#### UNITED STATES PATENT AND TRADEMARK OFFICE

\_\_\_\_

BEFORE THE PATENT TRIAL AND APPEAL BOARD

\_\_\_\_\_

ERICSSON INC. AND TELEFONAKTIEBOLAGET LM ERICSSON,
Petitioner

V.

INTELLECTUAL VENTURES II LLC, Patent Owner

\_\_\_\_\_

Patent 7,787,431

Title: METHODS AND APPARATUS FOR MULTI-CARRIER COMMUNICATIONS WITH VARIABLE CHANNEL BANDWIDTH

PETITION FOR INTER PARTES REVIEW

Under 35 U.S.C. §§ 311-319

U.S. Patent No. 7,787,431

Claims 8-12 and 18-22



## TABLE OF CONTENTS

I.	Mandatory Notices		1
II.	Grounds for Standing.		2
		Board Should Consider the New Prior Art and Arguments Presented etition	2
IV.	This	Petition is Timely Under 35 U.S.C. § 315(b)	6
V.	Relie	f Requested	8
VI.	The I	Reasons for the Requested Relief	8
	A.	Summary of the Related Technology and the '431 Patent	8
	B.	The Prosecution History	12
	C.	The Prior Art of the Present Petition	13
VII		Identification of Challenges and Claim Construction	22
	A.	Challenged Claims	22
	B.	Claim Construction.	22
	1	. Core-Band	22
	2	. Primary Preamble	23
	3	. Peak-to-Average Ratio	24
	C.	Statutory Grounds for Challenges – Challenge #1: Claims 8-12 and 18-22 are unpatentable under 35 U.S.C. § 103(a) over Dulin, Yamaura, Hwang, and Zhuang	25
VII	T	Conclusion	60



### I. Mandatory Notices

**The real party-in-interest is**: Ericsson Inc. and Telefonaktiebolaget LM Ericsson (collectively "Petitioner").

Related Matters: As of the filing date of this petition and to the best knowledge of Petitioner, the '431 Patent is involved in the following litigations, all located in Delaware, and *inter partes* reviews (IPRs): *IV I LLC et al. v. AT&T Mobility LLC et al.*, 1-13-cv-01668; *IV I LLC et al. v. Leap Wireless Int'l et al.*, 1-13-cv-01669; *IV I LLC et al. v. Nextel Operations, et al.*, 1-13-cv-01670; *IV I LLC et al. v. T-Mobile USA Inc. et al.*, 1-13-cv-01671; *IV I LLC et al. v. U.S. Cellular Corp.*, 1-13-cv-01672; *IV II LLC v. AT&T Mobility LLC*, 1:14-cv-01229; *IV II LLC v. Leap Wireless International Inc.*, 1:14-cv-01230; *IV II LLC v. Nextel Operations Inc.*, 1:14-cv-01231; *IV II LLC v. T-Mobile USA Inc.*, 1:14-cv-01232; *IV II LLC v. U.S. Cellular Corp.*, 1:14-cv-01233-LPS; and *Ericsson v. IV II LLC*, IPR2014-01195.

Lead and Back-up Counsel: Petitioner appoints J. Andrew Lowes (Reg. No. 40,706) as its lead counsel and David M. O'Dell (Reg. No. 42,044), Russ Emerson (Reg. No. 44,098), and Clint Wilkins (Reg. No. 62,448) as its back-up counsel. The phone number for Mr. Lowes is (972) 680-7557, the phone number for Mr. O'Dell is (972) 739-8635, the phone number for Mr. Emerson is (214) 651-5328, and the phone number for Mr. Wilkins is (972) 739-6927.



The mailing address and fax number for all attorneys is HAYNES AND BOONE, LLP, 2323 Victory Ave, Suite 700, Dallas, TX 75219 and (214) 200-0853, respectively.

**Service Information:** Petitioner consents to electronic service by email at the following email addresses: andrew.lowes.ipr@haynesboone.com, david.odell.ipr@haynesboone.com, russell.emerson.ipr@haynesboone.com, and clint.wilkins.ipr@haynesboone.com.

### II. Grounds for Standing

Petitioner certifies that the '431 patent is available for IPR and that Petitioner is not barred or estopped from requesting IPR.

## III. The Board Should Consider the New Prior Art and Arguments Presented in This Petition

In connection with Petitioner's initial petition for IPR of the '431 Patent (the "Initial Petition"), the Board instituted review of claims 1 and 2 but declined review of claim 8-12 and 18-22. *See* IPR2014-01195, Paper 11. The present Petition challenges claims 8-12 and 18-22 (i.e., the claims that were not instituted in connection with the Initial Petition). Although the Board has discretion to reject a petition that raises substantially the same prior art or arguments presented previously (*see* 35 U.S.C. § 325(d)), it would be inappropriate to exercise that discretion for the challenges in this Petition. Specifically, this Petition presents new prior art that (1) was not reasonably available to Petitioner when the Initial



Petition was filed, (2) was accessible to the named inventors of the '431 Patent yet was not disclosed during prosecution, and (3) does not suffer from the deficiency relied on by the Board in denying institution of these claims from the Initial Petition.

First, the challenges in this Petition present new prior art—the Hwang (ERIC-1005) and Kerr (ERIC-1009) references—which Petitioner could not have reasonably raised in the Initial Petition. Petitioner reviewed the file history of the '431 patent and the references therein and conducted a thorough prior art search in preparation of the Initial Petition. Despite diligent search efforts, Petitioner did not identify the new prior art presented in this Petition until after the Initial Petition was filed. As explained further below, a recently concluded investigation into the inventors' activities revealed new prior art for the '431 Patent that (1) was unknown to Petitioner when the Initial Petition was filed, and (2) was accessible to the inventors but was not made of record in the '431 patent file history. Thus, Petitioner simply could not have raised this new prior art in its Initial Petition.

An investigation into the inventors' activities revealed prior art that was accessible to the inventors but was never disclosed to the PTO. Petitioner discovered that the first two named inventors, Xiaodong Li and Titus Lo, were repeat attendees in standards-setting sessions for the IEEE 802.16 Broadband Wireless Access Standards. *See, e.g.,* ERIC-1008, Appendix C. One such session



# DOCKET

## Explore Litigation Insights



Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

## **Real-Time Litigation Alerts**



Keep your litigation team up-to-date with **real-time** alerts and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

## **Advanced Docket Research**



With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

## **Analytics At Your Fingertips**



Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

#### API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

#### **LAW FIRMS**

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

#### **FINANCIAL INSTITUTIONS**

Litigation and bankruptcy checks for companies and debtors.

#### **E-DISCOVERY AND LEGAL VENDORS**

Sync your system to PACER to automate legal marketing.

