UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SAMSUNG ELECTRONICS CO., LTD.

Petitioner,

v.

ADVANCED CODING TECHNOLOGIES, LLC

Patent Owner.

Patent No. 9,986,303
Filing Date: March 13, 2015
Issue Date: May 29, 2018

Inventors: Hideki Takehara and Motoharu Ueda
Title: VIDEO IMAGE CODING DATA TRANSMITTER, VIDEO IMAGE CODING DATA TRANSMITTER, VIDEO IMAGE CODING DATA TRANSMISSION METHOD, VIDEO IMAGE CODING DATA RECEIVER, AND VIDEO IMAGE CODING DATA TRANSMISSION AND RECEPTION SYSTEM

PATENT OWNER'S PRELIMINARY SUR-REPLY

Case No. IPR2024-00327

TABLE OF CONTENTS

Page(s)

I. INTRODUCTION 1

II. THE "EXEMPLARY VARIATION OF THIRD EMBODIMENT" IS INAPPOSITE AND IGNORES THE PROSECUTION HISTORY 1

III. PETITIONER MISCHARACTERIZES THE EMBODIMENTS OF THE '303 PATENT 3

IV. PETITIONER'S REFERENCES DO NOT DISCLOSE THE REQUIRED "RECONSTRUCTING . . ." LIMITATION 4

V. CONCLUSION 5

LIST OF EXHIBITS

Exhibit No.	Description of Document
2001	Fourth Amended Docket Control Order, Dkt. 93, *Advanced Coding Techs. LLC v. LG Elecs. Inc.*, Case No. 2:22-cv-00501-JRG (E.D. Tex. March 11, 2024)
2002	Defendants' Joint Patent L.R. 3-3 Invalidity Contentions and Subject Matter Ineligibility Contentions, *Advanced Coding Techs. LLC v. LG Elecs. Inc.*, Case No. 2:22-cv-00501-JRG (E.D. Tex.), served Feb. 21, 2024
2003	Joint Claim Construction and Prehearing Statement, Dkt. 87, *Advanced Coding Techs. LLC v. Samsung Elecs. Co.*, Case No. 2:22-cv-00499-JRG (E.D. Tex.), filed March 5, 2024

I. INTRODUCTION

Petitioner's Reply ("Reply") highlights that Petitioner's arguments contradict relevant embodiments in the '303 Patent specification, ignores the prosecution history, and fails to properly construe claim limitations identified by Patent Owner in its Preliminary Response. The Board should deny institution of the Petition.

II. THE "EXEMPLARY VARIATION OF THIRD EMBODIMENT" IS INAPPOSITE AND IGNORES THE PROSECUTION HISTORY

Petitioner admits that "the '303 Patent describes certain embodiments consistent with PO's position." Reply, 1-2. All embodiments covered in Claims 1 and 2 are consistent with Patent Owner's position that basic video image coding data corresponds to the highest quality of pictures while supplementary video image coding data corresponds to a separate lower quality of pictures. Petitioner points to an "Exemplary Variation of Third Embodiment" ("EV3") that allegedly contradicts Patent Owner's position. Reply, 2-3; *see* '303 Patent, 15:28-48. But Petitioner ignores the prosecution history establishing that this embodiment is not claimed by Claims 1 and 2.

In EV3, the basic hierarchical picture layer corresponds to luminance, while one or more supplementary hierarchical picture layers each correspond to mono-chrominance. '303 Patent, 15:39-43. EV3 was claimed originally as Claim 7. Ex. 1002, 51 ("The video image coding data transmitter according to claim 1, wherein the transmission structure setting unit sets a video image consisting of a luminance

component to represent the basic hierarchy and a video image consisting of a color difference component to represent the supplementary hierarchy."). After an Office Action rejection (*id.*, 73-74), an amendment (*id.*, 95), and subsequent rejections (*id.*, 108, 144-145, 177-178), Applicant cancelled Claim 7 (among others) and retained Claims 8 and 11. *Id.*, 182-183. Allowed Claims 8 and 11 are now Claims 1 and 2 at issue in this proceeding, and were not cancelled precisely because they did not cover EV3, which was rendered obvious during prosecution. Therefore, EV3 is not claimed by Claim 1 or Claim 2.

