#### UNITED STATES PATENT AND TRADEMARK OFFICE

#### BEFORE THE PATENT TRIAL AND APPEAL BOARD

#### UNIFIED PATENTS INC., Petitioners, v.

DYNAMIC DATA TECHNOLOGIES, LLC, Patent Owner.

IPR2019-01085 Patent 8,135,073 B2

Before PATRICK M. BOUCHER, MINN CHUNG, and NORMAN H. BEAMER, *Administrative Patent Judges*.

BEAMER, Administrative Patent Judge.

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

#### I. INTRODUCTION

On May 22, 2019, Unified Patents Inc. ("Petitioner") filed a Petition (Paper 2, "Pet.") pursuant to 35 U.S.C. §§ 311–319 to institute an *inter partes* review of claims 1–4, 6–8, 14, 16, and 18–21 of U.S. Patent No. 8,135,073 B2 ("Shen '073"). On September 9, 2019, Dynamic Data Technologies, LLC ("Patent Owner") filed a Preliminary Response (Paper 6, "Prelim. Resp."). Pursuant to our authorization (Paper 9), on October 9, 2019, Petitioner filed a Reply To Patent Owner's Preliminary Response. Paper 10 ("Reply"). On October 16, 2019, Patent Owner filed a Sur-Reply To Petitioner's Reply. Paper 11 ("Sur-Reply").

The standard for instituting an *inter partes* review is set forth in 35 U.S.C. § 314(a), which provides that 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 [one] of the claims challenged in the petition." Applying that standard, we deny the Petition and do not institute an *inter partes* review.

#### II. BACKGROUND

#### A. The Shen '073 Patent

Shen '073, titled "Enhancing Video Images Depending On Prior Image Enhancements," was filed June 7, 2005, claiming priority to a PCT application filed on December 12, 2003, and a provisional application filed on December 20, 2002, and issued March 13, 2012. Ex. 1001, codes (54), (86), (22), (87), (45). The patent describes decoding a first video frame, enhancing the first frame using a re-mapping strategy determined using a region-based analysis of the frame, decoding a second frame using motion

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vectors indicating differences in positions between regions of the second frame and corresponding regions of the first frame, and enhancing the second frame using the re-mapping strategy determined from the first frame. *Id.* at Title, codes (54), (57).

For example, the video frames can be encoded and decoded in accord with the prior art MPEG II standard, where the first frame is an MPEG "intra-coded frame (I-frame)," the second frame is an MPEG "predicted frame (P-frame)," or "bi-directional frame (B-frame)," and the motion vectors are generated and applied according to the motion prediction and estimation scheme of the MPEG standard. *Id.* at 2:20–29, 44–51; Ex. 2019, 99–118. Shen '073 further explains that the procedure for enhancing decoded video frames using a re-mapping strategy, such as adjusting the contrast of the picture, was also well-known: "Methods of determining remapping strategies for regions of decoded frames using such analysis are well known, and those skilled in the art are directed to U.S. Pat. No. 6,259,472 and U.S. Pat. No. 5,862,254 which disclose such re-mapping of intensity values."<sup>1</sup> Ex. 1001, 2:37–42.

Shen '073 explains the advantage of enhancing the second frame by using the re-mapping strategy of the first frame: "The reuse of the video enhancing re-mapping strategy of previous frames for subsequent frames greatly reduces the processing required for providing video enhancements." *Id.* at 1:43–45.

<sup>&</sup>lt;sup>1</sup> Shen '073 incorporates by reference, in their entirety, the 6,259,472 and 5,862,254 patents. Ex. 1001, 1:16–19.

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#### B. Illustrative Claim

Challenged independent claim 1 is reproduced below.

1. A method, comprising:

receiving, at a decoder, a video stream containing encoded frame based video information including an encoded first frame and an encoded second frame, the encoding of the second frame depends on the encoding of the first frame, the encoding of the second frame includes motion vectors indicating differences in positions between regions of the second frame and corresponding regions of the first frame, the motion vectors define the correspondence between regions of the second frame and corresponding regions of the first frame; and

via the decoder:

decoding the first frame;

determining a re-mapping strategy for video enhancement of the decoded first frame using a region-based analysis;

re-mapping regions of the decoded first frame according to the determined video enhancement re-mapping strategy for the first frame so as to enhance the first frame;

recovering from the video stream, the motion vectors for the second frame;

decoding the second frame; and

re-mapping regions of the second frame that correspond to regions of the first frame using the video enhancing re-mapping strategy for the first frame so as to enhance the second frame.

Ex. 1001, 6:57-7:17.

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#### C. References

Petitioner relies on the following references (Pet. 7):

- Yang et al., U.S. Patent No. 6,873,657 B2, issued March 29, 2005, Ex. 1004 ("Yang '657").
- Paik et al., U.S. Patent No. 6,163,621, issued December 19, 2000, Ex. 1005 ("Paik '621").
- Liu et al., U.S. Patent No. 5,809,173, issued September 15, 1998, Ex. 1006 ("Liu '173").
- Kawamura et al., U.S. Patent No. 6,078,693, issued June 20, 2000, Ex. 1007 ("Kawamura '693").

Petitioner also relies on the declaration of Dr. Immanuel Freedman.

Ex. 1003.

#### D. Asserted Grounds of Unpatentability

Petitioner asserts that claims 1–4, 6–8, 14, 16, and 18–21 would have been unpatentable on the following grounds:

Claim(s) Challenged	35 U.S.C. §	<b>Reference</b> (s)/Basis
1–4, 14, 18, and 20	$103(a)^2$	Yang '657, Paik '621
6–8, 16, and 21	103(a)	Yang '657, Paik '621, Liu '173
19	103(a)	Yang '657, Paik '621,
		Kawamura '693

#### E. Real Parties in Interest

The parties identify themselves as the real parties in interest. Pet. 60;

Paper 4, 1.

<sup>&</sup>lt;sup>2</sup> The Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011) ("AIA"), amended 35 U.S.C. §§ 102 and 103. Because the '073 patent has an effective filing date prior to the effective date of the applicable AIA amendments, we refer to the pre-AIA versions of §§ 102 and 103.

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