUCTION

G+ Communications, LLC, the owner of U.S. Patent No. 10,448,430 (“the ’430 patent”), submits this Preliminary Response to the Petition of Samsung Electronics Co., Ltd. (“Samsung” or “Petitioner”) challenging the validity of claims 1-15 and 17-18 of the ’430 Patent (“Challenged Claims”). The Board should deny the Petition based on the merits and/or for discretionary reasons under 35 U.S.C. § 314 or § 325(d).

The Board should deny the Petition based on the merits because Petitioner has not established a reasonable likelihood that it will prevail on any of the nine grounds (Grounds 1-9) as presented in the Petition.

Petitioner fails to identify how the challenged claims are to be construed, as required under 37 C.F.R. § 42.104(b)(3). This is true of all claims and grounds, but particularly applies to claim 18 (one of two independent claims in the patent), where both parties agree in the district court litigation that the “sending unit” and “monitoring unit” are means-plus-function limitations invoking 35 U.S.C. § 112(f). Petitioner puts forth no construction, which plainly fails the requirement that a Petitioner’s construction of the claim must identify the specific portions of the specification that describe the structure, material, or acts corresponding to each claimed function. 37 C.F.R. § 42.104(b)(3). Of course, in failing to fulfill this requirement, the Petition also necessarily fails to properly demonstrate that the

means-plus-function limitations are present in the asserted prior art by showing the corresponding structure or an equivalent was present in the art.

The Petition also fails to show that either Li or Kim disclose or teach that message 3 comprises a “pre-set UE number” as asserted in the Petition. The Petition fails to present a claim construction, and Petitioner has argued in the district court litigation that the “pre-set UE number” limitation renders all claims indefinite. In attempting to evade taking a position on claim construction (which violates 37 C.F.R. § 42.104(b)(3)), Petitioner also fails to meet its burden to show a reasonable likelihood of success in showing the asserted art teaches at least the “pre-set UE number” limitation. Petitioner’s indefiniteness arguments also contain other arguments regarding claim scope that undermine the grounds asserted in its Petition, such as Petitioner’s argument to the district court that intrinsic and extrinsic evidence suggest that a “pre-set UE number” as recited in the ’430 patent “*is not* an identifier.”

Alternatively, the Board should exercise its discretion and deny institution under 35 U.S.C. § 325(d) and 314(a). Proceeding here is a poor use of the Board’s resources.

As to § 325(d), the Office previously considered Li (Ex. 1005), which formed the basis of a rejection during prosecution. Petitioner fails to show that the Office erred in a manner material to the patentability of the challenged claims.

As to § 314(a) discretion, Petitioner asserted Kim and other secondary references in co-pending litigation, and a Texas jury will consider invalidity of the '430 patent long before the Board is expected to render a final written decision here. This is true regardless of whether the calendared jury selection date or the median time-to-trial statistics are considered. Moreover, the co-pending litigation presents overlapping issues, and the parties and the district court have already expended (and will continue to expend) significant time and resources by the time the Board is expected to issue a decision on institution. Petitioner's purported stipulation that it "will not pursue the IPR grounds in the district court litigation" falls short of the type of stipulation—that it will not pursue "any grounds that could have reasonably been raised in the petition"—necessary to mitigate concerns of potentially conflicting decisions and duplication of efforts. The Board should thus exercise its discretion to deny institution under 35 U.S.C § 314, particularly when considered in light of the § 325(d) issues also present here.

For these reasons, Patent Owner respectfully submits that this Petition does not warrant institution.

II. OVERVIEW OF THE '430 PATENT

The '430 patent relates to a random access method in the field of communications. The background to the '430 patent explains that "[i]n the LTE [Long-Term Evolution] system, a random access is a basic function, and a UE [User

Equipment] can be scheduled by the system to perform uplink transmission only after uplink synchronization with the system via a random access process.” ’430 patent, 1:22-25.

An initial random access process is a contention-based access process, which can be divided into four steps:

(1) A UE sends a preamble, and the UE randomly selects an available preamble to be sent.

(2) An evolved Node B (eNB, also referred to as an evolved base station) sends a Random Access Response (RAR). When the eNB detects a preamble sequence sent by the UE, a response will be sent over a Downlink-Synchronization Channel (DL-SCH), the response including: an index number of the detected preamble, time adjustment information for uplink synchronization, initial uplink resource allocation (used for sending a subsequent message 3), and a Temporary Cell Radio Network Temporary Identity (TC-RNTI). It will be decided whether the TC-RNTI is converted into a permanent C-RNTI in Step (4) (contention resolution). The UE needs to monitor an RAR message over a Physical Downlink Control Channel (PDCCH) by using a Random Access RNTI (RA-RNTI).

(3) The UE sends the message 3. After receiving the RAR message, the UE obtains uplink time synchronization and uplink resources. However, at this time, it cannot be determined that the RAR message is sent to the UE itself instead of other

UEs. The preamble sequence of the UE is randomly selected from common resources, thereby making it possible for different UEs to send the same access preamble sequence over the same time-frequency resource. Thus, they will receive the same RAR via the same RA-RNTI. Moreover, the UE is unable to know whether other UEs make a random access by using the same resource. For this purpose, the UE needs to resolve such a random access contention via the subsequent message 3 and message 4.

(4) The eNB sends the message 4, namely a contention resolution message. If the UE receives the message 4 returned by the eNB and a UE Identifier (ID) carried therein conforms to an ID reported to the eNB in the message 3 within the time of a mac-Contention Resolution Timer, the UE considers that it wins this random access contention and the random access is successful, and sets the TC-RNTI obtained in the RAR message as an own C-RNTI.

Id., 1:28-2:8.

The '430 patent explains that future requirements for a huge number of machine devices can require that at least tens of thousands of UEs are accessed to a micro cell with 1 s to 10 s. "In a conventional LTE system, if one time-frequency resource receives 64 cyclic shifts of one preamble root sequence, resources are insufficient for a system having a bandwidth of 20 Mbps even though all bandwidths are used to send the PRACH." *Id.*, 2:16-31.

The '430 patent discloses a random access method, device, and system intended to save PRACH resources and meet requirements for a huge number of machine communications. According to an embodiment of the method, a first UE in a UE group sends a preamble to an eNB over a time-frequency resource, the time-frequency resource including a time domain resource and a frequency domain resource. The first UE and/or a second UE in the UE group monitor(s) an RAR corresponding to the preamble and sent by the eNB, wherein the first UE is at least one UE in the UE group, and the second UE is all or some UEs in the UE group. After the first UE and/or the second UE monitor(s) an RAR corresponding to the preamble and sent by the eNB, the first UE and/or the second UE send(s) a message 3 according to the UL grant allocated thereto. After the first UE and/or the second UE send(s) a message 3 according to the UL grant allocated thereto, the first UE and/or the second UE receive(s) a message 4 sent by the eNB. *Id.*, 2:38-3:38.

The '430 patent discloses other features in various embodiments. For example, in an embodiment, the first UE is at least one of the following: at least one fixed UE; or, at least one UE determined according to a pre-set rule; or, at least one UE notified by the eNB. In an embodiment, the preamble and/or the time domain resource and/or the frequency domain resource are/is pre-set, or determined by a group ID of the UE group, or notified by the eNB. *Id.*, 2:53-61.

In an example embodiment, the operation that the first UE and/or the second UE monitor(s) an RAR corresponding to the preamble and sent by the eNB includes the following operations:

The first UE and/or the second UE descramble(s) a Cyclic Redundancy Check (CRC) of Downlink Control Information (DCI) for scheduling the RAR according to a pre-set RA-RNTI or an RA-RNTI corresponding to the preamble, and receive(s) the RAR, the RAR including at least one TC-RNTI and/or at least one Uplink (UL) grant.

The first UE and/or the second UE determine(s) a TC-RNTI and/or UL grant allocated thereto according to at least one TC-RNTI and/or at least one UL grant included in the RAR.

Id., 2:62-3:8.

In another example embodiment, the operation that the first UE and/or the second UE determine(s) a TC-RNTI and/or a UL grant allocated thereto according to at least one TC-RNTI and/or at least one UL grant included in the RAR includes the following operation: The first UE and/or the second UE determine(s) a TCRNTI and/or a UL grant allocated thereto according to an ID of the first UE and/or the second UE in accordance with a pre-set rule. *Id.*, 3:9-17.

In a further example embodiment, the operation that the first UE and/or the second UE monitor(s) an RAR corresponding to the preamble and sent by the eNB includes the following operation: The first UE and/or the second UE determine(s) corresponding RA-RNTIs according to respective IDs and/or preambles, descramble(s) a CRC of DCI for scheduling the RAR according to the corresponding

RA-RNTIs, and receive(s) corresponding RARs, the RAR including a TCRNTI and/or a UL grant allocated to the first UE or second UE. *Id.*, 3:18-28.

