UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

CAVIUM, INC. Petitioner

v.

ALACRITECH, INC.

Patent Owner

Case IPR. No. Unassigned U.S. Patent No. 7,673,072 Title: FAST-PATH APPARATUS FOR TRANSMITTING DATA CORRESPONDING TO A TCP CONNECTION

Petition For *Inter Partes* Review of U.S. Patent No. 7,673,072 Under 35 U.S.C. §§ 311-319 and 37 C.F.R. §§ 42.1-.80, 42.100-.123

Mail Stop "PATENT BOARD"

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

TABLE OF CONTENTS

1.	INTR	ODUCTION	1			
2.	REQU	QUIREMENTS FOR PETITION FOR INTER PARTES REVIEW1				
	2.1.	. Grounds for Standing (37 C.F.R. § 42.104(a))				
	2.2.	Notice of Lead and Backup Counsel and Service Information	1			
	2.3.	Notice of Real-Parties-in-Interest (37 C.F.R. § 42.8(b)(1))	2			
	2.4.	Notice of Related Matters (37 C.F.R. § 42.8(b)(2))				
	2.5.	Fee for Inter Partes Review	13			
	2.6.	Proof of Service	14			
3.		TIFICATION OF CLAIMS BEING CHALLENGED 104(B))	14			
4.	BACH	KGROUND OF THE TECHNOLOGY	14			
	4.1.	TCP/IP	15			
	4.2.	UDP/IP	18			
	4.3.	Protocol Offload	19			
5.	OVEI	RVIEW OF THE 072 PATENT	20			
6.	072 P	ATENT PROSECUTION HISTORY	24			
7.	CLAI	M CONSTRUCTION	24			
	7.1.	Applicable Law	24			
	7.2.	Construction of Claim Terms	25			
		"context"	25			
		"prepending"	25			
		"status information"				
8.	PERS	ON HAVING ORDINARY SKILL IN THE ART	27			
9.	DESCRIPTION OF THE PRIOR ART					
	9.1.	Tanenbaum96: A. Tanenbaum, Computer Networks, 3rd ed. (1996)	28			
	9.2.	U.S. Patent No. 5,768,618 ("Erickson")	31			
	9.3.	Motivations To Combine Erickson and Tanenbaum96	34			

		Express Motivations and Implementing TCP/IP on the Erickson I/O Device Adapter
10.	GROU	ND #1: CLAIMS 1 – 21 ARE UNPATENTABLE AS
	OBVI	OUS OVER ERICKSON IN VIEW OF TANENBAUM96
	10.1.	Claim 1 is unpatentable as obvious over Erickson in view of
		Tanenbaum96
		[1.P] A method comprising:
		[1.1] establishing, at a host computer, a transport layer connection, including creating a context that includes protocol header information for the connection;
		[1.2] transferring the protocol header information to an interface device;
		[1.3] transferring data from the network host to the interface device, after transferring the protocol header information to the interface device;
		[1.4] dividing, by the interface device, the data into segments;
		[1.5] creating headers for the segments, by the interface device, from a template header containing the protocol header information;
		[1.6] prepending the headers to the segments to form transmit packets
	10.2.	Claim 2 is unpatentable as obvious over Erickson in view of Tanenbaum9650
		[2] The method of claim 1, further comprising transferring status information for the context to the interface device during the same operation as transferring protocol header information to the interface device50
	10.3.	Claim 3 is unpatentable as obvious over Erickson in view of Tanenbaum96
		[3] The method of claim 1, wherein creating headers for the segments includes adding status information to the template header
	10.4.	Claim 4 is unpatentable as obvious over Erickson in view of Tanenbaum96

	[4] The method of claim 1, wherein the protocol header information includes Internet Protocol (IP) addresses and Transmission Control Protocol (TCP) ports for the connection, and creating headers for the segments includes forming headers containing the IP addresses and TCP ports
10.5.	Claim 5 is unpatentable as obvious over Erickson in view of Tanenbaum96
	 [5] The method of claim 1, wherein the protocol header information includes a Media Access Control (MAC) layer address, and creating headers for the segments includes forming headers containing the MAC layer address
10.6.	Claim 6 is unpatentable as obvious over Erickson in view of Tanenbaum9660
	[6] The method of claim 1, further comprising adding to the context a descriptor for a buffer, in a memory of the computer, that has been allocated for application data60
10.7.	Claim 7 is unpatentable as obvious over Erickson in view of Tanenbaum96
	[7] The method of claim 1, further comprising receiving, by the interface device, receive packets that correspond to the context, and updating the context by the interface device to account for the receive packets
10.8.	Claim 8 is unpatentable as obvious over Erickson in view of Tanenbaum96
	[8] The method of claim 1, further comprising transmitting the transmit packets on a network
10.9.	Claim 9 is unpatentable as obvious over Erickson in view of Tanenbaum96
	[9.P] A method comprising:
	[9.1] creating, at a computer, a context including protocol information and status information for a network connection, the protocol information providing a template header for the network connection;

	[9.2]	transferring the protocol information and status information to an interface device;	64
	[9.3]	transferring data from the computer to the interface device, after transferring the protocol information and status information to the interface device;	65
	[9.4]	dividing, by the interface device, the data into segments;	65
	[9.5]	creating headers for the segments, by the interface device, from the template header;	66
	[9.6]	prepending the headers to the segments to form packets;	66
	[9.7]	transmitting the packets on a network	66
10.10.		10 is unpatentable as obvious over Erickson in view of aum96	66
	[10] Th	ne method of claim 9, wherein creating headers for the segments includes adding current status information to the template header, the current status information being different than the status information that was transferred to the interface device.	66
10.11.		11 is unpatentable as obvious over Erickson in view of paum96	68
	[11] Th	ne method of claim 9, wherein the protocol header information includes Internet Protocol (IP) addresses and Transmission Control Protocol (TCP) ports for the connection, and creating headers for the segments includes forming headers containing the IP addresses and TCP ports.	68
10.12.		12 is unpatentable as obvious over Erickson in view of paum96	68
		ne method of claim 9, wherein the protocol header information includes a Media Access Control (MAC) layer address, and creating headers for the segments includes forming headers containing the MAC layer address.	
10.13.		13 is unpatentable as obvious over Erickson in view of paum96	69

DOCKET A L A R M



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.