UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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GOOGLE LLC,
Petitioner,

v.

REALTIME ADAPTIVE STREAMING LLC,
Patent Owner.

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IPR2019-01035
Patent 9,769,477 B2

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Before GEORGIANNA W. BRADEN, KEVIN W. CHERRY, and
KAMRAN JIVANI, *Administrative Patent Judges*.

BRADEN, *Administrative Patent Judge*.

DECISION
Institution of *Inter Partes* Review
37 C.F.R. § 314(a)

I.   INTRODUCTION

A.   *Background*

Google LLC[1] ("Petitioner") filed a Petition requesting an *inter partes* review of claims 1, 3, 4, 7, 9, 16, 17, and 20–22 of U.S. Patent No. 9,769,477 B2 (Ex. 1001, "the '477 patent"). Paper 1 ("Pet."). Realtime Adaptive Streaming LLC[2] ("Patent Owner") filed a Preliminary Response. Paper 6 ("Prelim. Resp.").

Under the statute, an *inter partes* review may not be instituted unless the information presented in the petition and the preliminary response shows "there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition." 35 U.S.C. § 314(a). Moreover, the Supreme Court has held that a decision under § 314 may not institute review on fewer than all claims challenged in the petition. *SAS Inst., Inc. v. Iancu*, 138 S. Ct. 1348, 1355–56 (2018); *see also PGS Geophysical AS v. Iancu*, 891 F.3d 1354, 1360 (Fed. Cir. 2018) (interpreting the statute to require "a simple yes-or-no institution choice respecting a petition, embracing all challenges included in the petition").

After considering the Petition, the Preliminary Response, and associated evidence, we determine Petitioner has satisfied the threshold requirement set forth in 35 U.S.C. § 314(a). Thus, based on the information

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[1] Petitioner identifies itself and YouTube LLC as the real parties-in-interest pursuant to 37 C.F.R. § 42.8. Pet. 1. Petitioner also indicates that Google LLC is a subsidiary of XXVI Holdings Inc., which itself is a subsidiary of Alphabet Inc., and further indicates that XXVI Holdings Inc. and Alphabet Inc. are not real parties-in-interest.

[2] Patent Owner identifies only itself as the real party-in-interest pursuant to 37 C.F.R. § 42.8. Paper 4, 1.

presented, and under *SAS* and *PGS Geophysical AS*, we institute an *inter partes* review of claims 1, 3, 4, 7, 9, 16, 17, and 20–22 of the '477 patent.

II. BACKGROUND

A. Related Proceedings

Petitioner informs us of multiple pending district court proceedings involving the '477 patent, some of which involve Petitioner, and three pending *inter partes* review proceedings: IPR2018-01187; IPR2018-01630; and IPR2019-00786. Pet. 1–3. Patent Owner informs us of a prior pending *inter partes* review petition challenging the '477 patent, IPR2018-01413. Prelim. Resp. 4. We note IPR2018-01413 was terminated prior to the issuance of a decision on institution. *See* IPR2018-01413, Paper 10.

B. Background of Technology and the '477 Patent

The '477 patent was filed on October 6, 2015, and is titled "Video Data Compression Systems." Ex. 1001, Title. It describes systems and methods directed to a "compressing and decompressing based on the actual or expected throughput (bandwidth) of a system employing data compression and a technique of optimizing based upon planned, expected, predicted, or actual usage." Ex. 1001, 7:66–8:3, 9:27–31. The '477 patent states that "dynamic modification of compression system parameters so as to provide an optimal balance between execution speed of the algorithm (compression rate) and the resulting compression ratio, is highly desirable." *Id.* at 1:64–67. The '477 patent also states that it seeks to "provide[] a desired balance between execution speed (rate of compression) and efficiency (compression ratio)." *Id.* at 8:24–27. For example, where the speed of the encoder causes a "bottleneck" because "the compression system cannot maintain the required or requested data rates," "then the controller will command the data

compression system to utilize a compression routine providing faster compression . . . so as to mitigate or eliminate the bottleneck." *Id.* at 14:14–24. The '477 patent discloses that it can resolve "bottlenecks" in the throughput of a system by switching between different compression algorithms applied to data. *Id.* at 10:3–8.

One embodiment of the '477 patent is shown in Figure 2, reproduced below.
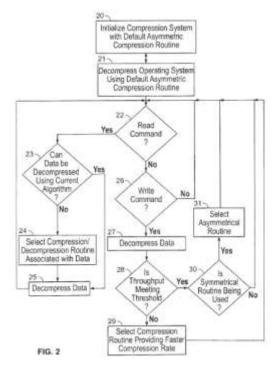

FIG. 2

Figure 2, above, illustrates a method for providing bandwidth sensitive data compression. *Id.* at 13:25–27. The data compression system is initialized during a boot-up process after a computer is powered on and a default compression/decompression routine is initiated (step 20). *Id.* at 13:31–34. According to the '477 patent, the default algorithm comprises an asymmetrical algorithm, because asymmetric algorithms provide "a high compression ratio (to effectively increase the storage capacity of the hard disk) and fast data access (to effectively increase the retrieval rate from the

hard disk)." *Id.* at 13:35–45. According to the '477 patent, depending on the access profile, it "is preferable to utilize an asymmetrical algorithm that provides a slow compression routine and a fast decompression routine so as to provide an increase in the overall system performance as compared to performance that would be obtained using a symmetrical algorithm." *Id.* at 12:23–28. The '477 patent notes that symmetric routines "compris[e] a fast compression routine." *Id.* at 14:40–43. In one embodiment, the '477 patent discloses a controller "tracks and monitors the throughput . . . of the data compression system 12." *Id.* at 10:54–57. When the throughput of the system falls below a predetermined threshold, the system generates control signals to enable/disable different compression algorithms. *Id.* at 10:55–58.

C. Illustrative Claims

As noted above, Petitioner challenges claims 1, 3, 4, 7, 9, 16, 17, and 20–22, with claim 1 and 20 being independent. Challenged independent claims 1 and 20 are reproduced below:

> 1. A system, comprising:
> a plurality of different asymmetric data compression encoders,
> wherein each asymmetric data compression encoder of the
>   plurality of different asymmetric data compression encoders
>   is configured to utilize one or more data compression
>   algorithms, and
> wherein a first asymmetric data compression encoder of the
>   plurality of different asymmetric data compression encoders
>   is configured to compress data blocks containing video or
>   image data at a higher data compression rate than a second
>   asymmetric data compression encoder of the plurality of
>   different asymmetric data compression encoders; and
> one or more processors configured to:
>   determine one or more data parameters, at least one of the
>   determined one or more data parameters relating to a

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