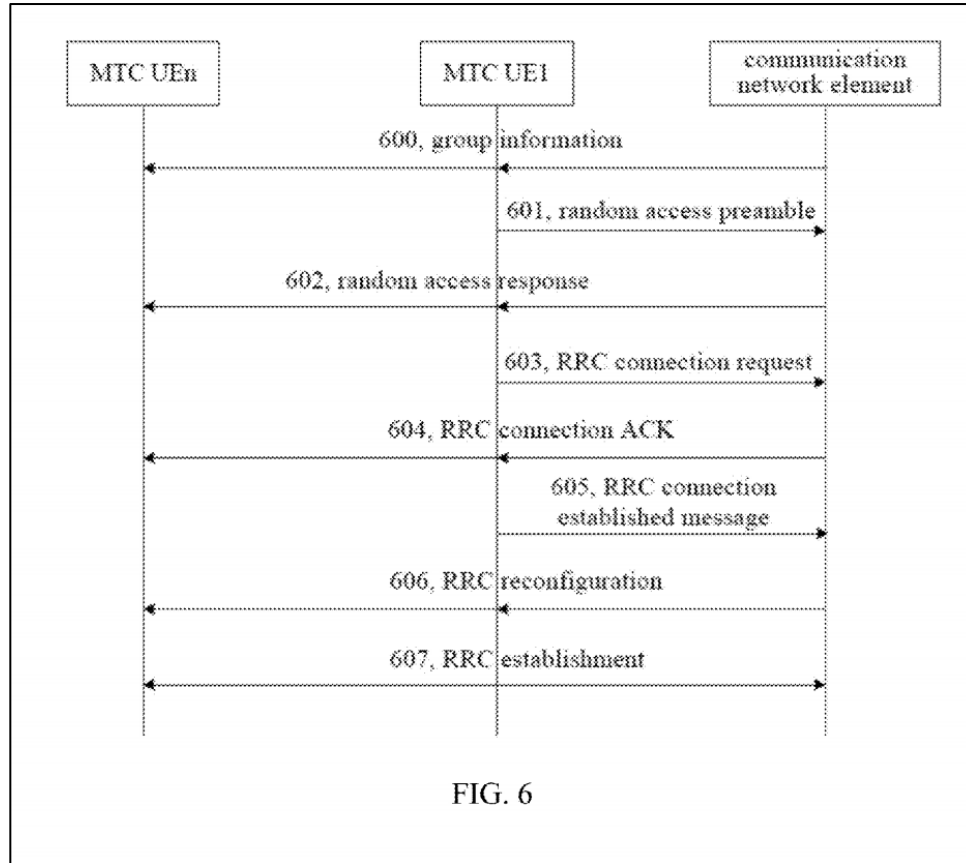
In an additional example embodiment with language that appears in claim 1, the message 3 includes a number of UEs having random access requests in the UE group or a number of UEs contained in the UE group or a pre-set UE number. *See, e.g., id.*, 4:41-44, 27:13-16.

III. OVERVIEW OF ALLEGED PRIOR ART

A. Li (Ex. 1005)

U.S. Patent Publication No. US 2013/0155894 to Li et al. is entitled “Method and System for Accessing Network.” Ex. 1005. In Li, terminals in a same group execute random number synchronization; when an arbitrary first terminal in the group initiates network access, terminals in the group except the first terminal monitor the access of the first terminal according to the synchronized random number, after monitoring that the first terminal accesses network successfully, the terminals in the group except the first terminal initiate network access by using Radio Resource Control (RRC) connection uplink resources which are allocated to the group by the network. Ex. 1005, Abstract. Li states that “[t]he technical solution of the present invention can reduce the signaling overhead for establishing signaling connection and data bearing.” *Id.*

Figure 6 of Li is a schematic flowchart of a network access method showing contention-based random access:



“MTC” refers to Machine Type communication, or “network communication that takes place in one network element (NE) or between a plurality of NEs without human interventions” *Id.*, ¶ 7. Li states that, at 600, a communication network element sends group information to all terminals in a group. *Id.*, ¶ 107. According to Li, the communication network element may divide a plurality of terminals into one or more groups and then broadcast group information including terminal IDs of all terminals in each group, so that each terminal can calculate a group ID of the group

it belongs to according to terminal IDs of all terminals in the group. *Id.*, ¶¶ 110-111.

The communication network element may also broadcast group information including group IDs of the groups or including group IDs of the groups and terminal IDs of all terminals in each group. In another variation, each terminal may store group information of the group it belongs to, including terminal IDs of all terminals belonging to the group, or including the group ID of the group, or including the group ID of the group and terminal IDs of all terminals belonging to the group. *Id.*, ¶¶ 112-114.

Li states with reference to Figure 6 that, at 601, MTC UE1 sends a random access preamble to prepare for network access. *Id.*, ¶ 115. Li explains that terminals in the same group may perform random number synchronization:

For example, terminals in the same group may select the same pseudo random number generator according to the group ID, generate the same pseudo random number seed according the group ID, select the same DL slot position as an input reference time point, and determine random numbers according to the pseudo random number seed and the input reference time point. Because they have the same DL slot position and the same input reference time point, the random numbers are the same also, thereby realizing random number synchronization.

Id., ¶ 116.

With further reference to Figure 6, Li states that, at 602, after receiving the preamble sent from the first terminal, the communication network element may allocate a T-CRNTI and RRC connection UL resources and send a RAR to the first

terminal. The RAR may comprise at least one of TA (Timing Advance), T-CRNTI, next stage UL resource allocation (UL GRANT), and a preamble ID. Because all terminals in the group have the same random number, all of other terminals in the group except the first terminal can monitor the RAR to the first terminal. For example, MTC UEn monitors the RAR to the first terminal according to the RA-RNTI and the preamble ID. When it is detected through monitoring that the first terminal has received the RAR, other terminals in the group except the first terminal may acquire the T-CRNTI and RRC connection UL resources allocated by the network from the RAR. In the case that the first terminal is randomly selected in the group, because the random number is the same in the group, MTC UEn may be aware of the terminal ID of MTC UE1. If a MTC UE receives a back-off instruction, it withdraws for a period of time and then reinitiates random access; if a MTC UE does not receive the RAR, it initiates random access separately. *Id.*, ¶¶ 120-124.

At 603, MTC UE1 sends a RRC connection request to the communication network element, which may be done according to the T-CRNTI and RRC connection UL resources allocated by the communication network element. *Id.*, ¶¶ 125-126.

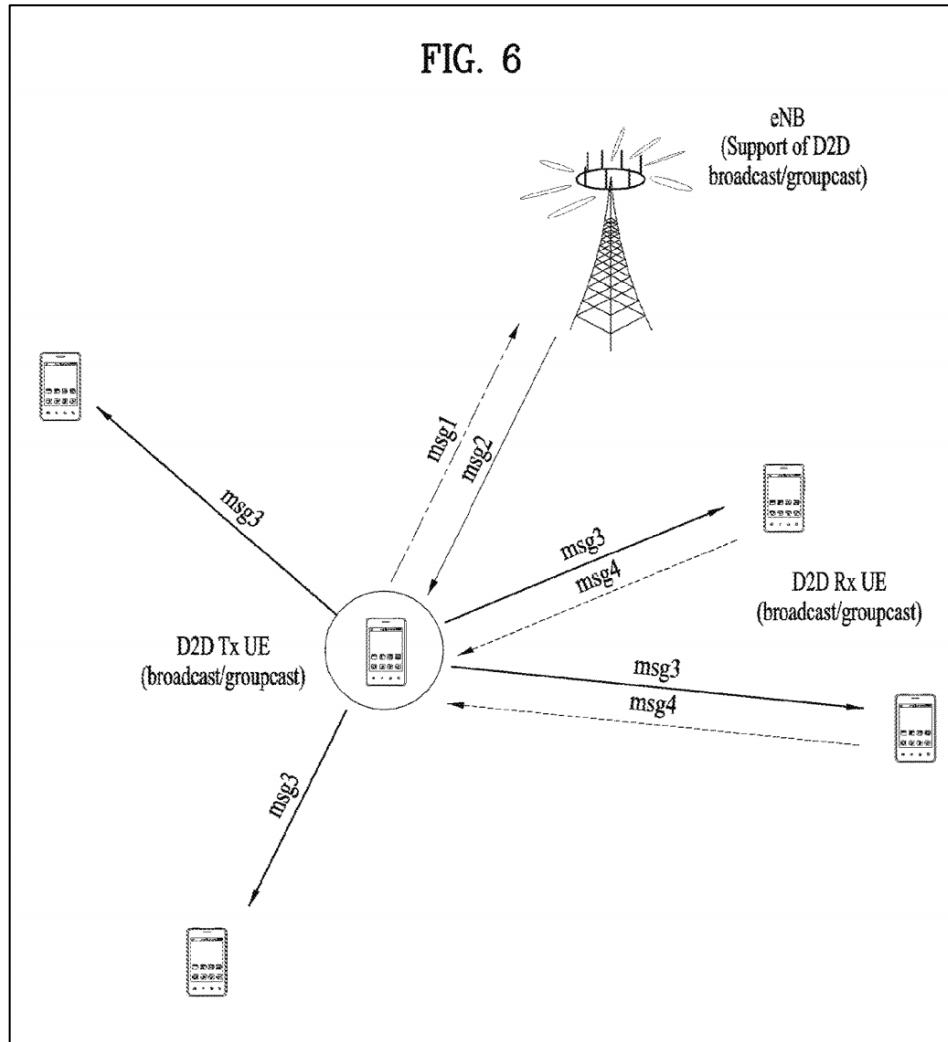
The RRC connection request may carry the terminal ID of MTC UE1 or the group ID of the group MTC UE1 belongs to or the synchronized random number. For example, after receiving the RAR, MTC UE1 may calculate a time delay of

reaching the BS from the MTC UE1 according to a preamble arrival time, and adjust the time MTC UE1 UL signal reaches the BS by using of TA (Timing Advance) so that synchronize with BSDL frames, and then send a RRC access request using the T-CRNTI and the RRC connection UL resources allocated by the communication network element. *Id.*, ¶¶ 128-129.

In Li, at 604, the communication network element returns an ACK to MTC UE1, for example, a RRC Connection ACK. The ACK may comprise the terminal ID of MTC UE1 or the group ID of the group MTCUE1 belongs to or the synchronized random number. *Id.*, ¶¶ 130-131.

