# UNITED STATES PATENT AND TRADEMARK OFFICE BEFORE THE PATENT TRIAL AND APPEAL BOARD \_\_\_\_\_\_

T-MOBILE USA, INC., T-MOBILE US, INC., SPRINT SPECTRUM L.P., and SPRINTCOM, INC. Petitioners

V.

### INTELLECTUAL VENTURES II LLC Patent Owner

Case IPR2018-01773 Patent 8,897,828

## PATENT OWNER INTELLECTUAL VENTURES II LLC'S PRELIMINARY RESPONSE TO PETITION

Mail Stop "PATENT BOARD" Patent Trial and Appeal Board U.S. Patent & Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450



#### **TABLE OF CONTENTS**

I.	Introduction		
II.		'828 Patent Presents a Novel Approach to Transmit Power rol in a Wireless Network	2
	A.	The Existing Approaches Did Not Provide a Particular Manner for Combining an Open Loop Scheme with a Closed Loop Scheme.	4
	В.	The '828 Patent Describes a Combination of an Open Loop and Closed Loop Scheme with Control Dependent on Whether Accumulation Has Been Enabled.	5
	C.	The Prosecution History and Resulting Allowance Confirmed the Patentability of the '828 Patent Claims	9
III.	Clair	n Construction	12
IV.	The Board Should Deny Institution Under 35 U.S.C. § 325(d) Because the Petition Cites to Substantially the Same References Considered During Prosecution in Substantially the Same Way		
	A.	The Board is Authorized to Exercise its Discretion and Deny Institution Under § 325(d) When the Petition Cites to the Same References Considered During Prosecution and Fails to Present Any New Arguments	14
	В.	Zeira, Krishnan, and Khan, Were Extensively Considered During Prosecution and Deemed to Not Render Obvious Several Elements of the Independent Claims	16
	C.	The Petition Relies on Zeira, Krishnan, and Khan for the Same Claim Elements Deemed Allowable During Prosecution and Fails to Present any New Arguments or Indicate That any Error Occurred During the Examination of the '828 Patent	18
V.	Zeira, Krishnan, and Khan Do Not Teach or Otherwise Render Obvious "receiving by the UE if accumulation is enabled, an allocation of a scheduled uplink resource and a TPC command, wherein the TPC command is accumulated with other received TPC commands" and "receiving by the UE if accumulation is not enabled, an allocation of a scheduled uplink resource to transmit data at a power level calculated by the UE based on the path loss."		22



	A.	Overview of Zeira
	B.	Overview of Krishnan
	C.	Overview of Khan
	D.	The Petition Does Not Establish That the Combination of Zeira, Krishnan, and Khan Renders Obvious Independent Claims 1, 8, 15, 22, 29, or 36
		1. The Petition Fails to Establish That the Combination of Zeira, Krishnan, and Khan Renders Obvious "receiving by the UE if accumulation is enabled, an allocation of a scheduled uplink resource and a TPC command, wherein the TPC command is accumulated with other received TPC commands" and "receiving by the UE if accumulation is not enabled, an allocation of a scheduled uplink resource to transmit data at a power level calculated by the UE based on the path loss."
		2. Zeira Does Not Teach the Specific Control Process Recited in the Claims that Depends on Whether Accumulation Has Been Enabled
		3. Krishnan Does Not Teach the Specific Control Process Recited in the Claims Dependent on Whether Accumulation Has Been Enabled
		4. The Petition Does Not Rely On Khan to Allegedly Teach a Power Control Process Dependent on Whether Accumulation Has Been Enabled
VI.	Conc	lusion



#### I. Introduction

The Board should deny institution of this proceeding because Petitioners do not come close to meeting their burden. The Petition does not establish by a preponderance of the evidence that claims 1-2, 5-6, 8-9, 12-13, 15-16, 19-20, 22-23, 26-27, 29-30, 33-34, 36-37, or 40-41 of U.S. Patent 8,897,828 ("the '828 patent") are obvious over the proposed Grounds. Rather than presenting new art and arguments not previously considered during prosecution, the Petition merely relies on the exact same references—Zeira, Krishnan, and Khan—and rehashes arguments that the Examiner and Board have already heavily considered for the independent claims. Because the Petition presents arguments that are duplicative of those considered during prosecution of the '828 patent, the Board should deny institution under 35 U.S.C. § 325(d).

The Petition fails for the exact same reasons the claims of the '828 patent were found allowable—the prior art does not render obvious the claimed power control process that depends on whether accumulation has been enabled for user equipment (UE) transmission power. Simply put, the prior art does not describe performing particular actions in response to whether or not accumulation has been enabled. Thus, in view of the redundant and flawed arguments presented in Petition, the Board should deny institution of an *inter partes* review against the '828 patent.



## II. The '828 Patent Presents a Novel Approach to Transmit Power Control in a Wireless Network.

Wireless communication networks require a balancing of signal power to avoid several problems. For example, "radio signals transmitted with increased power result in fewer errors when received than signals transmitted with decreased power. Unfortunately, signals transmitted with excessive power may interfere with the reception of other signals sharing the radio link." ('828 patent, Ex. 1001, 1:18-22.) In particular, this balancing is important for user equipment (UE) such as a mobile device to communicate with a base station. (*See id.* at 1:43-49.)

One metric for determining a desired transmit power is to determine a target signal to noise-plus-interference ratio (SNIR). (*Id.* at 1:50-53.) Using the target SNIR, a UE may adjust its transmission power level depending on various factors, such as the path loss detected on a communication channel. In this manner, the UE may increase or decrease the transmit power to compensate for the path loss and to achieve a target SNIR. (*See id.* at 2:5-32.)

Two schemes have been proposed in an attempt to adjust a UE's transmission power level: an open loop method and a closed loop method. In an open loop scheme, the UE "monitors the received strength of signals it receives to determine a power level at which it will transmit." (*Id.* at 2:8-11.) For example, the UE may receive a signal from a base station and determine the degree to which the received signal's power level has decreased from the transmitted power level from



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