

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE PATENT TRIAL AND APPEAL BOARD**

In the *Inter Partes* Review of:)
)
U.S. Patent No.: 9,762,636)
)
)
)
For: STREAMING MEDIA)
DELIVERY SYSTEM)
)
)
)
)
)

Mail Stop Patent Board
Patent Trial and Appeal Board
P.O. Box 1450
Alexandria, VA 22313-1450

DECLARATION OF KEVIN JEFFAY

Amazon / WAG Acquisition
February 19, 2015

TABLE OF CONTENTS

	Page
I. INTRODUCTION.....	3
II. BACKGROUND AND QUALIFICATIONS.....	3
III. MATERIALS CONSIDERED.....	9
IV. LEGAL STANDARDS.....	10
V. OVERVIEW OF THE '636 PATENT.....	13
A. Summary of the Alleged Invention.....	13
B. Prosecution History.....	20
C. Priority Date.....	21
VI. LEVEL OF ORDINARY SKILL IN THE ART.....	21
VII. CLAIM CONSTRUCTION.....	21
VIII. SUMMARY OF OPINIONS.....	22
A. Claims 1-12 are rendered obvious over Carmel in view of Feig and Willebeek.	23
1. Overview of Carmel.....	26
2. Overview of Feig.....	28
3. Overview of Willebeek.....	31
4. Motivation to combine Carmel, Feig, and Willebeek.....	33
5. Independent claims 1, 5, and 9 are obvious over Carmel in view of Feig and Willebeek.....	34
(a) Preamble Limitations.....	35
(b) Limitations reciting receiving the live program.....	38
(c) Limitations reciting supplying media data elements.....	40

(d)	Limitations reciting serially identifying the media data elements	46
(e)	Limitations reciting storing the media data elements.....	49
(f)	Limitations reciting receiving requests at the server system.....	50
(g)	Limitations reciting sending media data elements to the requesting user systems	55
(h)	Limitations reciting that the data connection has a data rate more rapid than the playback rate.....	57
(i)	Limitations reciting that “each sending is at a transmission rate as fast as the data connection between the server system and each requesting user system allows”	64
(j)	Limitations reciting that the elements are sent without depending on the server system to maintain a record of the last element sent	68
(k)	Limitations reciting that all of the elements are sent in response to the requests	71
(l)	Limitations reciting that all of the elements are sent from the data structure as the elements were first stored therein.....	74
6.	Claims 2, 6, and 10 are obvious over Carmel in view of Feig and Willebeek.....	78
7.	Claims 3, 7, and 11 are obvious over Carmel in view of Feig and Willebeek.....	79
8.	Claims 4, 8, and 12 are obvious over Carmel in view of Feig and Willebeek.....	80
IX.	CONCLUSION	81

I, Kevin Jeffay, Ph.D., declare as follows:

I. INTRODUCTION

1. My name is Kevin Jeffay, and I have been asked by the parties requesting this review, Amazon.com, Inc., Amazon Web Services, Inc., and Amazon.com Services LLC (collectively “Petitioner”) to analyze U.S. Patent No. 9,762,636 (the “’636 patent”) (EX1001) and to provide my opinions regarding the patentability of claims 1-12 of the ’636 patent.

2. I am being compensated for my time. This compensation is not contingent upon my performance, the conclusions I reach in my analysis, the outcome of this matter, or any issues involved in or related to this matter.

II. BACKGROUND AND QUALIFICATIONS

3. I am a tenured professor in the Department of Computer Science at the University of North Carolina at Chapel Hill where I currently hold the position of Gillian T. Cell Distinguished Professor of Computer Science. I also recently served as the Chairman of the Department (from 2014-2022). I have been a faculty member at UNC since 1989.

4. I received a Ph.D. in computer science from the University of Washington in 1989. Before that I received a M.Sc. degree in computer science from the University of Toronto in 1984, and a B.S. degree with Highest Distinction in mathematics from the University of Illinois at Urbana-Champaign in 1982.

5. I have been involved in the research and development of computing systems for nearly 40 years. I have been a faculty member at the University of North Carolina since 1989 where I perform research, and I teach in the areas of multimedia networking, computer networks, distributed systems, real-time systems, and operating systems, among others. A major theme of my research has been the development of technology to improve the performance of data transfers on the Internet. My research has examined problems ranging from network and operating system support for real-time multimedia applications such as audio and video streaming, voice-over-Internet protocol (VoIP) and Internet videoconferencing, to the design of congestion control mechanisms in network routers, to measurements and analysis of network traffic to passively assess the performance of servers on the Internet.

6. For example, starting in the late 1980s, the focus of my research was the development of network and operating system technology to enable the real-time transfer of streams of audio and video data across the Internet. This involved, among other things, the development of media encoders, media players, and network communication protocols for adaptive transmission of live audio and video data on the Internet. This work culminated in my research group developing some of the first videoconferencing systems for the Internet. Several of the papers authored by myself and members of my research group on this project won awards for their

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.