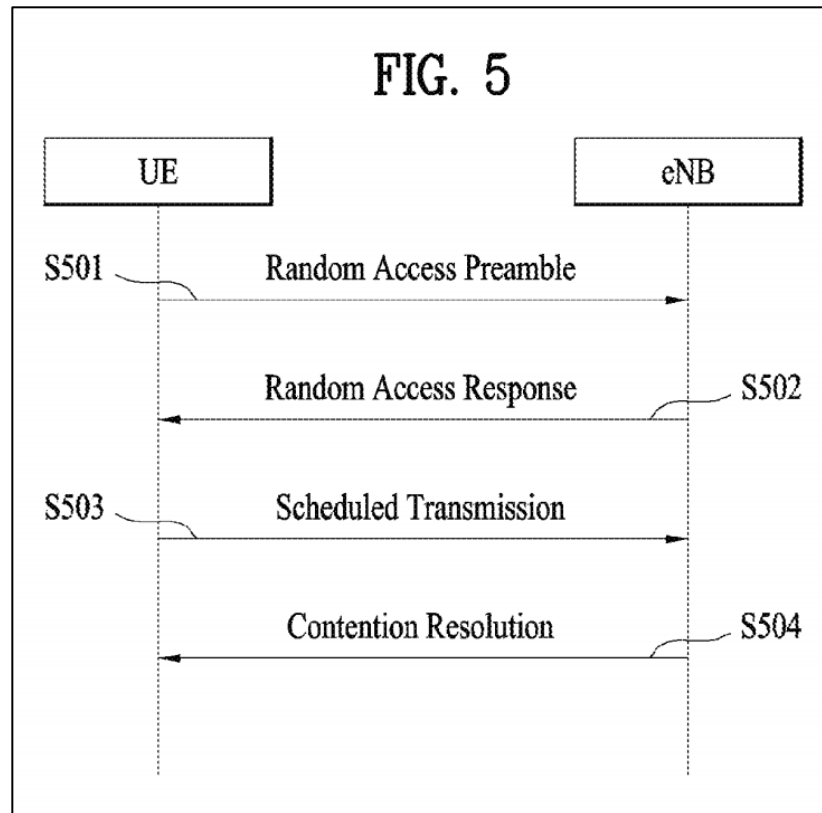
B. Kim (Ex. 1011)

U.S. Pat. Pub. 2016/0374068 to Kim et al. is entitled “D2D Signal Transmission Method and User Equipment.” Ex. 2011, 1. “D2D” stands for “device-to-device.” *Id.*, Abstract. Kim is focused on D2D communication, and discloses, e.g., D2D communication performed through a pseudo-random access procedure as illustrated in Figure 6:



In Figure 6, “the eNB may transmit msg2 containing information about, for example, resource assignment for transmission of msg3 of the Tx UE to the Tx UE in response to msg1.” *Id.*, ¶ 108.

Figure 5 of Kim illustrates a random access procedure.



Kim describes the random access procedure of Figure 5 as follows:

0084 (1) Transmission of Message 1

0085. A UE may randomly select a random access preamble from a set of random access preambles indicated through system information or an HO command, and select and transmit a physical RACH (PRACH) resource on which the random access preamble may be transmitted (S501).

0086 (2) Reception of Message 2

0087 Random access response information is received using a method similar to the method used in the non contention-based random access procedure. That is, after transmitting the random access preamble as performed in step S401, the UE attempts to receive a random access response thereof within a random access response reception window indicated through the system information or an HO command by an eNB, and receives corresponding RA-RNTI information (S402).

Thereby, the UE may receive a UL grant, a temporary C-RNTI and a TAC.

0088 (3) Transmission of Message 3

0089 If the UE receives a valid random access response, the UE processes the information included in the random access response. That is, the UE applies the TAC and stores the temporary C-RNTI. In addition, the UE transmits data (i.e., message 3) to the eNB using the UL grant (S403). Message 3 should include an ID of the UE. This is because the eNB cannot determine which UEs perform the random access procedure in the contention-based random access procedure and the UEs need to be identified for future contention resolution.

0090 Two methods to include the ID of the UE in message 3 have been discussed. According to a first method, if the UE has a valid cell ID assigned thereto in a corresponding cell before the random access procedure, the UE transmits the cell ID thereof via a UL transmission signal corresponding to the UL grant. On the other hand, if the UE has not been assigned a valid cell ID before the random access procedure, the UE transmits its unique ID (e.g., System Architecture Evolution (SAE)-Temporary Mobile Subscriber Identity (S-TMSI) or a random ID) in the message. In general, the unique ID is longer than the cell ID. Once the UE has transmitted data corresponding to the UL grant, the UE starts a contention resolution timer.

0091 (4) Reception of Message 4

0092 After transmitting the data including the ID of the UE through the UL grant included in the random access response, the UE awaits instruction from the eNB for contention resolution. That is, the UE attempts to receive a PDCCH in order to receive a specific message (S404). Two methods for receiving the PDCCH have been discussed. As described above, if message 3 is transmitted according to the UL grant using the ID of the UE or the cell ID, the UE may attempt to receive a PDCCH using the cell ID thereof. If the ID is a unique ID, the UE may attempt to receive a PDCCH using the temporary C-RNTI included in the random access response. In the former case, if the UE receives the PDCCH using the cell ID thereof before the contention resolution timer expires, the UE terminates the random access

procedure, determining that the random access procedure has been normally performed. In the latter case, if the UE receives a PDCCH using the temporary C-RNTI before the contention resolution timer expires, the UE checks the data delivered through the PDSCH indicated by the PDCCH. If the data contains the unique ID of the UE, the UE terminates the random access procedure, determining that the random access procedure has been normally performed.

Ex. 1011, ¶¶ 84-92.

IV. THE BOARD SHOULD DENY INSTITUTION OF THIS PETITION UNDER 35 U.S.C. § 325(D)

Section 325(d) provides that the Director may elect not to institute a proceeding if the challenge to the patent is based on matters previously presented to the Office. *Advanced Bionics, LLC v. Med-El Elektromedizinische Geräte GmbH*, Case IPR2019-01469, Paper 6 at 7 (PTAB Feb. 13, 2020) (precedential). The Li reference relied on as allegedly anticipating claims 1-3, 7, 11, 13-15, and 18 (Ground 1, and also relied on in all other grounds of the Petition except alleged anticipation of claim 18 by Kim, Ground 9) formed the basis of a rejection that was overcome during prosecution of the '430 patent. Petitioner asserts that the Office erred in evaluating Li, but these arguments fail. The Board should exercise discretion not to institute in light of the Office's previous consideration of Li, particularly in conjunction with the § 314(a) discretionary denial issues also presented herein.

Under § 325(d), the Board uses the following two-part framework: (1) whether the same or substantially the same art previously was presented to the Office or whether the same or substantially the same arguments previously were presented

to the Office; and (2) if either condition of first part of the framework is satisfied, whether the petitioner has demonstrated that the Office erred in a manner material to the patentability of challenged claims. *Advanced Bionics*, Paper 6 at 8. “If a condition in the first part of the framework is satisfied and the petitioner fails to make a showing of material error, the Director generally will exercise discretion not to institute inter partes review.” *Id.* at 8-9. “If reasonable minds can disagree regarding the purported treatment of the art or arguments, it cannot be said that the Office erred in a manner material to patentability.” *Id.* at 9. “At bottom, this framework reflects a commitment to defer to previous Office evaluations of the evidence of record unless material error is shown.” *Id.*

At least as to alleged anticipation by Li (Ground 1), the Petition admits that “there is no dispute that Li was considered by the Examiner during prosecution and used as a basis for initially rejecting several claims.” Pet. 4. Petitioner thus considers only whether the Office erred in its consideration of Li. Petitioner incorrectly argues that the Office materially erred “because Li anticipates several claims and expressly discloses limitations the Office found missing from Li.” *Id.* This is incorrect. At the very least, reasonable minds can disagree regarding the purported treatment of the art, and thus it cannot be said that the Office erred in a manner material to patentability. *Advanced Bionics*, Paper 6 at 9.

During prosecution of the '430 patent, the Examiner determined that Li failed to disclose that message 3 comprises “a number of UEs having random access requests in the UE group or a number of UEs contained in the UE group or a pre-set UE number.” These message 3 limitations were initially recited in dependent claim 21, Ex. 1004 at 391, and claim 21 was indicated as allowable subject matter in an Office Action rejecting then-pending claim 1 and others over Li, *id.* at 52-58. The applicant amended claim 1 to include the limitations of claim 21 and intervening claim 7, *id.* at 37-40, and the claims were allowed, *id.* at 18-20 (reasons for allowance). Thus, the Examiner determined that Li did not disclose at least that message 3 comprises a “pre-set UE number” as recited in issued claim 1.

Petitioner asserts that “Section IX.A” of its Petition explains that Li expressly discloses the limitations the Examiner found were missing. Pet. 5. Petitioner argues Li discloses these limitations in the description of Figure 6, which Petitioner asserts “the Office identified in its rejection of claim 1 but failed to apply against claims 7 and 21.” *Id.* Petitioner argues that “Li expressly discloses that message 3 includes a unique ID of the UE, i.e., a ‘pre-set UE number.’” *Id.*

As an initial matter, Petitioner simply refers to other sections of its brief in arguing material error, and fails to provide citations for specific teachings of Li that were alleged to be overlooked. Petitioner thus expects Patent Owner and the Board to fill in its “material error” argument, and Petitioner’s argument can be rejected on

that basis. “If a condition in the first part of the framework is satisfied and the petitioner fails to make a showing of material error, the Director generally will exercise discretion not to institute *inter partes* review.” *Advanced Bionics*, Paper 6 at 8-9.

Considering the other sections of the Petition, it appears that Petitioner is arguing the Examiner overlooked paragraphs 66 and 128 of Li. Petitioner's entire argument as to limitation 1[f] of claim 1 is as follows (Section IX.A.1.vii of the Petition):

Li discloses this limitation. (Ex. 1002, ¶46.) The RRC connection request (message 3) includes “the terminal ID of MTC UE1.” (Ex. 1005, ¶[0128].) And the “terminal ID may be IMSI, MSISDN, IP address, IMPU, IMPI and any other symbol used to uniquely identify a terminal.” (Id., 0066].) Thus, message 3 in Li includes a “pre-set UE number.”

Pet. 16. The Petition lacks any explanation as to why Li's terminal ID would be considered a “pre-set UE number” as recited in claim 1, which would be required to show that the Office overlooked such a teaching and erred in a manner materially related to patentability. Indeed, given the Examiner's extensive reliance on Li for other limitations in the previous rejections, it is more likely that the Examiner considered all of Li's teachings and determined Li nonetheless failed to teach a message 3 as recited in claim 1 that comprises “a pre-set UE number.” At the very least, reasonable minds can disagree regarding the purported treatment of the art, and thus it cannot be said that the Office erred in a manner material to patentability.

