UNITED STATES PATENT AND TRADEMARK OFFICE
·
BEFORE THE PATENT TRIAL AND APPEAL BOARD
Cisco Systems, Inc., Petitioner
VS.
TQ Delta, LLC

### PETITION FOR INTER PARTES REVIEW

OF

U.S. PATENT NO. 8,238,412



# TABLE OF CONTENTS

PET	TITI(	ONER'S EXHIBIT LIST	4			
I.	MANDATORY NOTICES					
	A.	Real Party-in-Interest.	6			
	B.	Related Matters	6			
	C.	Lead and Back-up Counsel and Service Information	7			
II.	GR	ROUNDS FOR STANDING				
III.	REG	QUESTED RELIEF				
IV.	REASONS FOR THE REQUESTED RELIEF					
	A.	Summary of the '412 Patent	8			
	B.	Prosecution History	9			
	C.	Priority Date	10			
	D.	Summary of the Petition	11			
	E.	Note Regarding Page Citations	11			
V.	IDENTIFICATION OF CHALLENGES AND CLAIM CONSTRUCTION					
	A.	Challenged Claims	12			
	B.	Statutory Grounds for Challenges	12			
	C.	Level of Ordinary Skill in the Art	12			
	D.	Claim Construction	13			
VI.		ENTIFICATION OF HOW THE CONSTRUED CLAIMS ARE PATENTABLE	15			



	A.	Summary of the Prior Art		
		1.	Summary of Milbrandt	16
		2.	Summary of Chang	16
		3.	Summary of Hwang	17
		4.	Summary of ANSI T1.413	18
	B.	Rea	sons to Combine	18
		1.	Reasons to Combine Milbrandt with Chang	18
		2.	Reasons to Combine Milbrandt/Chang with Hwang	23
		3.	Reasons to Combine Milbrandt/Chang/Hwang with ANSI T1.413	25
	C.		ms 9-12, 15-18, and 21 are obvious under 35 U.S.C. § 103(a) r Milbrandt in view of Chang, Hwang, and ANSI T1.413	29
		1.	Claim 9	29
		2.	Claim 11	38
		3.	Claim 15	42
		4.	Claim 16	49
		5.	Claim 17	60
		6.	Claim 18	62
		7.	Claim 21	64
		8.	Claims 10 and 12	66
VII.	CON	NCLU	USION	68
<b>37111</b>	CEE	ירודי	ICATE OF WORD COLINT	60



#### PETITIONER'S EXHIBIT LIST

May 6, 2016

- 1001 U.S. Patent No. 8,238,412 to Krinsky et al.
- 1002 Prosecution File History of U.S. 8,432,956
- 1003 Prosecution File History of U.S. 8,238,412
- 1004 Prosecution File History of U.S. 7,835,430
- 1005 Prosecution File History of U.S. 7,570,686
- 1006 Prosecution File History of U.S. 6,658,052
- 1007 U.S. Provisional Application No. 60/224,308
- 1008 U.S. Provisional Application No. 60/174,865
- 1009 Declaration of Dr. Sayfe Kiaei Under 37 C.F.R. § 1.68
- 1010 Curriculum Vitae of Dr. Sayfe Kiaei
- 1011 U.S. Patent No. 6,636,603 to Milbrandt
- 1012 U.S. Patent No. 6,891,803 to Chang et al.
- 1013 U.S. Patent No. 6,590,893 to Hwang et al.
- 1014 ANSI T1.413-1995 Standard
- 1015 Charles K. Summers, ADSL STANDARDS, IMPLEMENTATION, AND ARCHITECTURE (CRC Press 1999) (selected pages)
- 1016 Walter Goralski, ADSL AND DSL TECHNOLOGIES (McGraw-Hill 1998) (selected pages)
- Harry Newton, Newton's Telecom Dictionary, 16<sup>th</sup> Ed. (2000) (selected pages)



- 1018 Valerie Illingworth and John Daintith, THE FACTS ON FILE DICTIONARY OF COMPUTER SCIENCE (Market House Books 2001) (selected pages)
- 1019 Thomas Starr, John M. Cioffi, Peter J. Silverman, Understanding Digital Subscriber Line Technology, (Prentice Hall 1999) (selected pages)
- 1020 Andrew S. Tanenbaum, COMPUTER NETWORKS (Prentice Hall 1996) (selected pages)
- 1021 B. P. Lathi, Modern Digital and Analog Communication Systems (Oxford University Press 1998) (selected pages)
- 1022 Behzad Razavi, RF MICROELECTRONICS (Prentice Hall 1997) (selected pages)
- 1023 Declaration of David Bader



# 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.

