

UNITED STATES PATENT AND TRADEMARK OFFICE

---

BEFORE THE PATENT TRIAL AND APPEAL BOARD

---

Ericsson Inc.

Petitioner

v.

Electronics and Telecommunications Research Institute

Patent Owner

Patent No. 8,593,936 B2  
Filing Date: January 3, 2013  
Issue Date: November 26, 2013

Title: CARRIER AGGREGATION IN WIRELESS COMMUNICATION  
SYSTEMS

*Inter Partes* Review No. IPR2020-00238

---

**PETITION FOR *INTER PARTES* REVIEW  
UNDER 35 U.S.C. §§ 311-319 AND 37 C.F.R. § 42.100 *ET SEQ.***

## TABLE OF CONTENTS

I.	Preliminary Statement .....	1
II.	Technological Background and State of The Art .....	2
	A. LTE Standard Development.....	2
	B. Release 8 PUCCH Formats (Prior Art).....	3
	C. PUCCH Format 3 .....	8
III.	The '936 Patent and the Challenged Claim.....	10
	A. The '936 Patent and Representative Embodiment.....	10
	B. Challenged Claim.....	13
	C. Priority Date and Prosecution History .....	15
IV.	Prior Art .....	17
	A. U.S. Patent No. 9,485,060 (“Nazar”) .....	17
	1. Nazar is Prior Art Under 35 U.S.C. § 102(e).....	17
	2. The Teachings of Nazar .....	27
	B. Ericsson-2, TI-1, and Motorola-1 (“the 3GPP References”) .....	29
	1. The 3GPP References are Prior Art Under 35 U.S.C. § 102(a).....	29
	2. The Teachings of Ericsson-2 .....	32
	3. The Teachings of TI-1 and Motorola-1 .....	34
V.	Statement of Precise Relief Requested.....	37
	A. Claims for Which Review is Requested.....	37
	B. Statutory Grounds of Challenge.....	37
	C. Level of Ordinary Skill .....	37
	D. Claim Construction .....	38

VI.	Claim 12 of the '936 patent is Unpatentable .....	38
A.	Ground #1: Claim 12 is Obvious Under 35 U.S.C. § 103(a) Over Nazar in view of TI-1 or Motorola-1 .....	38
1.	A POSITA would have combined Nazar with TI-1 or Motorola-1 .....	38
2.	Claim 12 .....	42
B.	Ground #2: Claim 12 is Obvious Under 35 U.S.C. § 103(a) Over Ericsson-2 in view of TI-1 or Motorola-1 .....	62
1.	A POSITA would have combined Ericsson-2 with TI-1 or Motorola-1 .....	62
2.	Claim 12 .....	65
VII.	Conclusion .....	73
VIII.	Mandatory Notices Under 37 C.F.R. § 42.8 .....	73
A.	Real Parties-In-Interest .....	73
B.	Related Matters .....	73
C.	Lead and Back-Up Counsel .....	74
D.	Service Information .....	75
IX.	Certification Under 37 C.F.R. § 42.24(d) .....	75
X.	Payment of Fees .....	75
XI.	Time for Filing Petition .....	75
XII.	Grounds for Standing .....	75

## TABLE OF AUTHORITIES

	<b>Page(s)</b>
<b>CASES</b>	
<i>Cisco Sys., Inc. v. Capella Photonics, Inc.</i> , IPR2014-01276 .....	17, 27
<i>Dow Chem. Co. v. Sumitomo Chem. Co.</i> , 257 F.3d 1364 (Fed. Cir. 2001) .....	38
<i>Dynamic Drinkware, LLC v. Nat’l Graphics, Inc.</i> , 800 F.3d 1375 (Fed. Cir. 2015) .....	17, 18
<i>EmeraChem Holdings, LLC v. Volkswagen Group of Am., Inc.</i> , 859 F.3d 1341 (Fed. Cir. 2017) .....	39
<i>Ex parte Andresen</i> , 212 USPQ 100 (Bd. Pat. App. & Inter. 1981) .....	38
<i>In re Giacomini</i> , 612 F.3d 1380 (Fed. Cir. 2010) .....	17, 27
<i>Panduit Corp. v. Dennison Mfg. Co.</i> , 810 F.2d 1561 (Fed. Cir. 1987) .....	38
<i>Par Pharm., Inc. v. Twi Pharm., Inc.</i> , 773 F.3d 1186 (Fed. Cir. 2014) .....	46
<i>Phillips v. AWH Corp.</i> , 415 F.3d 1303 (Fed. Cir. 2005) (en banc) .....	38
<i>Polaris Indus., Inc. v. Arctic Cat Inc.</i> , IPR2016-01713 .....	18
<b>STATUTES</b>	
35 U.S.C. §§ 102 and 103 .....	passim
35 U.S.C. § 119(e) .....	17, 18
35 U.S.C. §§ 311-319 .....	1

**OTHER AUTHORITIES**

37 C.F.R. § 42.8 .....73, 75

37 C.F.R. § 42.24(d) .....75

37 C.F.R. § 42.63(d)(2)(ii)..... vii

37 C.F.R. § 42.100 *et seq.* .....1, 38

37 C.F.R. § 42.101(b) .....75

MPEP § 2141.01 .....38

# 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.