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BIRCH STEWART KOLASCH & BIRCH, LLP
8110 Gatehouse Road
Suite 100 East
Falls Church, VA 22042-1248

EXAMINER	
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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte SHUNICHI SEKIGUCHI, KOHTARO ASAI, TOKUMICHI MURAKAMI, HIROFUMI NISHIKAWA, SHINICHI KURODA, YOSHIMI ISU, and YURI HASEGAWA[1]

Appeal 2016-005151
Application 11/980,497
Technology Center 2400

Before CARL W. WHITEHEAD JR., HUNG H. BUI, and SHARON FENICK, *Administrative Patent Judges*.

FENICK, Administrative Patent Judge.

DECISION ON APPEAL

Appellant appeals under 35 U.S.C. § 134(a) from the Examiner's Final Rejection of claims 1 and 6, which are all claims pending. Appeal Br. 3, Claims Appendix 1.[2] We have jurisdiction under 35 U.S.C. § 6(b)(1).

We REVERSE.

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[1] We use the word "Appellant" to refer to "applicant" as defined in 37 C.F.R. § 1.42. Appellant lists Mitsubishi Denki Kabushiki Kaisha as the real party in interest. Appeal Brief filed October 20, 2015 ("Appeal Br.") 1.

[2] Rather than repeat the Examiner's positions and Appellant's arguments in their entirety, we refer to the above-mentioned Appeal Brief, as well as the following documents: the Non-Final Action mailed May 21, 2015 ("Non-

Introduction

According to Appellant, the claimed subject matter relates to a prediction system for encoding/decoding video data, where two or more memories are provided to store picture data to be used for prediction. Spec. 15:15–16:5. The number of times each of the plurality of memories has been used for prediction is counted to determine a ranking of the two or more memories and a code length is allocated for prediction information of each memory based on that rank. *Id.* 20:14–22; 69:4–70:20.

Claims 1 and 6 are independent. Independent claim 1, reproduced below with certain limitations italicized, illustrates the claimed invention:

> 1. A moving picture prediction system for predicting a moving picture to be implemented in an encoder,
> the moving picture prediction system comprising:
> a plurality of reference picture memory areas, each area storing picture data of a reference picture to be used for prediction; and
> a prediction picture generation section including
> *a motion compensator*
> for receiving a motion vector representing a motion between an image to be predicted and the reference picture stored in the reference picture memory area, and a reference memory number indicating a reference memory area to be used for prediction, and
> *for generating a predicted image by using* the picture data stored in the reference picture memory area indicated by the reference memory number, and *a parameter dynamically determining a code assignment for the reference memory number based on frequency in use of the respective memories for prediction*.

Claims Appendix 1.

Final Act."); the Examiner's Answer mailed February 19, 2016 ("Answer"); and the Reply Brief filed April 14, 2016 ("Reply Br.").

Examiner's Rejection & References

Claims 1 and 6 stand rejected under 35 U.S.C. § 103 as unpatentable over Suzuki et al. (US Patent 5,699,474, issued Dec. 16, 1997) ("Suzuki") and Hirano et al. (US Patent 4,460,923, issued July 17, 1984) ("Hirano"). Non-Final Act. 2–7.

Analysis

The Examiner relies on Suzuki's predictor 317 and related elements of the Suzuki system as teaching all of the claimed system, with the exception of the "parameter dynamically determining a code assignment for the reference memory number based on frequency in use of the respective memories for prediction," for which the Examiner relies on Hirano. Non-Final Act. 2–7.

Appellant argues that the Examiner's rejection is deficient with respect to this limitation in the context of Appellant's claimed "motion compensator . . . for generating a predicted image by using . . . a parameter dynamically determining a code assignment for the reference memory number based on frequency in use of the respective memories for prediction." Appeal Br. 5–9.

While expressly not finding the disputed limitation present in Suzuki, the Examiner finds that Suzuki teaches a parameter for dynamically determining addresses for the reference memory number based on the "frequently motion in use" of the respective memories for prediction. Non-Final Act. at 5 (citing Suzuki Fig. 2, elements 311–314, 316, 317, 12:3–9). Because this disclosure appears to relate to the disputed limitation, we address the Examiner's finding as follows.

First, the cited portions of Suzuki's written description describes two different motion prediction modes, but it is not clear from the Examiner's citation which part of Suzuki is meant to teach or suggest the determination of addresses for the field memories of Suzuki, 311–314, cited by the Examiner as teaching or suggesting the reference picture memory areas. *See* Non-Final Act. 4 (discussing frame memory 321, 322, comprising field memories 311–314). As such, we do not find in the Examiner's cited portions of Suzuki a teaching of dynamically determining addresses based on frequency of use of the field memories of Suzuki.

Second, Hirano is cited as teaching that there is a dynamic determination of a code assignment for a reference memory based on a frequency in use of the reference picture memory areas, as required in claim 1. *Id.* at 5–6. The Examiner asserts that this is found in Hirano's input vectors being assigned variable length codes. *Id.* at 6 (citing Hirano Fig. 11A). In particular, the Examiner asserts that since "the frequency of occurrence of motion vector is the maximum for a motion vector indicative of a standstill picture" and that, as shown in Figure 11A, this vector would have the shortest code assignment. *Id.* However, we agree with Appellant that Hirano's Figure 11A does not determine code assignments for reference memories, as opposed to motion vectors. *See* Appeal Br. 5–7; Reply Br. 5–6.

Additionally, we do not find in Hirano a teaching or suggestion that the actual "frequency in use of the respective memories for prediction" is tracked. *See* Reply Br. 7–8. While the Examiner describes possible patterns of frequencies of use of motion vectors based on the degree of departure from inter-frame prediction (standstill picture), we do not find in Hirano or

in the Examiner's statements any actual or predicted values corresponding to "frequency in use of the respective memories for prediction" as required in claim 1.

For these reasons, we are persuaded of error in the Examiner's § 103 rejection of claim 1, and claim 6, argued on the same basis. Appeal Br. 9.

DECISION

The Examiner's decision rejecting claims 1 and 6 under 35 U.S.C. § 103 is reversed.

REVERSED