UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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APPLE INC.,
Petitioner

v.

TELEFONAKTIEBOLAGET LM ERICSSON,
Patent Owner

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*Inter Partes* Review Case No. IPR2022-00464
U.S. Patent No. 10,193,600

**PETITION FOR *INTER PARTES* REVIEW OF U.S. PATENT NO. 10,193,600**

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## LIST OF EXHIBITS

| Exhibit No. | 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** | *Curriculum Vitae* 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 *et al.*, 4G – LTE / LTE-Advanced for Mobile Broadband (Academic Press 2011) ("Dahlman") |
| **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, *et al.*, 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 |

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Petitioner Apple Inc. ("Apple" or "Petitioner") requests inter partes review ("IPR") of claims 1–28 (the "Challenged Claims") of U.S. Patent No. 10,193,600 (Ex. 1001, "the '600 Patent").

## I. INTRODUCTION

The '600 Patent is directed towards methods and apparatuses for "codebook subset restriction," a well-known prior art technique used to assist in forming and directing antenna beams transmitted from a base station to a user device in a wireless communication network. *See* Ex. 1001 at 1:13–18. The purported novelty of the '600 Patent is applying the conventional codebook subset restriction technique in a manner that is "rank-agnostic" (*See* Ex. 1002 at 344), meaning that the technique is applied without regard to the number of beams of information the base station targets at the user device. This Petition demonstrates, however, that applying the admittedly conventional technique of codebook subset restriction in a manner that is rank-agnostic was obvious at the time of the alleged invention. Petitioner therefore respectfully requests that the Challenged Claims be cancelled as invalid.

## II. CERTIFICATION OF GROUNDS FOR STANDING

Petitioner certifies pursuant to Rule 42.104(a) that the '600 Patent is available for IPR and that Petitioner is not barred or estopped from requesting an IPR of the Challenged Claims on the grounds identified in this Petition.

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