



Samsung Electronics Co., Ltd.
Petitioner,

v.

G+ Communications, LLC
Patent Owner,

IPR 2023-00441
U.S. Patent No. 10,448,430

U.S. Patent No. 10,448,430

(57)

ABSTRACT

A random access method comprises: transmitting, by a first user equipment (UE) in a UE group, and according to a time-frequency resource, a preamble to an evolved node B (eNB); and monitoring, by a second UE in the UE group and/or the first UE, for a random access response (RAR) corresponding to the preamble transmitted by the eNB, wherein the first UE is at least one UE in the UE group, and the second UE is all or a part of the UEs in the UE group.

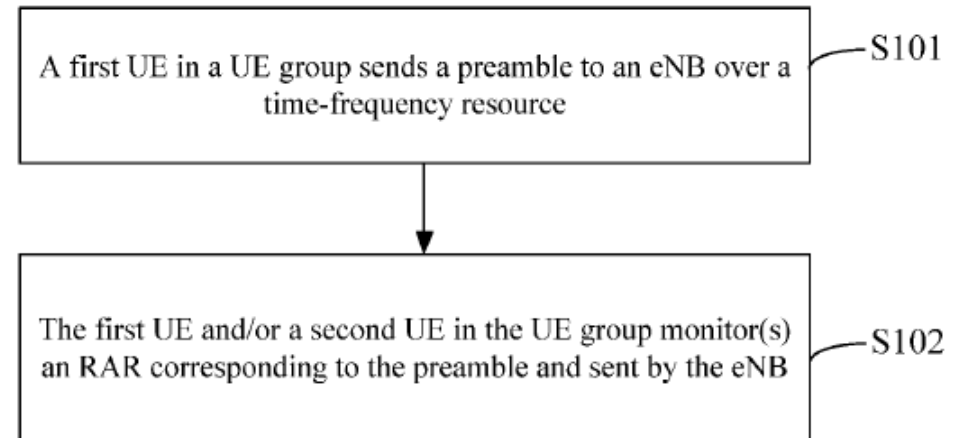


FIG. 1

U.S. Patent No. 10,448,430

Exemplary Claim 1

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.

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Grounds for Petition

IPR2023-00441 Petition Grounds

Ground 1	Independent claims 1 and 18 Dependent claims 2, 3, 7, 11, 13-15	§102(a)(2) as being anticipated by Li
Ground 2	Dependent claims 5-6, 8-10	§103 as being obvious over Li in view of Lee
Ground 3	Dependent claim 12	§103 as being obvious over Li in view of Zhao
Ground 4	Dependent claim 17	§103 as being obvious over Li in view of Jiang

Paper 1, Petition, at 2

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4

Grounds for Petition, contd.

IPR2023-00441 Petition Grounds

Ground 5	Independent claim 1 Dependent claims 2-4, 7, 13	§103 as being obvious over Kim in view of Li
Ground 6	Dependent claims 5-6, 8-10	§103 as being obvious over Kim and Li in view of Lee
Ground 7	Dependent claim 12	§103 as being obvious over Kim and Li in view of Zhao
Ground 8	Dependent claim 17	§103 as being obvious over Kim and Li in view of Jiang
Ground 9	Independent claim 18	§102(a)(2) as being anticipated by Kim

Paper 1, Petition, at 3

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5

Ground Deficiencies

- Samsung takes no position on the proper interpretation of “pre-set UE number”
- All grounds fail because Samsung admits that its Petition fails under the district court’s interpretation of “pre-set UE number”:
 - none of the references teach at least:
[1e] sending, by at least one of the first UE or the second UE, a message 3 according to a Uplink (UL) grant allocated thereto,
[1f] 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
- Grounds 1 and 9 additionally fail as to claim 18 because:
 - Petitioner failed to demonstrate that the “sending unit” and “monitoring unit” means-plus-function limitations were disclosed in Li or Kim
 - The Petition improperly relies on Kim, Li, and the knowledge of one of skill in the art in arguing that Kim anticipates claim 18
 - Samsung’s new arguments in its Reply for claim 18 are late and incorrect

PO Response, Paper 12 at ii-iv; PO Sur Reply, Paper 19 at ii

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6



Claim Construction

1. “pre-set UE number”
2. “sending unit” and “monitoring unit”

PO Response, Paper 16, at 18, 20

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7

“pre-set UE number”

- Samsung takes no position on the proper interpretation of “pre-set UE number”
- Accordingly, Samsung fails to meet its burden of proof

PO Sur Reply, Paper 19 at 2-3

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8

“pre-set UE number”

- “Samsung takes no position in this IPR as to the correctness of the district court’s construction.” Reply, Paper 15 at 2.
- Samsung thus retreats from any implied construction in its Petition, despite the Board’s invitation to develop the record on construction of this term.