Advanced Bionics, Paper 6 at 9. Moreover, Petitioner's lack of explanation constitutes a failure to show material error, in which case "the Director generally will exercise discretion not to institute *inter partes* review." *Advanced Bionics*, Paper 6 at 9.

Given that the Office did not materially err in determining Li failed to disclose the "pre-set UE number" limitation of claim 1, then it cannot have erred as to the claim as a whole, and additional limitations argued by Petitioner need not be considered. Nonetheless, Petitioner also errs as to its argument that the Examiner overlooked teachings in Li regarding sending a message 3 according to the UL (uplink) grant allocated to the UE by the eNodeB. *See* Pet. at 5. Dependent claim 7 during prosecution, which was later incorporated into claim 1 as amended, recited in full: "The method according to claim 4, further comprising: after monitoring, by the first UE and/or the second UE, the RAR corresponding to the preamble and sent by the eNB, sending, by the first UE and/or the second UE, a message 3 according to the UL grant allocated thereto." Ex. 1004 at 388. Importantly, the Examiner still rejected claim 7 based on a combination with teachings in another reference, Webb. *See id.* at 57. The Examiner's rejection demonstrates that, even if the Examiner had overlooked any teaching in Li—which has not been demonstrated—it would not show error in a manner material to patentability because the Examiner relied on another reference for these teachings. In addition, the Examiner's rejection was not

final, and it is not evident whether, in allowing the claims, the Examiner still considered Li not to alone teach the limitations of claim 7 that were incorporated into claim 1. The claim still would have been allowed at least based on the lack of teaching of a message 3 comprising “a number of UEs having random access requests in the UE group or a number of UEs contained in the UE group or a pre-set UE number.” Again, at the very least, reasonable minds can disagree regarding the purported treatment of the art, and thus it cannot be said that the Office erred in a manner material to patentability. *Advanced Bionics*, Paper 6 at 9.

Petitioner also argues that the Board should not exercise its discretion to deny institution because “Petitioner presents grounds against the challenged claims that are based on prior art not before the Office.” Pet. at 6. Nonetheless, substantially the same art was previously considered by the Office. *See Advanced Bionics*, Paper 6 at 13-19 (determining that additional references were substantially the same).

As to Kim, which is the primary reference asserted by the Petition for Grounds 5-8 and asserted to anticipate claim 18 (Ground 9), it is substantially the same as Li and also potentially more deficient in certain respects. Kim is relied on for all limitations of independent claims 1 and 18, except for the “group” aspect of claim 1. *See* Pet. 39-47. But Li is relied on for the “group,” *see id.*, and the Examiner’s rejection of claim 1 during prosecution showed the Examiner considered Li to teach the “group” aspect, Ex. 1004 at 52. The Petition’s citations to Kim for “an ID of the

UE” teach no more than what the Petition relies on in Li for limitation 1[f]. *Compare* Pet. 16 *with* Pet. 47 (referring to a “similar description” as in Li). Indeed, in the analysis of claim 1 in Ground 5 of the Petition, Petitioner repeatedly invokes the similarity of the disclosures in Kim and Li in attempting to support the analysis. *See, e.g.,* Pet. 42 (“The inclusion of Kim’s UE as part of a group would not have altered this aspect of Kim’s disclosure ***given that Li discloses a similar transmission of a random access preamble*** over time-frequency resources.” (emphasis added)); Pet. at 44 (“[T]he inclusion of Kim’s UE as part of a UE group in view of Li does not affect this operation of Kim, as ***evidenced by a similar description of the random access response step in Li.***” (emphasis added)); Pet. 46 (“The inclusion of Kim’s UE as part of a UE group in view of Li does not affect this operation of Kim, ***as evidenced by a similar description of the random access response step in Li.***” (emphasis added)); Pet. at 47 (“The inclusion of Kim’s UE as part of a UE group in view of Li does not affect this operation of Kim, as evidenced by a similar description of the random access response step in Li.”).

The analysis is the same for the ground asserting anticipation of claim 18 by Kim (Ground 9), with the difference being the Petition does not rely on Li for that claim given that the term “group” only appears in the final wherein clause and the Petition argues only that Kim teaches “a pre-set UE number.” *See* Pet. at 62.

Thus, it appears Petitioner included Kim in the Petition to be able to make the nominal argument that the art is not *the same* as what the Office considered previously. Kim, however, is *substantially the same* (or worse) than Li, and thus adds nothing to the Petition from a § 325(d) perspective.

Petitioner also argues that “grounds 2, 3, and 4 are based on secondary references such as Lee, Zhang, and Jiang that were also not considered by the Office.” Pet. at 6. These grounds, however, all challenge dependent claims and still rely on Li in the same manner as relied on for independent claim 1. Accordingly, none of these grounds could succeed unless the Board were to discard the Office’s previous consideration of Li as it relates to claim 1. This would fly in the face of § 325(d) and the Board’s framework established in *Advanced Bionics*, which “reflects a commitment to defer to previous Office evaluations of the evidence of record unless material error is shown.” *Advanced Bionics*, Paper 6 at 9.

Accordingly, given that the same or substantially the same art was previously before the Office, and “the petitioner fails to make a showing of material error, the Director generally will exercise discretion not to institute *inter partes* review.” *Advanced Bionics*, Paper 6 at 9.¹

¹ Petitioner’s generic argument that the Office previously did not have the testimony of Petitioner’s declarant, Dr. Zhi Ding, *see* Pet. 6, cannot change the

**V. THE BOARD SHOULD DENY INSTITUTION OF THIS PETITION
UNDER 35 U.S.C. § 314(A)**

Under § 314(a), the Director has discretion to deny institution. *NHK Spring Co. v. Intri-Plex Technologies, Inc.*, IPR2018-00752, Paper 8 (PTAB Sept. 12, 2018) (precedential). *Fintiv* sets forth six non-exclusive factors for determining “whether efficiency, fairness, and the merits support the exercise of authority to deny institution in view of an earlier trial date in the parallel proceeding.” *Apple Inc. v. Fintiv Inc.*, IPR2020-00019, Paper 11 at 6 (PTAB Mar. 20, 2020) (precedential). These factors include:

1. whether the court granted a stay or evidence exists that one may be granted if a proceeding is instituted;
2. proximity of the court's trial date to the Board's projected statutory deadline for a final written decision;

analysis. Petitioner does not rely on any particular portions of Dr. Ding's testimony to support its weak assertions that the Office materially erred. In addition, Dr. Ding's testimony essentially mimics the Petition's bare assertions, and is entitled to no weight. *Xerox Corp. v. Bytemark, Inc.*, IPR2022-00624, Paper 9, at 15 (PTAB Aug. 24, 2022) (precedential) (holding declaration is entitled to little weight when it contains an exact restatement of the petition's arguments without any additional supporting evidence or reasoning).

3. investment in the parallel proceeding by the court and the parties;
4. overlap between issues raised in the petition and in the parallel proceeding;
5. whether the petitioner and the defendant in the parallel proceeding are the same party; and
6. other circumstances that impact the Board's exercise of discretion, including the merits grounds raised in the Petition.

Id.

According to the Memorandum from Director Vidal dated June 21, 2022, “compelling, meritorious challenges will be allowed to proceed at the PTAB even where district court litigation is proceeding in parallel. Compelling, meritorious challenges are those in which the evidence, if unrebutted in trial, would plainly lead to a conclusion that one or more claims are unpatentable by a preponderance of the evidence.” Ex. 1008 at 4. Moreover, “[w]hen a petitioner stipulates not to pursue in a parallel district court proceeding the same grounds as in the petition or any grounds that could have reasonably been raised in the petition, it mitigates concerns of potentially conflicting decisions and duplicative efforts between the district court and the PTAB.” *Id.* at 7 (citation omitted).

As noted in the Petition, the '430 patent is asserted in *G+ Communications, LLC v. Samsung Electronics Co., Ltd., et al.*, Case No. 2:22-cv-0078-JRG (E.D. Tex.)

("Texas litigation"). Here, the *Fintiv* factors favor denial of institution of this Petition in light of the Texas litigation, and Petitioner has not presented compelling evidence of unpatentability. Nor has Petitioner provided a sufficient stipulation that it will not pursue in the Texas litigation "any grounds that could have reasonably been raised in the petition." Ex. 1008 at 7.

As such, the Board should deny institution of this Petition under § 314(a).

A. Factor 1 is Neutral as No Court Has Granted a Stay and No Evidence Exists That a Stay May Be Granted

Regarding Factor 1, the parallel district court proceeding has not been stayed and no evidence exists that a stay may be granted if trial is instituted. The parallel district court proceeding includes four other U.S. patents besides the '430 Patent. Petitioner has never moved for a stay. Many issues raised in the Petition are already presented, and are already being litigated, in the Texas Litigation. Factor 1 is thus neutral at best. *See, e.g., Cisco Sys., Inc. v. Ramot at Tel Aviv Univ. Ltd.*, No. IPR2020-00123, 2020 WL 2511247, at *3 (P.T.A.B. May 15, 2020) (finding factor 1 to be neutral were "there is little evidence to suggest that the district court will grant a stay, should another one be requested").

B. Factors 2 and 5 Weigh in Favor of Denying Institution

As to factors 2 and 5, Petitioner is the defendant in the Texas litigation (Pet. at 1), and jury selection is scheduled to begin Monday, November 13, 2023 (Ex. 1010). If trial were to be instituted in this case, the Board would be expected to issue

a final written decision around the beginning of August 2024. Thus, the district court's trial is scheduled to precede the Board's final written decision (if trial were to be instituted) on overlapping issues by more than 8 months. *Samsung Electronics Co., Ltd. v. California Institute of Technology*, IPR2023-00130, Paper 10, at 22 (PTAB May 4, 2023) ("We find that the advanced posture of the Underlying Litigation outweighs the impact of Petitioner's stipulation. In particular, trial is set to start approximately eight months before the expected date of our final written decision.").

