# UNITED STATES PATENT AND TRADEMARK OFFICE BEFORE THE PATENT TRIAL AND APPEAL BOARD GOOGLE LLC, Petitioner

V.

# REALTIME ADAPTIVE STREAMING LLC, Patent Owner

Case IPR2019-01035 Patent 9,769,477

PATENT OWNER'S RESPONSE



## **TABLE OF CONTENTS**

I.	Introduction1
II.	Summary of Argument1
III.	Person of Skill in The Art2
IV.	The '477 Patent (Ex. 1001)4
V.	Claim Construction10
A	. "throughput"10
VI.	Overview of Prior Art11
A	Overview of Brooks Reference (Ex. 1006)11
В.	Overview of the '468 Application (Ex. 1007)13
VII.	Petitioner's Ground 1 Anticipation Argument Fails14
conf data	Ground 1: Limitation 1[b]: "wherein a first asymmetric data compression oder of the plurality of different asymmetric data compression encoders is figured to compress data blocks containing video or image data at a higher a compression rate than a second asymmetric data compression encoder of plurality of different asymmetric data compression encoders"
A	The requirements of Limitation 1[b]16
B. hi	Brooks does not disclose a first encoder configured to compress data at a gher compression rate than a second encoder
C.	
D	·
	Ground 1: Limitation 20[c] "wherein at least one of the plurality of video compression encoders is configured to utilize an arithmetic data pression algorithm"



# IPR2019-01035 ('477 Patent)

	A. Brooks does not disclose or imply arithmetic data compression lgorithms.	36
B th	e. Petitioner's reliance on extrinsic evidence to fill in gaps in its anticipation is improper	
C	Petitioner's anticipation theory fails	45
Х.	Petitioner's Ground 2 Theory (Obviousness Based on Brooks) Fails	46
XI.	None of the Challenged Claims Are Proven to Be Invalid	47
XII.	Conclusion	48



### **EXHIBIT LIST**

Pursuant to 37 C.F.R. § 42.63(e), Patent Owner Realtime Adaptive Streaming, LLC hereby submits its exhibit list associated with the above-captioned *inter partes* review of U.S. Patent No. 9,769,477.

Exhibit No.	Description
2007	Declaration of Kenneth A. Zeger, Ph.D., in Support of Patent Owner's Response
2008	Transcript of February 18, 2020 Deposition of Dr. Jeffrey J. Rodriguez
2009	ITU-T Rec. H.262 (1995 E) (Information Technology – Generic Coding of Moving Pictures and Associated Audio Information)
2010	ITU-T Rec. H.263 (03/96) (Video Coding for Low Bit Rate Communication)
2011	Cote et al., H.263+: Video Coding at Low Bit Rates (IEEE Transactions on Circuits and Systems for Video Technology, Vol. 8, No. 7, November 1998)
2012	Wiegand & Marpe, Context-Based Adaptive Binary Arithmetic Coding in the H.264/AVC Video Compression Standard (IEEE Transactions on Circuits and Systems for Video Technology, 2003)



### I. Introduction

Patent Owner Realtime Adaptive Streaming, LLC ("Realtime" or "Patent Owner") submits this response to the Petition (Paper 1) filed by Google LLC ("Google" or "Petitioner") requesting inter partes review ("IPR") of claims 1, 3, 4, 7, 9, 16, 17, 20, 21, and 22 of U.S. Patent No. 9,769,477 (Ex. 1001, the "'477 Patent"). The Board granted institution on all challenged claims on the two asserted grounds of unpatentability constituting (1) anticipation based on U.S. Patent No. 7,143,432 ("Brooks") (Ex. 1006); and (2) an obviousness combination comprising Brooks and U.S. Provisional Patent Application 60/157,468 ("'468 Application") (Ex. 1007). See Paper 10 (Institution Decision). Patent Owner respectfully submits that the arguments presented herein and the additional evidence submitted herewith, such as the testimony from Patent Owner's expert witness Kenneth A. Zeger (see, e.g., Ex. 2007, Declaration of Kenneth A. Zeger Ph.D., "Zeger Decl."), demonstrate that the challenged claims are not anticipated Brooks, or rendered obvious by Brooks in view of the '468 Application.

# II. Summary of Argument

As discussed in this Patent Owner's Response, each of Petitioner's two grounds fail:

• **Ground 1**: The Petition fails to show that Brooks anticipates challenged claims 1, 3, 4, 7, 9, 16, 17, 20, 21, and 22. The Petition's theory against independent claim 1 asserts that Brooks teaches a plurality of asymmetric



# 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.

