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Paper 11
Date: October 13, 2020

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

GOOGLE LLC,
Petitioner,

v.

UNILOC 2017 LLC,
Patent Owner.

IPR2020-00757
Patent 7,012,960 B2

Before SALLY C. MEDLEY, MICHAEL R. ZECHER, and NABEEL U. KHAN, *Administrative Patent Judges.*

KHAN, *Administrative Patent Judge*.

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

I. INTRODUCTION

A. Background and Summary

Google LLC ("Petitioner") filed a Petition (Paper 1, "Pet.") requesting an *inter partes* review of claims 1, 4, and 5 ("the challenged claims") of U.S. Patent No. 7,012,960 B2 (Ex. 1001, "the '960 Patent"). UNILOC 2017 LLC ("Patent Owner") timely filed a Preliminary Response (Paper 6, "Prelim. Resp."). Pursuant to our authorization, Petitioner filed a Reply to Patent Owner's Preliminary Response (Paper 7, "Petitioner's Reply to Patent Owner's Preliminary Response," "Pet. Reply") and Patent Owner filed a Sur-reply (Paper 9, "Patent Owner Sur-reply to Petitioner's Reply to the Preliminary Response," "PO Sur-reply").

We have authority to institute an *inter partes* review only if the information presented in the Petition 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) (2018). Upon consideration of the papers and evidence of record, we conclude that Petitioner has not shown a reasonable likelihood of prevailing with respect to at least one of the challenged claims. For the reasons explained below, we deny instituting an *inter partes* review on the challenged claims of the '960 Patent.

B. Related Matters

The parties identify the following matters as related to this case: *Uniloc USA, Inc. v. Amazon.com, Inc.*, no. 2-18-cv-00332 (E.D. Tex.); *Uniloc 2017 LLC v. Google LLC*, no. 2-18-cv-00551 (E.D. Tex.) ("Texas proceeding"). Pet. 2; Prelim. Resp. 4. The parties indicate that the Texas proceeding has been transferred to the Northern District of California per

court order dated June 19, 2020. Prelim. Resp. 4; Pet. Reply 1 (citing Ex. 1019).

C. The '960 Patent

The '960 Patent, titled "Method of Transcoding and Transcoding Device with Embedded Filters," is directed to "a method of transcoding a primary encoded signal comprising a sequence of pictures, into a secondary encoded signal." Ex. 1001, 1:7–9. The transcoding method comprises a decoding step, which comprises a dequantizing sub-step for producing a first transformed signal. *Id.* at 1:11–13. Following the decoding step, the method includes an encoding step, which comprises a quantizing sub-step, for obtaining the secondary encoded signal. *Id.* at 1:14–16.

By way of background, the '960 Patent explains that bitrate transcoding allows a primary video stream to be encoded into a secondary video stream having a lower bitrate, "the bitrate reduction being performed in order to meet requirements imposed by the means of transport during broadcasting." *Id.* at 1:24–29. The '960 Patent describes that, in consumer devices, transcoding has often involved encoding "at a variable bitrate with a low average bit-rate" (*id.* at 1:51–56), and that prior art transcoding methods may lead to conspicuous quantization artifacts (*id.* at 1:59–60). To overcome this drawback, the '960 Patent describes a transcoding method that "further comprises a filtering step between the dequantizing sub-step and the quantizing sub-step." *Id.* at 1:64–67. The transcoding method in accordance with the invention allows filters to be implemented at negligible cost in the prior art transcoder. *Id.* at 2:1–3. These filters can be tuned to control the static and dynamic resolution and also to effect noise reduction. *Id.* at 2:3–5. For the same number of bits, the filtered transformed signal is

encoded with a smaller quantization scale, thus reducing visual artifacts such as blocking, ringing, and mosquito noise. *Id.* at 2:5–8.