This timing is analogous to the recent decision described above in IPR2023-00130 and notably longer than that in *NHK* where the Board noted a six-month difference between a scheduled trial date and the deadline for the Board's written decision. *NHK*, IPR2018-00752, Paper 8 at 20; *see also GlobalFoundries Inc. v. UNM Rainforest Innovations*, IPR2020-00984, Paper 11, at *11-16 (PTAB Dec. 9, 2020) (finding that a scheduled trial date four months before the statutory deadline for a final written decision was a factor weighing in favor of discretionary denial); *NanoCelect Biomedical, Inc. v. Cytonome/ST, LLC*, IPR2020-00551, Paper 19, at *16 (PTAB Aug. 27, 2020) (same); *Intel Corp. v. LLC*, No. IPR2020-00583, 2021 WL 531706, at *2 (P.T.A.B. Feb. 11, 2021) ("Thus, at this time, it appears likely that trial will occur many months before any final written decision would likely issue in this proceeding. Therefore, we maintain our finding that *Fintiv* Factor

2 (proximity of the court's trial date to the Board's projected statutory deadline for a final written decision) weighs in favor of exercising our discretion to deny institution pursuant to 35 U.S.C. § 314(a).”).

Just like in *NHK*, instituting trial under the facts and circumstances here would be an inefficient use of Board resources. *See NHK*, IPR2018-00752, Paper 8 at 20 (finding under similar circumstances that institution “would not be consistent with ‘an objective of the AIA . . . to provide an effective and efficient alternative to district court litigation’”).

Petitioner’s contention that Factor 2 “weighs strongly against denial” based on the median time-to-trial statistics for the Eastern District of Texas lacks merit. Pet. 63. The Memorandum from Director Vidal dated June 21, 2022, instructs only that “the proximity to trial should not alone outweigh” other factors. Ex. 1008 at 8. As shown herein, other factors besides Factor 2 weigh in favor of denial, such as Factors 3, 4, 5, and 6, and no factors favor declining to exercise the Board’s discretion to deny institution. Moreover, based on the median time-to-trial in the Eastern District of Texas (24.5 months), trial would take place on March 29, 2024 (March 14, 2022 + 24.5 months). The district court trial would thus still occur well prior to an August 2024 final written decision if trial were instituted here.

Factors 2 and 5 thus weigh in favor of denying institution.

C. Factor 3 Weighs in Favor of Denying Institution, as the Parties and the District Court in the Eastern District of Texas Litigation Have Already Invested Significant Time and Resources

By the time the Board's institution decision is likely to issue in early August 2023, the Parties and the district court will have already expended considerable time and resources into the case, having completed claim construction and all discovery by that time. For example, as of the filing of this response, the parties have already exchanged infringement and invalidity contentions, have already briefed claim construction and are approaching the claim construction hearing on June 1, 2023 (and anticipate receiving a claim construction order at that time). Ex. 1010 at 3-4. By August 2023, the parties will have completed fact discovery, will have completed expert discovery, and will be filing dispositive motions around the same time as an anticipated decision on institution. *Id.* at 2-3.

Moreover, the District Court has already ruled on motions to dismiss. Exs. 2003-2004. In *Fintiv*, the Board stated "if, at the time of the institution decision, the district court has issued substantive orders related to the patent at issue in the petition, this fact favors denial." *Id.* at 9-10. Further, "[t]his investment factor is related to the trial date factor, in that more work completed by the parties and court in the parallel proceeding tends to support the arguments that the parallel proceeding is more advanced, a stay may be less likely, and instituting would lead to duplicative costs." *Id.* at 10.

Based on the significant time and resources the parties have already expended and will likely have expended by the time of the expected decision on institution, Factor 3 weighs in favor of denying institution.

D. Factor 4 Weighs in Favor of Denying Institution Given the Overlap in Arguments Presented in the Petition and in the Texas Litigation and Because Petitioner has not Adequately Mitigated Concerns of Potentially Conflicting Decisions and Duplication of Efforts

As to factor 4, Petitioner presents overlapping arguments in the Texas litigation and in the Petition. Petitioner's invalidity contentions in the Texas litigation contain similar proposed grounds for invalidity as are presented in the Petition for the Challenged Claims. *Compare* Pet. at 2-3 (asserting grounds based on Kim, Lee, and Jiang) *with* Ex. 2001 (asserting Kim, Lee, and Jiang teach limitations of the claims) *and with* Ex. 2002 (asserting invalidity under §§ 102 and/or 103 based on Kim). To the extent that Petitioner does not plan to rely on Li in the district court litigation, perhaps because Li formed the basis of rejections that were overcome during prosecution of the patent, such absence should not weigh in favor of institution given the factors weighing in favor of discretion to deny institution under § 325(d), as established herein.

Petitioner does not argue the overlap, except to state in the Petition that "if the IPR is instituted, Petitioner will not pursue the IPR grounds in the district court litigation." Pet. at 64-65. Petitioner's "stipulation" is insufficient to alleviate

concerns of potentially conflicting decisions and duplicative efforts between the district court and the PTAB because Petitioner fails to stipulate that it will not pursue “any grounds that could have reasonably been raised in the petition.”² Ex. 1008 at 7 (emphasis added).

Factor 4 thus weighs in favor of denying institution.

E. Factor 6 Weighs Against Institution as Petitioner Has Not Shown a Reasonable Likelihood That It Would Prevail on Ground 1

Factor 6 considers other circumstances that impact the Board's exercise of discretion. According to Petitioner, Factor 6 weighs against denial “as the merits of Petitioner’s arguments are strong.” Pet. at 65. But as shown herein, Petitioner has failed to show a reasonable likelihood that it would prevail on any ground.

Thus, to the extent Factor 6 takes into account the merits of Petitioner’s claims, Factor 6 weighs in favor of denial.

VI. LEGAL STANDARDS

A. Institution of an IPR

Under 35 U.S.C. § 314(a), Petitioner carries the burden of showing a reasonable likelihood that it would prevail with respect to at least one of the claims challenged in the Petition. Petitioner must prove unpatentability by a preponderance

² Even if it did, Factors 2, 3, 5, and 6 would still favor denial.

of the evidence. 35 U.S.C. § 316(e); *In re Magnum Oil Tools Int'l, Ltd.*, 829 F.3d 1364, 1375-77 (Fed. Cir. 2016).

A Petition cannot support institution unless it “identifies, in writing and with particularity, each claim challenged, the grounds on which the challenge to each claim is based, and the evidence that supports the grounds for the challenge to each claim.” 35 U.S.C. § 312(a)(3). The Petition must explain “[h]ow the construed claim is unpatentable” and “must specify where each element of the claim is found in the prior art patents or printed publications relied upon.” 37 C.F.R. § 42.104(b)(4); *Google Inc. v. EveryMD.com LLC*, IPR2014-00347, Paper 9, at *9 (PTAB May 22, 2014). “The Board may exclude or give no weight to the evidence where a party has failed to state its relevance or to identify specific portions of the evidence that support the challenge.” 37 C.F.R. § 42.104(b)(5).

B. Petitions Based on Anticipation

A petition based on anticipation requires a showing that “each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros., Inc. v. Union Oil Co.*, 814 F.2d 628, 631 (Fed. Cir. 1987). “If the prior art reference does not expressly set forth a particular element of the claim, that reference still may anticipate if that element is ‘inherent’ in its disclosure.” *In re Robertson*, 169 F.3d 743, 745 (Fed. Cir. 1999). “To establish inherency, the extrinsic evidence ‘must make clear that the missing

descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill.” *Id.* (quoting *Continental Can Co. v. Monsanto Co.*, 948 F.2d 1264, 1268 (Fed. Cir. 1991)). “Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.” *Continental Can*, 948 F.2d at 1269 (quotation omitted).

It is well-understood that for an anticipation argument, “there must be a teaching with respect to the entirety of the claimed invention” or the argument fails as a matter of law. *Structural Rubber Prods. Co. v. Park Rubber Co.*, 749 F.2d 707, 716 (Fed. Cir. 1984); *Eli Lilly & Co. v. Sicor Pharms., Inc.*, 705 F. Supp. 2d 971, 992 (S.D. Ind. 2010) (“In showing that all elements of an invention were anticipated, the challenging party may not rely upon the knowledge of one skilled in the art . . . to supply missing elements.”).

C. Petitions Based on Obviousness

Grounds in a petition based on obviousness must “meaningfully” address the first two *Graham* factors: (i) the scope and content of the prior art, and (ii) any differences between the claimed subject matter and the prior art. *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 17-18 (1966). It is not the Board’s (or Patent Owner’s) role to “sift through the information” provided with a petition to identify the differences between a challenged claim and the prior art. *Google*, IPR2014-

00347 at *9. As part of that analysis, the Petition must show that a skilled artisan would have been motivated to combine the prior art references with a reasonable expectation of success. *Apotex Inc. v. Wyeth LLC*, IPR2014-00115, Paper 94, at 11 (PTAB Apr. 20, 2015) (citations omitted). An articulated reason with a rational underpinning to combine specific teachings in the references in a particular manner to arrive at the claimed invention is required for a showing of obviousness. *KSR Int'l Co. v. Teleflex, Inc.*, 550 U.S. 398, 418 (2007). Moreover, when an expert declaration is relied on to support such reasoning, the “[l]ack of factual support for expert opinion going to factual determinations . . . may render the testimony of little probative value in a validity determination.” *Ashland Oil v. Delta Resins & Refractories*, 776 F.2d 281, 294 (Fed. Cir. 1985); *see also Xerox Corp. v. Bytemark, Inc.*, IPR2022-00624, Paper 9, at 15 (PTAB Aug. 24, 2022) (precedential) (holding declaration is entitled to little weight when it contains an exact restatement of the petition’s arguments without any additional supporting evidence or reasoning).

