

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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NETFLIX, INC.,  
Petitioner,

v.

REALTIME ADAPTIVE STREAMING, LLC,  
Patent Owner.

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Case IPR2018-01169  
Patent 8,934,535 B2

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Before KEVIN W. CHERRY, GARTH D. BAER, and  
NABEEL U. KHAN, *Administrative Patent Judges*.

KHAN, *Administrative Patent Judge*.

DECISION  
Institution of *Inter Partes* Review  
35 U.S.C. § 314

## I. INTRODUCTION

### A. Background

Netflix, Inc.<sup>1</sup> (“Petitioner”) filed a Petition (Paper 8, “Pet.”) to institute an *inter partes* review of claims 1–14 (the “challenged claims”) of U.S. Patent No. 8,934,535 B2 (Exhibit 1001, “the ’535 Patent”). Realtime Adaptive Streaming, LLC (“Patent Owner”) has filed a Preliminary Response. (Paper 19, “Prelim. Resp.”). We have authority under 37 C.F.R. § 42.4(a) and 35 U.S.C. § 314, which provides that an *inter partes* review may not be instituted unless the information presented in the Petition “shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” Having considered the arguments and the associated evidence presented in the Petition, for the reasons described below, we institute *inter partes* review of all the challenged claims on the grounds set forth in the Petition.

### B. Related Proceedings

The parties inform us that the ’535 Patent is involved in the following litigations:

- *Realtime Data, LLC v. Echostar Corp.*, No. 6:17-cv-84 (E.D. Tex.)
- *Realtime Data LLC d/b/a IXO v. DISH Network Corporation et al.*, 6:17-cv-00421 (E.D. Tex.)
- *Realtime Adaptive Streaming, LLC v. Sling TV, LLC*, No. 1:17-cv-2097 (D. Colo.)
- *Realtime Adaptive Streaming, LLC v. Amazon.com, Inc.*, No. 6:17-cv-549 (E.D. Tex.)

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<sup>1</sup> The Board has granted Amazon.com Inc. and Hulu, LLC’s Joint Motion to Terminate *Inter Partes* Reviews as to Amazon.com, Inc. and Hulu, LLC. Paper 18. Thus, Netflix is the sole remaining Petitioner in this proceeding.

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- *Realtime Adaptive Streaming LLC v. EchoStar Technologies, LLC et al.*, No. 6:17-cv-00567 (E.D. Tex.).
- *Realtime Adaptive Streaming, LLC v. Hulu, LLC*, No. 2:17-cv-7611 (C.D. Cal.)
- *Realtime Adaptive Streaming, LLC v. Cisco Systems, Inc.*, No. 6:17-cv-591 (E.D. Tex.)
- *Realtime Adaptive Streaming, LLC v. Brightcove, Inc.*, No. 1:17-cv-1519 (D. Del.)
- *Realtime Adaptive Streaming, LLC v. Haivision Network Video, Inc.*, No. 1:17-cv-1520 (D. Del.)
- *Realtime Adaptive Streaming, LLC v. Polycom, Inc.*, No. 1:17-cv-2692 (D. Colo.)
- *Realtime Adaptive Streaming, LLC v. Netflix, Inc.*, No. 1:17-cv-1692 (D. Del.)
- *Realtime Adaptive Streaming, LLC v. Sony Elecs., Inc.*, No. 1:17-cv-1693 (D. Del.)
- *Realtime Adaptive Streaming, LLC v. Apple, Inc.*, No. 1:17-cv-2869 (D. Colo.)
- *Realtime Adaptive Streaming, LLC v. Adobe Sys. Inc.*, No. 1:18-cv-10355 (D. Mass.)
- *Realtime Adaptive Streaming, LLC v. Samsung Elec. Co., Ltd.*, No. 6:18-cv-00113 (E.D. Tex.)
- *Realtime Adaptive Streaming LLC v. Wowza Media Systems LLC*, No. 1:18-cv-00927 (D. Colo.)
- *Realtime Adaptive Streaming LLC v. Google LLC et al*, No. 2:18-cv-03629 (D.C. Cal.)
- *Realtime Adaptive Streaming LLC v. Avaya Inc.*, No. 1:18-cv-01046 (D. Colo.)
- *Realtime Adaptive Streaming LLC v. Broadcom Corporation et al.*, No. 1:18-cv-01048 (D. Colo.)
- *Realtime Adaptive Streaming LLC v. LG Electronics Inc. et al*, No. 6:18-cv-00215 (E.D. Tex.)

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- *Realtime Adaptive Streaming LLC v. Advanced Micro Devices, Inc.*, No. 1:18-cv-01173 (D. Colo.)
- *Realtime Adaptive Streaming LLC v. Intel Corporation*, No. 1:18-cv-01175 (D. Colo.)
- *Realtime Adaptive Streaming LLC v. Mitel Networks, Inc.*, No. 1:18-cv-01177 (D. Colo.)
- *Realtime Adaptive Streaming LLC v. Charter Communications, Inc. et al*, No. 1:18-cv-01345 (D. Colo.)
- *Realtime Adaptive Streaming LLC v. Cox Communications, Inc.*, No. 8:18-cv-00942 (C.D. Cal.)
- *Realtime Adaptive Streaming LLC v. Comcast Cable Communications, LLC*, No. 1:18:cv-01446 (D. Colo.)

Pet. 63–65; Paper 9, 2–4.

Petitioner further informs us that the '535 Patent is involved in the following *inter partes* review proceedings:

- *Unified Patents Inc. v. Realtime Adaptive Streaming LLC*, IPR2018-00883
- *Hulu, LLC, Amazon.com, Inc., and Netflix, Inc. v. Realtime Adaptive Streaming LLC*, IPR2018-01170

### *C. The '535 Patent*

The '535 Patent relates generally to compressing and decompressing data based on an actual or expected throughput (bandwidth) of a system. Ex. 1001, 1:21–25. The '535 Patent explains that data compression algorithms can have varied performance characteristics. Ex. 1001, 1:32–35. For example, with a typical dictionary-based compression algorithm, such as Lempel-Ziv, the size of the dictionary can affect the performance of the algorithm. Ex. 1001, 1:35–38. A large dictionary may yield very good compression ratios, but may make the algorithm take a long time to execute.

On the other hand, a smaller dictionary would yield a faster compression time but at the expense of lower compression ratio. Ex. 1001, 1:38–44. Thus, one challenge in employing data compression is selecting the appropriate algorithm from a variety of algorithms for a given application or system. The desired balance between speed and efficiency is an important factor in determining which algorithm to select for data compression. A system that provides dynamic modification of compression system parameters to provide an optimal balance between speed and compression ratio is highly desirable. Ex. 1001, 1:56–60.

The '535 Patent describes two categories of compression algorithms—asymmetrical and symmetrical. An asymmetrical data compression algorithm is “one in which the execution time for the compression and decompression routines differ significantly.” Ex. 1001, 9:64–66. Thus, in an asymmetrical algorithm, either the compression time is fast with the decompression time being slow, or vice versa. An example of an asymmetric algorithm is Lempel-Ziv. Ex. 1001, 10:2–4. A symmetric compression algorithm, on the other hand, is “one in which the execution time for the compression and the decompression routines are substantially similar. Examples of symmetrical algorithms include table-based compression schemes such as Huffman.” Ex. 1001, 10:5–9. The total execution time of the compression and decompression portions of asymmetrical algorithms is typically higher than the total time for symmetrical algorithms. But an asymmetric algorithm typically achieves higher compression ratios. Ex. 1001, 10:10–14.

The invention described in the '535 Patent is directed to a system and method for compressing and decompressing based on the actual or expected

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