

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

AT&T MOBILITY LLC, AT&T SERVICES INC., ERICSSON INC.,
NOKIA OF AMERICA CORPORATION, AND T-MOBILE USA, INC.,
PETITIONERS,

v.

DAINGEAN TECHNOLOGIES LTD.,
PATENT OWNER.

CASE IPR2024-00310
PATENT 10,932,207

SECOND DECLARATION OF DR. KARTHIKEYAN SUNDARESAN

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[4d] for the 4-step contention based random access procedure, the PREAMBLE_RECEIVED_TARGET_POWER is given based at least on a <code>preambleInitialReceivedTargetPower(0)</code> and a <code>powerRampingStep(0)</code> ; and	1
[4e] for the 2-step contention based random access procedure, the PREAMBLE_RECEIVED_TARGET_POWER is given based at least on a <code>preambleInitialReceivedTargetPower(1)</code> and a <code>powerRampingStep(1)</code>	1
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CURRENT EXHIBIT LIST

No.	Brief Description
1001	U.S. Patent 10,932,207 (“’207 Patent”)
1002	Prosecution History of U.S. Patent 10,932,207 (“’207 File History”)
1003	Declaration of Mark Mahon, Ph.D. (“Mahon Declaration”)
1004	Curriculum Vitae of Mark Mahon, Ph.D.
1005	US Patent Publication No. 2017/0019930 (“Lee1”)
1006	US Patent Publication No. 2010/0255847 (“Lee2”)
1007	Dahlamn et al. 4G, LTE-Advanced Pro and the Road to 5G (3rd ed. 2016)
1008	Harri Holma and Antti Toskala LTE for UMTS (2009)
1009	Nokia, “Considerations on NR RACH procedures,” R2-168013 (Nov. 2016)
1010	3GPP TS 36.331 v13.0.0 (2016) (“TS 36.331”)
1011	3GPP TS 25.214 v3.2.0 (Mar. 2000) (“TS 25.214 Release 1999”)
1012	3GPP TS 38.321 v16.1.0
2001	Intentionally Left Blank
2002	Intentionally Left Blank
2003	U.S. Patent Publication No. 2015 0296525A1 to Kim (“Kim”)
2004	Intentionally Left Blank
2005	For, The New Oxford American Dictionary (2nd Ed. 2005)
2006	Parameter, Webster’s NewWorld Dictionary of Computer Terms (5th Ed. 1994).

I. INTRODUCTION

¶1. I am supplementing my first declaration, see Ex. 2002, in light of the Board's Institution Decision, Paper 9.

II. MATERIALS CONSIDERED

¶2. In forming my opinions expressed herein, I have considered the items listed in the Current Exhibit list found beginning on page ii, the Petition (Paper 2), the Institution Decision (Paper 9), and the concurrently filed Patent Owner's Response.

III. MY OPINION REGARDING SELECTED ISSUES

A. A POSITA Reading the '207 Patent Claims in Light of the Specification Understood that the Introductory Clauses "For the 4/2-Step Contention Based Random Access Procedure" Meant That `preambleInitialReceivedTargetPower()` and `powerRampingStep()` Functions Are Passed "0" or "1" Based upon the Steps Performed

[4d] **for** the 4-step contention based random access procedure, the `PREAMBLE_RECEIVED_TARGET_POWER` is given based at least on a `preambleInitialReceivedTargetPower(0)` and a `powerRampingStep(0)`; and

[4e] **for** the 2-step contention based random access procedure, the `PREAMBLE_RECEIVED_TARGET_POWER` is given based at least on a `preambleInitialReceivedTargetPower(1)` and a `powerRampingStep(1)`.

¶3. After reading the claims in light of the specification a POSITA at the Effective Priority date would understand the definition of a "for" as a preposition primarily used to indicate the purpose/function, reason, or representing the thing being referenced. See, e.g., Ex. 2005. Specifically, in the context of claims 4d and 4e, a

POSITA would understand that “for” takes the role of “intended recipient” or “representing (the thing mentioned),” highlighting relevance for a particular case. That is, a POSITA would understand that the claims capture how the `PREAMBLE_RECEIVED_TARGET_POWER` variable is given “for” the two cases of the 4-step and 2-step contention based random access procedures in claims 4d and 4e respectively. Thus, the “for” refers to the cases of 4-step contention based random access procedure and 2-step contention based random access procedure.

¶4. Further, as I have highlighted in my previous declaration, the use of a name followed by parentheses would be obvious to a POSITA that it represents a function. It is a widely used convention in any form of execution logic or code that one comes across in engineering and computer science. The latter are fields highly pertinent to the patent under consideration. The variable that is used within the parentheses represents the variable that serves as input to the function. The nature of the function can range from a simple look-up table to a series of instructions. A POSITA would readily understand from claims 4d and 4e that `PREAMBLE_RECEIVED_TARGET_POWER` depends at least on two other functions `preambleInitialReceivedTargetPower()` and `powerRampingStep()`. These functions take as input, a numerical value that allows them and hence the `PREAMBLE_RECEIVED_TARGET_POWER` to employ the same or different values “for” the cases of the 4-step and 2-step random access procedures. In

particular, when the input is a ‘0’, it corresponds to the case of the 4-step random access procedure in claim 4d, while an input of ‘1’ corresponds to the case of the 2-step random access procedure in claim 4e.

¶5. Indeed, a POSITA can specifically see that another function of the PREAMBLE_RECEIVED_TARGET_POWER, DELTA_PREAMBLE(F), represents another function that takes as input “F,” where “F” is a variable used to capture different types of PRACH formats. Ex. 1001, 29:49–50. Thus, depending on the type of the PRACH format ‘F’ used, the DELTA_PREAMBLE value can vary. By a similar straightforward reasoning, just like F “corresponds” to a PRACH format (F) for DELTA_PREAMBLE, “m” corresponds to the steps in the power functions.

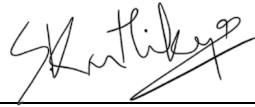
IV. DECLARATION

¶6. In signing this declaration, I recognize that the declaration will be filed as evidence in a contested case before the Patent Trial and Appeal Board of the United States Patent and Trademark Office. I also recognize that I may be subject to cross examination on the subject matter of this declaration. If cross examination is required of me, I will appear for cross examination within the United States during the time allotted for cross examination.

¶7. I declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true. Further,

these statements are made with the knowledge that willful false statements are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code.

Executed on Dec 5, 2024, at Suwanee, GA.



Dr. Karthikeyan Sundaresan