“The evaluation of the choices made by a skilled scientist, when such choices lead to the desired result, is a challenge to judicial understanding of how technical advance is achieved in the particular field of science or technology.” *Abbott Labs. v. Sandoz, Inc.*, 544 F.3d 1341, 1352 (Fed. Cir. 2008). An obviousness inquiry based on an obvious-to-try rationale must always be undertaken in the context of the subject matter in question, “including the characteristics of the science or

technology, its state of advance, the nature of the known choices, the specificity or generality of the prior art, and the predictability of results in the area of interest.” *Id.*

To show that a particular design could have been obvious to try, Petitioner must present credible evidence to support its assertion that one of ordinary skill in the art would have understood that there are a limited number of possibilities for meeting a known design need. *See Bayer Schering Pharma AG v. Barr Labs., Inc.*, 575 F.3d 1341, 1347 (Fed. Cir. 2009) (“[A]n invention would not have been obvious to try when the inventor would have had to try all possibilities in a field unreduced by direction of the prior art.”). In addition, “an invention is not obvious to try where vague prior art does not guide an inventor toward a particular solution.” *Bayer Schering Pharma AG v. Barr Lab'ys, Inc.*, 575 F.3d 1341, 1347 (Fed. Cir. 2009).

VII. CLAIM CONSTRUCTION

In an *inter partes* review filed on or after November 13, 2018, claim terms are construed based on their ordinary and customary meaning. 37 C.F.R. § 42.100(b). Further, the Board should always construe claims to sustain their validity, if possible. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1329 (Fed. Cir. 2005). The specification is the “best source for understanding a technical term,” to be supplemented, “as needed, by the prosecution history.” *Id.*, at 1315. For purposes of this paper, for all claim terms, Patent Owner requests that the Board adopt the ordinary and customary meaning of

the claim terms as understood by one of ordinary skill in the art.³ Patent Owner also contends that the “sending unit” and “monitoring unit” of claim 18 are means-plus-function limitations that invoke 35 U.S.C. § 112(f). If trial is instituted, and to the extent deemed necessary to resolve any dispute, Patent Owner reserves the right to further propose more specific constructions of one or more claim terms.

A. The Petition Should Be Denied Because the Petitioner Fails to Identify How the Challenged Claims are to Be Construed (37 C.F.R. § 42.104(b)(3))

Petitioner argues that “given the correlation between the prior art and the challenged claims of the ’430 patent, the Board need not construe any terms of the challenged claims to resolve the underlying controversy, as any reasonable construction reads on the prior art.” Pet. 8-9. The “correlation” alleged by Petitioner necessarily depends, however, on how the claims are construed, and Petitioner does not identify how the challenged claims are to be construed as required by 37 C.F.R.

³ Patent Owner files herewith claim construction briefing submitted to the district court by Petitioner and Patent Owner so that the Board may be aware of the parties’ positions to the extent they may differ from those argued in this proceeding. *See* Exs. 2005-2007. Citations to these exhibits are to the Exhibit label’s numbered pages (also corresponding with the ECF label page #s), rather than to the original numbered pages of the document.

§ 42.104(b)(3). None of the so-called “reasonable construction[s]” are discussed in the Petition, indicating Petitioner is simply attempting to avoid claim construction altogether and hope that the Board perform its own construction in evaluating Petitioner's arguments. For example, the Petition makes statements such as “[t]he UE ID is a ‘pre-set UE number,’” Pet. 47, without any analysis of the claim construction issues or explanation as to how the conclusion was reached. This constitutes a failure to identify how the challenged claims are to be construed, and institution should be denied on this additional basis.

The Petition particularly fails in this regard as to claim 18, which both parties agree before the district court contains means-plus-function elements governed by 35 U.S.C. § 112(f). *See* Ex. 2006, 13-17 (Petitioner's responsive claim construction brief identifying the monitoring unit and sending unit of claim 18 as means-plus-function elements invoking § 112(f)). Again, Petitioner attempts to avoid this issue altogether, presumably for strategic reasons given that, in the district court, Petitioner argues there is no corresponding structure for the claimed functions of the monitoring unit and sending unit, rendering the claims indefinite. *See id.* Petitioner must, however, identify how the challenged claim is to be construed and, “[w]here the claim to be construed contains a means-plus-function or step-plus-function limitation as permitted under 35 U.S.C. 112(f), the construction of the claim must identify the specific portions of the specification that describe the structure, material,

or acts corresponding to each claimed function.” 37 C.F.R. § 42.104(b)(3). The Consolidated Trial Practice Guide⁴ states the following:

Where claim language *may be construed according to 35 U.S.C. § 112(f)*, a petitioner must provide a construction that includes both the claimed function and *the specific portions of the specification that describe the structure, material, or acts corresponding to each claimed function*. 37 C.F.R. § 42.104(b)(3). A party may choose to elaborate why § 112(f) should or should not apply to the limitation at issue. . . . *A petitioner who chooses not to address construction under § 112(f) risks failing to satisfy the requirement of 37 C.F.R. § 42.104(b)(3).*

Consolidated Practice Guide at 45 (emphasis added).

Where, as here, both parties agree the terms are governed by § 112(f), Petitioner's failure to even acknowledge the issue, let alone argue why the terms are or are not governed by § 112(f) or identify the functions and the portions of the specification that describe the corresponding structure, is a failure to comply with 37 C.F.R. § 42.104(b)(3). Such failure calls for denial of institution. *See Samsung Elecs. Co. v. Power2B Inc.*, IPR2022-01378, Paper 12, 11-15 (PTAB Mar. 15, 2023) (denying institution where petitioner has not identified structure corresponding to the functions recited in the claims, noting that, in such circumstances, the Board

⁴ See Consolidated Trial Practice Guide at 45 available at <https://www.uspto.gov/TrialPracticeGuideConsolidated>; *see also* 84 Fed. Reg. 64,280 (Nov. 21, 2019).

“cannot ascertain the differences between the claimed invention and the asserted prior art, as required.”).

B. Petitioner argues in district court that the “pre-set UE number” limitation renders the claims indefinite and that the ’430 patent indicates that the “pre-set UE number” is not an identifier.

Petitioner argues to the district court that the “pre-set UE number” limitation is indefinite, and “[a] POSITA would not understand the scope of this term with reasonable certainty.” Ex. 2006, 17. Petitioner’s indefiniteness arguments also contain other arguments regarding claim scope that undermine the grounds asserted in its Petition.

Petitioner argues before the district court that “a number of UEs having random access requests in the UE group” and “a number of UEs contained in the UE group” expressly refer to a quantity, “but the language is unclear whether ‘pre-set UE number’ pertains to a quantity (*e.g.*, a pre-set number of UEs in the UE group), an identifier (*e.g.*, a pre-set number specific to a certain UE or the UE group), or something else (*e.g.*, priority, order). *Id.* According to Petitioner, “[o]ther claim terms referring to identifiers expressly state so, unlike here. ’430 patent at cl. 3 (reciting “group Identifier (ID)”), cl. 13 (reciting “a group ID”), cl. 5 (reciting “Random Access Radio Network Temporary Identity (RA-RNTI)” and “Temporary Cell Radio Network Temporary Identity (TCRNTI)).” Ex. 2006 at 17-18. Petitioner

asserts that “[t]he claims fail to clarify the scope of the term *aside from implying ‘pre-set UE number’ is not an identifier.*” *Id.* at 18 (emphasis added).

Petitioner further addresses the specification, asserting:

The specification provides no clarification about the scope of the term at issue, simply reciting it in the same manner as the claims. ’430 patent at 4:41-49, 7:24-27, 7:29-32, 11:20-22, 11:23-27, 27:17-21. While the specification mentions a “UE Identifier” and a “group ID” in various embodiments of group-based random access, it does not tie any of those embodiments to the claimed “pre-set UE number.” *Id.* at 2:2-7, 13:20-23, 13:49-50. ***If anything, the patent suggests that the “pre-set UE number” is not an identifier, as it refers to any identifiers expressly, see, e.g., id.*** at 4:16-23 (“group ID of the UE group,” “ID of the first UE,” “ID of a preamble”), but is otherwise devoid of any guidance about how to interpret this term.

Ex. 2006 at 18 (emphasis added).

As to extrinsic evidence, Petitioner argues:

Extrinsic evidence suggests that the uncertainty about the meaning of “pre-set UE number” is the result of translation error. Certified translations of the foreign applications underlying the ’430 patent reflect that the original language of the term at issue referred to a quantity of UEs, namely “a preset number of UEs.” Ex. 2 at cl. 21 (SAM-GC00073496) (“wherein the message 3 includes the number of UEs with random access requests in the UE group or the number of UEs included in the UE group or a preset number of UEs”), Ex. 3 at cl. 21 (SAM-GC00073817) (“wherein the message 3 includes the number of UEs with random access requests in the UE group or the number of UEs included in the UE group or a preset number of UEs”). ***Contradicting the intrinsic and extrinsic record***, G+ interprets “pre-set UE number” in the infringement contentions as an identifier. See Ex. 5 at 29 (“Upon information and belief, the C-RNTI MAC CE field [that signifies an identifier] comprises a pre-set UE number.”)

Ex. 2006 at 18-19 (footnotes omitted) (emphasis added).

In footnote 7 of its claim construction responsive brief to the district court, Petitioner again reiterates as to “pre-set UE number” that “intrinsic record suggests that the term at issue *is not* an identifier.” *Id.* at 19, fn7.⁵

VIII. PETITIONER'S ALLEGED GROUNDS OF INVALIDITY DO NOT SHOW A REASONABLE LIKELIHOOD OF SUCCESS

As illustrated in detail below, each of Petitioner's nine alleged grounds are clearly deficient.

A. Petitioner fails to show a reasonable likelihood of success as to anticipation by Li (Ground 1).

Petitioner asserts that claims 1-3, 7, 11, 13-15, and 18 are anticipated by Li (Ground 1). The Petition fails to show that Li discloses all limitations of independent claims 1 and 18. Additionally, Li fails to disclose all limitations of dependent claims 2-3, 7, 11, and 13-15 at least because these claims depend from claim 1.