Reply, Paper 15 at 2

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9

“pre-set UE number”

- If the Board does not determine that Samsung has failed to meet its burden by failing to argue for any interpretation of “pre-set UE number,” then...
- Consistent with the district court, the Board should construe “preset UE number” to be a quantity, i.e., a “pre-set number of UEs”

PO Response, Paper 12 at 19; PO Sur Reply, Paper 19 at 3

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10

“pre-set UE number”

- Before the district court, Petitioner asserted that “pre-set UE number” is not an identifier:
 - “The claims fail to clarify the scope of the term *aside from implying ‘pre-set UE number’ is not an identifier.*”
 - “*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”), ...”

PO Response, Paper 12 at 20; Ex. 2006 at 18 (emphasis added).

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11

“pre-set UE number”

- District court reasoning:
 1. Surrounding claim language pertains to other quantities
 2. Given the nature of the invention as a whole—“group based random access method device and system”—quantities of UEs are important
 3. When the patent refers to an identifier, it does so with “identifier” or “ID”

PO Response, Paper 12 at 21-22; Ex. 2008 at 21

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12

“pre-set UE number”

- The district court accepted Samsung’s argument that “[i]f anything, the patent suggests that the ‘pre-set UE number’ is not an identifier.”
- Were Samsung to contend that “pre-set UE number” means an identifier, that would be inconsistent with its position accepted by the district court.
- Having succeeded in persuading the district court that a “pre-set UE number” is not an identifier, the Board’s acceptance of an inconsistent position would create the perception that the district court or the Board was misled.
- Whether based on the doctrine of judicial estoppel, *see New Hampshire v. Maine*, 532 U.S. 742, 750-51 (2001), or principles of fairness and consistency, the Board should not adopt the construction implied in Samsung’s Petition.

PO Sur Reply, Paper 19 at 4

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13

“sending unit” and “monitoring unit” (claim 18)

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,

PO Response, Paper 12 at 19

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14

“sending unit” and “monitoring unit” (claim 18)

- Issues about “sending unit” and “monitoring unit” need not be decided if the Board determines Samsung did not meet its burden as to “pre-set UE number.”
- Because Samsung argues that claim 18 is indefinite, and that the Board should not reach a decision on the merits of claim 18, the Board should summarily decline to reach the merits of claim 18, without offering an advisory opinion on indefiniteness.

PO Sur Reply, Paper 19 at 5; see Reply, Paper 15 at 11

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15

“sending unit” and “monitoring unit” (claim 18)

- If the Board reaches the merits of claim 18, then...
- Consistent with the district court, the Board should construe the “sending unit” and “monitoring unit” of claim 18 as means-plus-function limitations under 35 U.S.C. § 112(f)

PO Response, Paper 12 at 22

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16

“sending unit” and “monitoring unit” (claim 18)

- The term “unit” is used as a non-structural placeholder that operates as a substitute for the term “means.”
- As in *Williamson*, where the term “module” was used, the term “unit” here “does not provide an indication of structure because it sets forth the same black box recitation of structure for providing the same specified function as if the term ‘means’ had been used.” *Williamson*, 792 F.3d at 1350 (panel op.).

PO Response, Paper 12 at 24

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17

“sending unit” and “monitoring unit” (claim 18)

- The district court identified corresponding structure in the '430 Patent specification.
- Samsung does not address 112(f) in its Petition and makes no attempt to show corresponding structure.
- Samsung's Reply agrees that 112(f) governs but then argues indefiniteness.
- The Board should not address the merits of Samsung's new argument on indefiniteness, presented for the first time in its Reply.

PO Response, Paper 12 at 25, 28-30; Ex. 2008 at 22-26; Reply, Paper 15 at 5-10; PO Sur Reply, Paper 19 at 5-6

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18



Li and Kim Fail to Disclose “pre-set number of UEs” [1f], [18e]

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19

Li and Kim Fail to Disclose “pre-set number of UEs”

- Samsung has admitted that it cannot prevail under the district court’s construction.
- “Li and Kim don’t disclose that the message 3 includes a ‘pre-set number of UEs,’” (Samsung Reply 4)

PO Sur Reply, Paper 19 at 3; Reply, Paper 15 at 4

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20



Samsung Fails to Show that Li or Kim Disclose the “sending unit” and “monitoring unit” means-plus-function limitations

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21

“sending unit” and “monitoring unit”

- Samsung does not dispute that it made no attempt in the Petition to identify corresponding structure for “sending unit” and “monitoring unit” or to show that Li or Kim disclose the corresponding structure.
- PO Response 29: “Petitioner has not identified, in the specification of the ’430 patent, structure corresponding to these means-plus-function limitations.”

PO Response, Paper 12 at 28-30; PO Sur Reply, Paper 19 at 5

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22

“sending unit” and “monitoring unit”

- The Petition improperly relies on Kim, Li, and the knowledge of one of skill in the art in arguing that Kim anticipates claim 18.
- Samsung does not address this issue in its Reply.

PO Response, Paper 12 at 33-34; PO Sur-Reply, Paper 19 at 6

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23



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