

UNITED STATES PATENT AND TRADEMARK OFFICE

PATENT TRIAL AND APPEAL BOARD

APPLE INC.,
Petitioner

v.

TELEFONAKTIEBOLAGET LM ERICSSON

Patent Owner

Case No. IPR2022-00464

Patent No. 10,193,600

SUPPLEMENTAL DECLARATION OF DR. MURIEL MÉDARD, Sc.D
IN SUPPORT OF PATENT OWNER'S RESPONSE

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A. Novlan’s paragraph 54 does not teach rank-agnostic signaling.6

B. Novlan and 36.213 do not teach “codebook subset restriction signaling that, for each of one or more groups of precoders, *jointly restricts* the precoders in the group by restricting a certain component that the precoders have in common.”11

a. Novlan’s Fourth Method of General CSR Does Not Disclose These Limitations.12

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I. INTRODUCTION

1. My name is Dr. Muriel Médard. I make this declaration based upon my own personal knowledge and, if called upon to testify, would testify competently to the matters contained herein.

2. I have been asked to provide technical assistance in the inter partes review of U.S. Patent No. 10,193,600, which I may abbreviate as “the ‘600 Patent.” Ex. 1001. I previously provided a statement of my opinions related to the patentability of claims of the ‘600 Patent in a declaration dated May 9, 2022 (Ex. 2001), which I incorporate by reference here. This supplemental declaration is a statement of certain additional opinions on issues related to the unpatentability of claims of the ‘600 Patent. I am being compensated at my normal rate of \$600 per hour for my analysis, plus reimbursement for expenses. My compensation does not depend on the content of my opinions or the outcome of this proceeding.

3. I make this declaration based on my personal knowledge. I am over the age of 18 and competent to make this declaration. The statements herein include my opinions and the bases for those opinions, which relate to at least the Petition and associated exhibits. I have reviewed the Board’s Institution Decision in detail, and I have also reviewed Patent Owner’s Response (POR). I agree with the analyses and conclusions set forth in the POR.

4. For the reasons set forth in Ex. 2003, and for the additional reasons set forth below, it is my opinion that the Petition fails to show that the challenged claims are unpatentable.

II. ADDITIONAL MATERIALS CONSIDERED

5. In addition to the materials listed in Section IV of my May 9, 2022 declaration (Ex. 2001), I have now additionally reviewed the Institution Decision as well as the deposition transcript of Dr. Apostolos K. Kakaes. A complete list of the materials I have considered is set forth below.

Exhibit	Description
1001	U.S. Patent No. 10,193,600 (“the ’600 Patent”)
1002	Certified File History of U.S. Patent No. 10,193,600
1003	Declaration of Dr. Apostolos K. Kakaes for Inter Partes Review of U.S. Patent No. 10,193,600
1004	<i>Curriculum Vitae</i> of Dr. Apostolos K. Kakaes
1005	U.S. Patent Application Publication No. 2014/0016549 (“Novlan”)
1006	3GPP TS 36.213, v12.3.0 (“36.213”)
1007	3GPP TS 36.213, v10.1.0
1008	U.S. Patent No. 8,891,676
1009	Declaration of Friedhelm Rodermund in Support of Petition for Inter Partes Review of U.S. Patent No. 10,193,600
1010	U.S. Provisional Patent Application No. 62/103,101 (“the ’600 Patent Provisional”)
1011	U.S. Patent Application Publication No. 2013/0163687 (“Jing”)
1012	U.S. Provisional Patent Application No. 61/670,936 (the “Novlan Provisional”)
1013	Dahlman <i>et al.</i> , 4G – LTE / LTE-Advanced for Mobile Broadband (Academic Press 2011) (“Dahlman”)

Exhibit	Description
1014	Declaration of James L. Mullins in Support of Petition for Inter Partes Review of U.S. Patent No. 10,193,600
1015	U.S. Patent Application Publication No. 2008/0051091
1016	Sesia, <i>et al.</i> , LTE - The UMTS Long Term Evolution From Theory to Practice (Wiley 2d. ed. 2011) (“Sesia”)
1017	Declaration of Jacob Robert Munford in Support of Petition for Inter Partes Review of U.S. Patent No. 10,193,600
2001	Declaration Of Dr. Muriel Médard, Sc.D In Support Of Patent Owner’s Preliminary Response
2002	<i>Curriculum Vitae</i> of Dr. Muriel Médard
2003	Deposition Transcript of Dr. Apostolos K. Kakaes (Nov. 11, 2022)

III. SUPPLEMENTAL OPINIONS REGARDING THE PETITIONER’S PROPOSED APPLICATION OF THE PRIOR ART TO THE CHALLENGED CLAIMS

6. This supplemental declaration provides further support for my opinion that neither Novlan alone (Ex. 1005), nor Novlan taken in view of 36.213 (Ex. 1006) discloses, teaches, or suggests each and every limitation of the Challenged Claims. My May 22 declaration focused on Novlan’s failure to disclose “the codebook subset restriction signaling is rank-agnostic signaling that jointly restricts the precoders in a group without regard to the precoders’ transmission rank.” This supplemental declaration further addresses this argument, particularly regarding paragraph 54 of Novlan’s failure to teach “rank-agnostic signaling.” I also provide my opinions with respect to two additional flaws in the petition. These arguments are organized in my declaration as follows:

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