1. Li fails to anticipate claim 1

- a. Li fails to disclose at least the claimed step of “sending, by at least one of the first UE or the second UE, a message 3 according to a Uplink (UL) grant allocated thereto, wherein the message 3 comprises a number of UEs having random access requests in the UE group or**

⁵ Patent Owner argued to the district court that Petitioner was confusing breadth with indefiniteness and that the term should be given its plain and ordinary meaning. Ex. 2005 at 19-20; Ex. 2007 at 9.

a number of UEs contained in the UE group or a pre-set UE number”

Independent claim elements 1[e] and 1[f] recite “sending, by at least one of the first UE or the second UE, a message 3 according to a Uplink (UL) grant allocated thereto, wherein the message 3 comprises a number of UEs having random access requests in the UE group or a number of UEs contained in the UE group or a pre-set UE number.” ’430 patent, 30:25-30. Because Petitioner provides no explanation as to how the cited portions of Li disclose “wherein the message 3 comprises . . . a pre-set UE number,” Petitioner has not shown by a preponderance of the evidence that Li anticipates this limitation. *See Eli Lilly & Co. v. L.A. Biomedical Research Inst.*, 849 F.3d 1073, 1074 (Fed. Cir. 2017) (“To anticipate a claim, a prior art reference must disclose every limitation of the claimed invention, either expressly or inherently.” (citation and quotation marks omitted)); *see also W.L. Gore & Assocs., Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1554 (Fed. Cir. 1983) (refusing to find claims anticipated when the prior art references were “unacceptably vague”); *In re Turlay*, 49 C.C.P.A. 1288, 304 F.2d 893, 899 (1962) (“It is well established that an anticipation rejection cannot be predicated on an ambiguous reference.”).

It is Petitioner’s burden to show how a cited reference discloses or teaches the full scope of a claim element or limitation. *Cf. Hulu v. Soundview Innovations*, IPR2018-01039, Paper 29 at 16 (PTAB Dec. 20, 2019) (precedential) (“[T]he burden

is on the petitioner to identify with particularity evidence sufficient to establish a reasonable likelihood that the reference was publicly accessible”). A Petitioner cannot ask the Board to speculate if Li’s terminal ID is a “pre-set UE number” as claimed; it must show that it is. Failure to engage on this issue both fails to meet Petitioner’s burden and also fails to comply with 37 C.F.R. § 42.104(b)(3)’s requirement to identify how the challenged claim is to be construed.

Here, Petitioner’s entire argument as to limitation 1[f] of claim 1 is as follows (Section IX.A.1.vii of the Petition):

Li discloses this limitation. (Ex. 1002, ¶46.) The RRC connection request (message 3) includes “the terminal ID of MTC UE1.” (Ex. 1005, ¶[0128].) And the “terminal ID may be IMSI, MSISDN, IP address, IMPU, IMPI and any other symbol used to uniquely identify a terminal.” (Id., 0066].) Thus, message 3 in Li includes a “pre-set UE number.”

Pet. 16. The Petition lacks any explanation as to why Li’s terminal ID would be considered a “pre-set UE number” as recited in claim 1. Thus, it is unclear how Petitioner arrived at the conclusion that the claim limitation is disclosed in Li.

Petitioner’s anticipation argument purports to rely on Dr. Ding’s Declaration (Ex. 1002). But a comparison of the Petition and the Declaration reveals that the Declaration is largely a verbatim copy of the attorney argument in the Petition. *Compare, e.g.,* Pet. 16 *with* Ex. 1002, ¶ 46 (footnote omitted).

Petition at 16	Ex. 1002, Ding Declaration, ¶ 46
Li discloses this limitation. (Ex. 1002, ¶46.) The RRC connection request (message 3) includes “the terminal ID of MTC UE1.” (Ex. 1005, ¶[0128].) And the “terminal ID may be IMSI, MSISDN, IP address, IMPU, IMPI and any other symbol used to uniquely identify a terminal.” (Id., 0066].) Thus, message 3 in Li includes a “pre-set UE number.”	Li discloses this limitation. In particular, the RRC connection request includes “the terminal ID of MTC UE1.” (Ex. 1005, ¶[0128].) As noted earlier in Li, “terminal ID may be IMSI, MSISDN, IP address, IMPU, IMPI and any other symbol used to uniquely identify a terminal.” (Id., ¶[0066].) It would have been well known to a POSITA that these examples of terminal ID comprise pre-set numbers corresponding to the terminal (i.e., UE). Thus, the message 3 disclosed in Li includes a “pre-set UE number.”

The only addition to what is contained in the Petition is a conclusion that “[i]t would have been well known to a POSITA that these examples of terminal ID comprise pre-set numbers corresponding to the terminal (i.e., UE).” This statement is merely a conclusion and fails to explain the basis for the opinion. The Board has determined repeatedly that expert testimony that merely repeats the statements in a petition fails to “disclose underlying facts or data on which the opinion is based [and therefore have found such testimony] to be entitled to little or no weight.” *See* 37 C.F.R. § 42.65(a). For example, in *Kinetic Technologies*, when the petitioner’s expert declaration contained arguments that were identical to arguments set forth

in the petition and merely added the phrase “it is my opinion that,” the Board found that “merely repeating an argument from the Petition in the declaration of a proposed expert does not give that argument enhanced probative value.” *Kinetic Techs., Inc. v. Skyworks Sols., Inc.*, IPR2014- 00529, Paper 8 at 15 (PTAB Sept. 23, 2014). Similarly, in *Corning Inc.*, the Board found expert testimony that merely repeated, verbatim, attorney argument in the petition to be entitled to little weight, as it identified no objective evidence to explain the petitioner’s arguments. *Corning Inc. v. DSM IP Assets B.V.*, IPR2013- 00045, Paper 92 at 8 (PTAB May 9, 2014) (“[L]ack of factual support for [an] expert opinion ‘may render the testimony of little probative value in a validity determination’”) (quoting *Ashland Oil, Inc. v. Delta Resins & Refractories, Inc.*, 776 F.2d 281, 294 (Fed. Cir. 1985)); *see also Xerox Corp. v. Bytemark, Inc.*, IPR2022-00624, Paper 9, at 15 (PTAB Aug. 24, 2022) (precedential) (holding declaration is entitled to little weight when it contains an exact restatement of the petition’s arguments without any additional supporting evidence or reasoning).

Petitioner and Dr. Ding’s unexplained conclusion is also undermined by Petitioner’s position in the district court that intrinsic and extrinsic evidence suggest that “pre-set UE number” “*is not* an identifier.” Ex. 2006 at 18-19 & fn7. It is Petitioner’s burden to show a reasonable likelihood of success, and failure to address

the construction of “pre-set UE number” in light of the assertions in the Petition and the positions taken in the litigation is a failure to meet its burden.

For at least these reasons, Petitioner has failed to meet its burden in establishing a reasonable likelihood of success in prevailing on its challenge to claim 1 as anticipated by Li.

2. Li fails to anticipate claims 2, 3, 7, 11, and 13-15

Petitioner asserts under Ground 1 that Li anticipates claims 2, 3, 7, 11, and 13-15. But Li fails to disclose all limitations of dependent claims 2, 3, 7, 11, and 13-15 at least because these claims depend from claim 1.

3. Li fails to anticipate claim 18

a. Petitioner failed to demonstrate that the “sending unit” and “monitoring unit” means-plus-function limitations were present in Li.

In the context of claims that invoke 35 U.S.C. § 112(f), “a challenger who seeks to demonstrate that a means-plus-function limitation was present in the prior art must prove that the corresponding structure—or an equivalent—was present in the prior art.” *Fresenius USA, Inc. v. Baxter Int’l, Inc.*, 582 F.3d 1288, 1299 (Fed. Cir. 2009) (citing *In re Donaldson Co.*, 16 F.3d 1189, 1193 (Fed. Cir. 1994)).

As discussed above in Section VII.A, the “sending unit” and “monitoring unit” recited in claim 18 invoke 35 U.S.C. § 112(f) and Petitioner has not identified, in the specification of the ’430 patent, structure corresponding to these means-plus-

function limitations. “Because Petitioner has not identified structure corresponding to the functions recited” in claim 18, the Board “cannot ascertain the differences between the claimed invention and the asserted prior art, as required.” *Samsung*, IPR2022-01378, Paper 12 at 15. Accordingly, Petitioner has not demonstrated a reasonable likelihood that it would prevail in showing claim 18 is anticipated by Li.

b. Li fails to disclose at least “wherein the message 3 comprises a number of UEs having random access requests in the UE group or a number of UEs contained in the UE group or a pre-set UE number”

In addition, Petitioner has failed to meet its burden in establishing a reasonable likelihood of success in prevailing on its challenge to claim 18 as anticipated by Li for the same reasons it failed to establish a reasonable likelihood of success as to claim element 1[f] as discussed above in Section VIII.A.1.a.

B. Petitioner fails to show a reasonable likelihood of success as to obviousness based on Li (Grounds 2-4).

Petitioner asserts that claims 5, 6, and 8-10 are unpatentable under 35 U.S.C. § 103(a) as being obvious over Li in view of Lee (Ex. 1007) (Ground 2), that claim 12 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Li in view of Zhao (Ex. 1012) (Ground 3), and that claim 17 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Li in view of Jiang (Ex. 1006) (Ground 4). All of these claims depend from claim 1, and the additional references are not used to cure the demonstrated deficiencies with Li. Thus, these grounds fail for at least the same

reasons that Petitioner failed to show a reasonable likelihood of success on anticipation of claim 1 by Li.

C. Petitioner fails to show a reasonable likelihood of success as to obviousness based on Kim and Li (Grounds 5-8).

Petitioner asserts that:

Claims 1-4, 7, and 13 are unpatentable under 35 U.S.C. § 103(a) as being obvious over Kim in view of Li (Ground 5);

Claims 5-6 and 8-10 are unpatentable under 35 U.S.C. § 103(a) as being obvious over Kim and Li in view of Lee (Ground 6);

Claim 12 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Kim and Li in view of Zhao (Ground 7);

Claim 17 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Kim and Li in view of Jiang (Ground 8).

Pet. 3.

The Petition fails to show that Kim or Li, alone or in combination, teach all limitations of independent claim 1. Additionally, Kim and Li fail to render obvious dependent claims 2-10, 12, 13, and 17, at least because these claims depend from claim 1.

