

UNITED STATES PATENT AND TRADEMARK OFFICE

---

BEFORE THE PATENT TRIAL AND APPEAL BOARD

---

DISH Network L.L.C.,  
Petitioner

vs.

TQ Delta, LLC  
Patent Owner

---

PETITION FOR INTER PARTES REVIEW

OF

U.S. PATENT NO. 7,835,430

**TABLE OF CONTENTS**

**PETITIONER'S EXHIBIT LIST .....iv**

I. MANDATORY NOTICES .....6

    A. Real Party-in-Interest .....6

    B. Related Matters.....6

    C. Lead and Back-up Counsel and Service Information .....7

II. GROUNDS FOR STANDING.....8

III. REQUESTED RELIEF .....8

IV. REASONS FOR THE REQUESTED RELIEF .....8

    A. Summary of the '430 Patent.....9

    B. Prosecution History .....10

    C. Priority Date .....11

    D. Summary of the Petition.....12

V. IDENTIFICATION OF CHALLENGES AND CLAIM CONSTRUCTION .....13

    A. Challenged Claims .....13

    B. Claim Construction .....13

    C. Statutory Grounds for Challenges.....15

    D. Level of Ordinary Skill in the Art.....16

    E. Note Regarding Page Citations .....16

VI. IDENTIFICATION OF HOW THE CONSTRUED CLAIMS ARE UNPATENTABLE.....16

A.	Summary of the Prior Art.....	16
1.	Summary of Milbrandt.....	16
2.	Summary of Chang .....	17
3.	Summary of Hwang .....	18
4.	Summary of ANSI T1.413.....	19
B.	Reasons to Combine .....	19
1.	Reasons to Combine Milbrandt with Chang.....	19
2.	Reasons to Combine Milbrandt/Chang with Hwang .....	25
3.	Reasons to Combine Milbrandt/Chang/Hwang with ANSI T1.413 .....	27
C.	Challenge #1: Claims 1-6 are rendered obvious under 35 U.S.C. § 103 by Milbrandt in view of Chang, Hwang, and ANSI T1.413 ...	30
i.	Claim 1 .....	30
ii.	Claim 2 .....	40
iii.	Claim 3 .....	45
iv.	Claim 4 .....	48
v.	Claim 5 .....	50
vi.	Claim 6 .....	52
VII.	CONCLUSION.....	55
VIII.	Certificate of Word Count .....	<b>ERROR! BOOKMARK NOT DEFINED.</b>

**PETITIONER'S EXHIBIT LIST**

May 6, 2016

1001	U.S. Patent No. 7,835,430 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)
1017	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)

Petition for *Inter Partes* Review of U.S. Patent No. 7,835,430

---

	(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

# 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.