

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Patent of: Mattias Tan Bergström, et al.  
U.S. Patent No.: 10,454,655 Attorney Docket No.: 50095-0059IP1  
Issue Date: October 22, 2019  
Appl. Serial No.: 16/203,450  
Filing Date: November 28, 2018  
Title: WIRELESS TERMINALS, NODES OF WIRELESS  
COMMUNICATION NETWORKS, AND METHODS OF  
OPERATING THE SAME

**Mail Stop Patent Board**

Patent Trial and Appeal Board  
U.S. Patent and Trademark Office  
P.O. Box 1450  
Alexandria, VA 22313-1450

**PETITION FOR *INTER PARTES* REVIEW OF UNITED STATES PATENT  
NO. 10,454,655 PURSUANT TO 35 U.S.C. §§ 311–319, 37 C.F.R. § 42**

## TABLE OF CONTENTS

I.	PETITIONER HAS STANDING.....	1
II.	SUMMARY OF THE '655 PATENT.....	1
	A. Brief Description.....	1
	B. Summary of the Prosecution History of the '655 Patent.....	5
	C. Level of Ordinary Skill.....	6
III.	CLAIM CONSTRUCTION .....	6
IV.	APPLICATION OF PRIOR ART TO THE CHALLENGED CLAIMS.....	7
	A. Grounds.....	7
	B. Bao (Ground 1A) and Bao in view of Feuersanger (Ground 1B) render obvious Claims 1-40 .....	8
	1. Overview of Bao (APPLE-1004) (Grounds 1A and 1B) .....	8
	2. Overview of Feuersanger (APPLE-1005) (Ground 1B) .....	11
	3. Combination of Bao and Feuersanger (Ground 1B) .....	12
	4. Analysis .....	16
	C. Kwon renders obvious claims 1-40 (Ground 2) .....	48
	1. Overview of Kwon (APPLE-1006).....	48
	2. Analysis .....	51
V.	PTAB DISCRETION SHOULD NOT PRECLUDE INSTITUTION.....	83
	A. The <i>Advanced Bionics</i> Test Favors Institution—§ 325(d) .....	83
VI.	FEES .....	84
VII.	CONCLUSION.....	84
VIII.	MANDATORY NOTICES UNDER 37 C.F.R § 42.8(a)(1).....	84
	A. Real Party-In-Interest Under 37 C.F.R. § 42.8(b)(1).....	84
	B. Related Matters Under 37 C.F.R. § 42.8(b)(2).....	84
	C. Lead And Back-Up Counsel Under 37 C.F.R. § 42.8(b)(3).....	85
	D. Service Information .....	85

**EXHIBITS**

APPLE-1001	U.S. Patent No. 10,454,655
APPLE-1002	File History for U.S. Patent No. 10,454,655
APPLE-1003	Expert Declaration of Dr. R. Michael Buehrer
APPLE-1004	U.S. Patent Pub. No. 2012/0113811 (“Bao”)
APPLE-1005	U.S. Patent Pub. No. 2013/0039202 (“Feuersanger”)
APPLE-1006	U.S. Patent No. 8,538,411 (“Kwon”)
APPLE-1007	E. Dahlman, “4G: LTE / LTE-Advanced for Mobile Broadband,” Second Edition, October 7, 2013 (“Dahlman”)
APPLE-1008	S. Sesia, “LTE-The UMTS Long Term Evolution: From Theory to Practice, 2 <sup>nd</sup> Ed.,” July 2011 (“Sesia”)

## LISTING OF CLAIMS

Claim 1	
[1pre]	A method of operating a wireless terminal in communication with a wireless communication network, the method comprising:
[1a]	receiving a first Medium Access Control (MAC) Control Element (CE) from the wireless communication network,
[1b]	wherein the first MAC CE includes a first bit map having a first bit map size with bits of the first bit map corresponding to respective component carriers of a first group of component carriers and indicating an activation status of the respective component carriers of the first group; and
[1c]	receiving a second MAC CE from the wireless communication network,
[1d]	wherein the second MAC CE includes a second bit map having a second bit map size with bits of the second bit map corresponding to respective component carriers of a second group of component carriers and indicating an activation status of the respective component carriers of the second group, and
[1e]	wherein the first bit map size of the first bit map is different than the second bit map size of the second bit map.
Claim 2	
[2a]	... claim 1 further comprising: responsive to the first MAC CE, activating/deactivating component carriers of the first group of component carriers responsive to the first bit map; and
[2b]	responsive to the second MAC CE, activating/deactivating component carriers of the second group of component carriers responsive to the second bit map.
Claim 3	

[3]	... claim 1, wherein a first Logical Channel Identity (LCID) is provided for the first MAC CE, a second LCID is provided for the second MAC CE, and the first and second LCIDs are different.
<b>Claim 4</b>	
[4a]	... claim 3 wherein receiving the first MAC CE comprises receiving the first MAC CE and applying bits of the first bit map to respective component carriers of the first group of component carriers responsive to the first LCID, and
[4b]	wherein receiving the second MAC CE comprises receiving the second MAC CE and applying bits of the second bit map to respective component carriers of the second group of component carriers responsive to the second LCID.
<b>Claim 5</b>	
[5]	... claim 1, wherein the first group of component carriers includes a first group of secondary component carriers, wherein the second group of component carriers includes a second group of secondary component carriers, wherein the first and second groups of secondary component carriers are different, wherein each of the first group of secondary component carriers corresponds to a respective bit of the first bit map, and wherein each of the second group of secondary component carriers corresponds to a respective bit of the second bit map.
<b>Claim 6</b>	
[6]	... claim 5, wherein a respective component carrier index is associated with each secondary component carrier of the first group, wherein a respective component carrier index is associated with each secondary component carrier of the second group, wherein at least one of the component carrier indices of the secondary component carriers of the first group exceeds a threshold, wherein none of the component carrier indices of the secondary component carriers of the second group exceeds the threshold, and wherein the first bit map size of the first bit map is greater than the second bit map size of the second bit map.
<b>Claim 7</b>	

# 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.