1. Kim and Li fail to render obvious claim 1

- a. Kim and Li fail to teach at least the claimed step of “sending, by at least one of the first UE or the second UE, a message 3 according to a Uplink (UL) grant**

allocated thereto, wherein the message 3 comprises a number of UEs having random access requests in the UE group or a number of UEs contained in the UE group or a pre-set UE number”

Independent claim elements 1[e] and 1[f] recite “sending, by at least one of the first UE or the second UE, a message 3 according to a Uplink (UL) grant allocated thereto, wherein the message 3 comprises a number of UEs having random access requests in the UE group or a number of UEs contained in the UE group or a pre-set UE number.” ’430 patent, 30:25-30. Because Petitioner provides no explanation as to how the cited portions of Kim teach “wherein the message 3 comprises . . . a pre-set UE number,” Petitioner has not shown by a preponderance of the evidence that Kim and Li teach this limitation.

It is Petitioner’s burden to show how a cited reference discloses or teaches the full scope of a claim element or limitation. *Cf. Hulu v. Soundview Innovations*, IPR2018-01039, Paper 29 at 16 (PTAB Dec. 20, 2019) (precedential) (“[T]he burden is on the petitioner to identify with particularity evidence sufficient to establish a reasonable likelihood that the reference was publicly accessible . . .”). A Petitioner cannot ask the Board to speculate if Kim’s UE ID is a “pre-set UE number” as claimed; it must show that it is. Failure to engage on this issue both fails to meet Petitioner’s burden and also fails to comply with 37 C.F.R. § 42.104(b)(3)’s requirement to identify how the challenged claim is to be construed.

Here, Petitioner’s entire argument as to limitation 1[f] of claim 1 is as follows
(Section IX.E.1.vii of the Petition):

Kim in view of Li discloses or suggests this limitation. (Ex. 1002, ¶¶99.) Kim discloses that “[m]essage 3 should include an ID of the UE. This is because the eNB cannot determine which UEs perform the random access procedure in the contention-based random access procedure and the UEs need to be identified for future contention resolution.” (Ex. 1011, ¶¶[0089].) The UE ID may be a “unique ID (e.g., System Architecture Evolution (SAE)-Temporary Mobile Subscriber Identity (S-TMSI) or a random ID).” (Id., ¶¶[0090].) ***The UE ID is a “pre-set UE number.”*** The inclusion of Kim’s UE as part of a UE group in view of Li does not affect this operation of Kim, as evidenced by a similar description of the random access response step in Li. (Ex. 1002, ¶¶99; supra Section IX.A.1.vii.)

Pet. 47 (emphasis added) (footnote omitted). The Petition lacks any explanation as to why Kim’s UE ID would be considered a “pre-set UE number” as recited in claim 1, and instead merely asserts it as fact. Thus, it is unclear how Petitioner arrived at the conclusion that the claim limitation is taught in Kim.

Petitioner’s argument purports to rely on Dr. Ding’s Declaration (Ex. 1002). But a comparison of the Petition and the Declaration reveals that the Declaration is largely a verbatim copy of the attorney argument in the Petition. *Compare, e.g.,* Pet. 47 *with* Ex. 1002, ¶ 99 (footnote omitted).

Petition at 47	Ex. 1002, Ding Declaration, ¶ 99
Kim in view of Li discloses or suggests this limitation. (Ex. 1002, ¶¶99.)	Kim in view of Li discloses or suggests this limitation.

Kim discloses that “[m]essage 3 should include an ID of the UE. This is because the eNB cannot determine which UEs perform the random access procedure in the contention-based random access procedure and the UEs need to be identified for future contention resolution.” (Ex. 1011, ¶[0089].) The UE ID may be a “unique ID (e.g., System Architecture Evolution (SAE)-Temporary Mobile Subscriber Identity (S-TMSI) or a random ID).” (Id., ¶[0090].) The UE ID is a “pre-set UE number.” The inclusion of Kim’s UE as part of a UE group in view of Li does not affect this operation of Kim, as evidenced by a similar description of the random access response step in Li. (Ex. 1002, ¶99; supra Section IX.A.1.vii.)	Kim discloses that “[m]essage 3 should include an ID of the UE. This is because the eNB cannot determine which UEs perform the random access procedure in the contention-based random access procedure and the UEs need to be identified for future contention resolution.” (Ex. 1011, ¶[0089].) The UE ID may be a “unique ID (e.g., System Architecture Evolution (SAE)-Temporary Mobile Subscriber Identity (S-TMSI) or a random ID).” (Id., ¶[0090].) For example, S-TMSI is a number expressed in 40 bits. Therefore, Kim discloses that the UE ID is a “pre-set UE number.” The inclusion of Kim’s UE as a member of a UE group in view of Li does not affect this operation of Kim, as evidenced by a similar description of the random access response step in Li. (Supra Section IX.A.1.vii.)
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The only addition to what is contained in the Petition is a statement that “[f]or example, S-TMSI is a number expressed in 40 bits.” This statement fails to explain the conclusion that Kim therefore discloses that the UE ID is a pre-set UE number. The Board has determined repeatedly that expert testimony that merely repeats the statements in a petition fails to “disclose underlying facts or data on which the opinion is based [and therefore have found such testimony] to be entitled to little or no weight.” See 37 C.F.R. § 42.65(a). For example, in *Kinetic Technologies*, when the petitioner’s expert declaration contained arguments that were identical to

arguments set forth in the petition and merely added the phrase “it is my opinion that,” the Board found that “merely repeating an argument from the Petition in the declaration of a proposed expert does not give that argument enhanced probative value.” *Kinetic Techs., Inc. v. Skyworks Sols., Inc.*, IPR2014- 00529, Paper 8 at 15 (PTAB Sept. 23, 2014). Similarly, in *Corning Inc.*, the Board found expert testimony that merely repeated, verbatim, attorney argument in the petition to be entitled to little weight, as it identified no objective evidence to explain the petitioner’s arguments. *Corning Inc. v. DSM IP Assets B.V.*, IPR2013- 00045, Paper 92 at 8 (PTAB May 9, 2014) (“[L]ack of factual support for [an] expert opinion ‘may render the testimony of little probative value in a validity determination’”) (quoting *Ashland Oil, Inc. v. Delta Resins & Refractories, Inc.*, 776 F.2d 281, 294 (Fed. Cir. 1985)); *see also Xerox Corp. v. Bytemark, Inc.*, IPR2022-00624, Paper 9, at 15 (PTAB Aug. 24, 2022) (precedential) (holding declaration is entitled to little weight when it contains an exact restatement of the petition’s arguments without any additional supporting evidence or reasoning).

Petitioner and Dr. Ding’s unexplained conclusion is also undermined by Petitioner’s position in the district court that intrinsic and extrinsic evidence suggest that “pre-set UE number” “*is not* an identifier.” Ex. 2006 at 18-19 & fn7. It is Petitioner’s burden to show a reasonable likelihood of success, and failure to address

the construction of “pre-set UE number” in light of the assertions in the Petition and the positions taken in the litigation is a failure to meet its burden.

For at least these reasons, Petitioner has failed to meet its burden in establishing a reasonable likelihood of success in prevailing on its challenge to claim 1 as rendered obvious by Kim and Li.

2. Kim and Li fail to render obvious claims 2-10, 12, 13, and 17

The Petition fails to show that Kim or Li, alone or in combination, teach all limitations of independent claim 1. Additionally, Kim and Li fail to render obvious dependent claims 2-10, 12, 13, and 17, at least because these claims depend from claim 1.

D. Petitioner fails to show a reasonable likelihood of success as to anticipation of claim 18 by Kim (Ground 9)

1. Kim fails to anticipate claim 18

a. Petitioner failed to demonstrate that the “sending unit” and “monitoring unit” means-plus-function limitations were present in Kim.

In the context of claims that invoke 35 U.S.C. § 112(f), “a challenger who seeks to demonstrate that a means-plus-function limitation was present in the prior art must prove that the corresponding structure—or an equivalent—was present in the prior art.” *Fresenius USA, Inc. v. Baxter Int’l, Inc.*, 582 F.3d 1288, 1299 (Fed. Cir. 2009) (citing *In re Donaldson Co.*, 16 F.3d 1189, 1193 (Fed. Cir. 1994)).

As discussed above in Section VII.A, the “sending unit” and “monitoring unit” recited in claim 18 invoke 35 U.S.C. § 112(f) and Petitioner has not identified, in the specification of the '430 patent, structure corresponding to these means-plus-function limitations. “Because Petitioner has not identified structure corresponding to the functions recited” in claim 18, the Board “cannot ascertain the differences between the claimed invention and the asserted prior art, as required.” *Samsung*, IPR2022-01378, Paper 12 at 15. Accordingly, Petitioner has not demonstrated a reasonable likelihood that it would prevail in showing claim 18 is anticipated by Kim.

- b. Kim fails to disclose at least “wherein the message 3 comprises a number of UEs having random access requests in the UE group or a number of UEs contained in the UE group or a pre-set UE number”**

In addition, Petitioner has failed to meet its burden in establishing a reasonable likelihood of success in prevailing on its challenge to claim 18 as anticipated by Kim for the same reasons it failed to establish a reasonable likelihood of success as to claim element 1[f] as discussed above in Section VIII.C.1.

IX. CONCLUSION

For all of the foregoing reasons, Patent Owner respectfully requests that the Board deny institution on the Petition.

G+ Communications Patent Owner's Preliminary Response
IPR2023-00441 to U.S. Patent No. 10,448,430

Dated: May 8, 2023

Respectfully submitted,
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CERTIFICATE OF WORD COUNT UNDER CERTIFI

I, the undersigned, do hereby certify that the foregoing Patent Owner Preliminary Response, including footnotes, contains less than 14,000 words, as measured by the Word Count function of Microsoft Word, pursuant to 37 C.F.R. § 42.24(b)(1).

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CERTIFICATE OF SERVICE

I hereby certify that on this 8th day of May, 2023, a true and correct copy of the foregoing PATENT OWNER'S PRELIMINARY RESPONSE, along with any accompanying exhibits, was served by electronic mail upon the following counsel of record for Petitioners:

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