In a first embodiment of the invention of the '960 Patent, the transcoder implements a motion-compensated temporal filter. *Id.* at 3:49–51. Figure 2 of the '960 Patent is reproduced below:

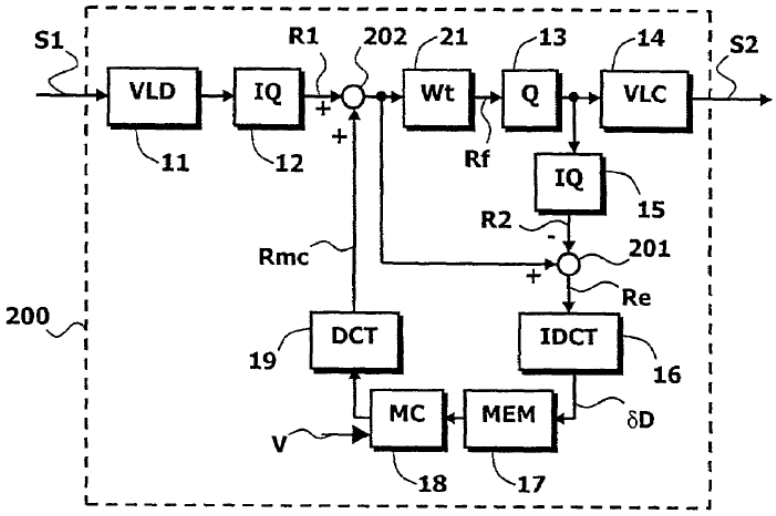

FIG. 2

Figure 2 depicts a transcoder (200) comprising a decoding channel, an encoding channel, a prediction channel, and a temporal filter circuit Wt (21). *Id.* at 5:17–41. The decoding channel comprises a variable length decoder VLD (11) and a first dequantizer IQ (12) for decoding a current picture of a primary encoded signal (S1) and for producing a first transformed signal (R1). *Id.* at 5:18–21. The encoding channel comprises a quantizer Q (13), a variable length encoder VLC (14) for obtaining the secondary encoded signal (S2), and a second dequantizer IQ (15) for delivering a second transformed signal (R2). *Id.* at 5:22–25. The prediction channel comprises a subtractor (201), for determining a transformed encoding error (Re) and whose negative input receives the second transformed signal, an inverse discrete cosine transform circuit IDCT (16), a picture memory MEM (17), a

circuit for motion-compensation MC (18), a discrete cosine transform circuit DCT (19), for predicting a transformed motion-compensated signal (Rmc), and an adder (202), for delivering a sum of the transformed motion-compensated signal and the first transformed signal (R1) to the positive input of the subtractor. *Id.* at 5:26–37. Temporal filter circuit Wt (21) receives said sum and delivers the filtered transformed signal (Rt) to the quantizer Q (13). *Id.* at 5:38–40.

In the second and third embodiments of the invention of the '960 Patent, the transcoder implements a spatial filter. *Id.* at 5:52–53. Figure 4 of the '960 Patent is reproduced below:

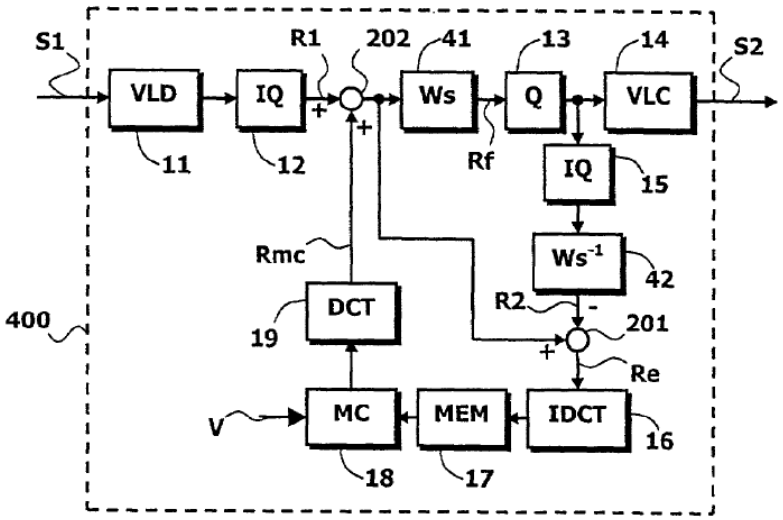

FIG. 4

Figure 4 is a transcoder according to the third embodiment of the invention, with spatial post-filtering whose weight factors are $Ws_{i\,j}$. *Id.* at 7:15–16. Transcoder (400) comprises a decoding channel, an encoding channel, a prediction channel, and a spatial filter circuit Ws (41). *Id.* at 7:17–40. The decoding channel comprises a variable length decoder VLD (11) and a first dequantizer IQ (12) for producing a first transformed signal (R1). *Id.* at 7:18–20. The encoding channel, comprises a quantizer Q (13), a variable

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