Claims 1 and 2 also recite "receiving supplementary video image coding data including a supplementary hierarchical picture whose coding order and display order are earlier . . . than those of a basic hierarchical picture included in the basic video image coding data . . ." and "acquiring basic video image coding data received before supplementary video image coding data . . ." that support "basic video image coding data" and "supplementary video image coding data," as separate layers with receiving, coding, and display orders relative to one another. The concepts of relative "coding order" and "display order" between a luminance layer and chrominance layer are not mentioned in the disclosure of EV3 and would not even make sense. Specifically, brightness and color are independent concepts, which are both necessary for proper video image display. *See* '303 Patent, 15:28-48. In other words, luminance and chrominance layers of the same picture must be displayed

simultaneously instead of displayed in a different order.

III. PETITIONER MISCHARACTERIZES THE EMBODIMENTS OF THE '303 PATENT

Petitioner's arguments mischaracterize the embodiments of the '303 Patent. First, Petitioner argues that the basic hierarchical pictures and supplementary hierarchical pictures are not "separate" in EV3. Reply, 1. As noted above, both the luminance (*i.e.*, brightness) layer and chrominance (*i.e.*, color) layer(s) are ***separate*** layers and necessary in pictures so, under this disclosure, both luminance and one or more chrominance layers[1] would always be transmitted. Petitioner's attempt to correlate this disclosure to "lower-quality" or "higher-quality" fails because EV3 does not relate to quality. Reply, 2-3. EV3 is clearly described as a minor two-paragraph "variation" of the third embodiment and can hardly be referred to as the "preferred embodiment." Petitioner's case law referring to preferred embodiments is inapposite. Reply, 3.

Second, Petitioner is incorrect that the '303 Patent includes embodiments where the "***supplementary*** data is transmitted when the transmission rate is ***higher***." Reply, 3. The '303 Patent explains that supplementary video image coding data is transmitted when there is a margin in the transmission rate. '303 Patent, 4:39-42 and 11:56-60. Column 9, lines 3 through 7, in conjunction with FIG. 5, actually shows

[1] '303 Patent, 15:39-48 (noting that when two color difference components are transmitted, a color video image can be viewed).

that supplementary video image coding data, marked as 'B,' is only transmitted in lower transmission rates.

Third, Petitioner argues, without any legal support, that Patent Owner's present understanding of claim terms is incorrect due to a failure to distinguish the '303 Patent claims against scalable video coding prior art during prosecution. Petitioner cites to no precedent that failure to construe a claim limitation during prosecution precludes Patent Owner from making such an argument against new prior art references during *inter partes* review.

Finally, Petitioner incorrectly argues that Demircin and Kimoto disclose basic and supplementary video image coding data "[e]ven if PO's characterizations were valid." However, Petitioner's cites to Demircin's enhancement / Kimoto's upper layer relating to temporal, SNR, or spatial scalability, are ***not separate and are dependent*** upon each of Demircin's base / Kimoto's lower layer, in contrast to "PO's characterizations." Reply, 4 (citing Pet., 9-10, 18, 24, 40-42, 62-63, 66).

IV. PETITIONER'S REFERENCES DO NOT DISCLOSE THE REQUIRED "RECONSTRUCTING . . ." LIMITATION

Petitioner no longer disputes Patent Owner's proposed construction of "reconstructing" as "rearranging." Reply at 4-5. With this admission, Petitioner's Reply makes clear that neither Demircin nor Kimoto in view of Demircin discloses any rearranging of basic and supplementary video image coding data.

Petitioner reiterates that Demircin discloses a combination of a dependent enhancement layer with a base layer. Therefore, at best, Demircin's "reconstruction" or "rearrangement" would include a sequence where each picture is a combination of both its base and enhancement layers or a sequence comprising a mix of base-layer-only pictures and a combination of both its base and enhancement layers. In other words, there is no sequence including base-layer-only pictures and enhancement-only-layer pictures. Claims 1 and 2 require "[rearranging] video image coding data from the basic video image coding data and the supplementary video image coding data," meaning that a sequence of pictures includes ***both basic and supplementary pictures***. There is no such thing as a "combination" of or dependency between the two layers as shown in FIG. 4 of the '303 Patent. '303 Patent, FIGS. 4, 5 (indicating 'A' as basic pictures and 'B' as separate supplementary pictures).

Petitioner's argument with respect to Kimoto in view of Demircin fails for the same reason as Demircin alone in that it relies on upper layer pictures dependent upon lower layer pictures that are synthesized in a given sequence. Kimoto discloses no sequence that comprises a mix of separate and independent upper layer pictures and lower layer pictures that can be mixed or sorted into a given picture sequence.

V. CONCLUSION

For the foregoing reasons, Patent Owner respectfully requests that the Board deny institution of the Petition in its entirety.

Respectfully submitted,

Dated: July 1, 2024

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CERTIFICATE OF SERVICE

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