

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. 6,845,128

Filing Date: February 8, 2002

Issue Date: January 18, 2005

Inventor: Kenji Sugiyama

Title: VIDEO-EMPHASIS ENCODING APPARATUS
AND DECODING APPARATUS AND METHOD OF
VIDEO-EMPHASIS ENCODING AND DECODING

PATENT OWNER'S PRELIMINARY SUR-REPLY

Case No. IPR2024-00062

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LIST OF EXHIBITS

Exhibit No.	Description of Document
2001	Second Amended Docket Control Order, Dkt. 84, <i>Advanced Coding Techs. LLC v. Samsung Elecs. Co.</i> , Case No. 2:22-cv-00499-JRG (E.D. Tex. Feb. 21, 2024)
2002	Defendants' Joint Patent L.R. 3-3 Invalidity Contentions and Subject Matter Ineligibility Contentions, <i>Advanced Coding Techs. LLC v. Samsung Elecs. Co.</i> , Case No. 2:22-cv-00499-JRG (E.D. Tex.), served Feb. 21, 2024
2003	Defendants' Samsung Electronics Co., Ltd. and Samsung Electronics America, Inc.'s P.R. 4-2 Preliminary Claim Constructions with Evidence, <i>Advanced Coding Techs. LLC v. Samsung Elecs. Co.</i> , Case No. 2:22-cv-00499-JRG (E.D. Tex.), served Feb. 6, 2024

Petitioner's Reply ("Paper No. 9" or "Reply") fails to rectify the deficiencies of its Petition, namely, (i) that the Petition fails to disclose the claimed "emphasis processing" and "emphasis level" as properly construed; and (ii) that the Petition fails to disclose each of the three factors ("control data . . . ," "a picture state . . . ," and "encoding conditions . . .") claimed in at least Claim 1. Therefore, the Board should deny institution of the Petition.

I. PETITIONER FAILS TO DISCLOSE "EMPHASIS PROCESSING" AND "EMPHASIS LEVEL" IN FUKUDA

A. Petitioner's New Arguments Based on Patent Owner's Proposed Constructions of "Emphasis Level" and "Emphasis Processing" Should Be Rejected

Petitioner blatantly circumvents the Board's Trial Practice Guide that states that a reply "may only respond to arguments raised in the preceding brief," which means that it does not "proceed in a new direction with a new approach as compared to the positions taken in a prior filing" "in the context of 37 C.F.R. § 42.23(b)." Patent Trial and Appeal Board Consolidated Trial Practice Guide ("Trial Practice Guide") (Nov. 2019), at 74, available at <https://www.uspto.gov/sites/default/files/documents/tpgnov.pdf>. However, that is exactly what Petitioner does in its Reply. Reply at 1-4. Instead of merely arguing against Patent Owner's proposed claim construction, Petitioner now seems to agree with Patent Owner's proposed constructions and improperly applies Patent Owner's proposed construction to formulate a new approach and rationale for obviousness.

Id.; Trial Practice Guide, at 74 (“[A] reply or sur-reply that raises a new issue or belatedly presents evidence may not be considered.”).

Mapping Fukuda to Patent Owner’s proposed constructions of “emphasis level” and “emphasis processing,” rather than adhering to the Petition’s original construction of plain and ordinary meaning, rises to the level of a “newly raised rationale to combine the prior art references that was not expressed in the petition” that is barred by the Board. *See id.* (citing *Intelligent Bio-Sys., Inc. v. Illumina Cambridge Ltd.*, 821 F.3d 1359, 1369–70 (Fed. Cir. 2016)). As a result, Petitioner’s new argument applying Patent Owner’s proposed claim constructions should be rejected.

B. Petitioner’s New Arguments Based on Patent Owner’s Proposed Constructions of “Emphasis Level” and “Emphasis Processing” Are Incorrect

Petitioner’s Reply does not rectify the deficiency of the Petition because Petitioner still fails to show that the cited references disclose the claimed “emphasis processing” and “emphasis level” properly construed.

Petitioner confirms that Fukuda only discloses an “emphasis circuit.” Reply at 1. No further detail is provided outside of parroting Patent Owner’s proposed constructions and citing to the ’128 Patent. Petitioner argues (without any support) that “[n]othing in the record suggests that Fukuda’s use of the same term—emphasis circuit—is something other than the admittedly ‘known technique’ described by the

'128 Patent.” Reply at 1-2. The flip side of this admission is that there is nothing in the record that suggests that Fukuda’s use of emphasis circuits *is* the technique of the '128 Patent. It was Petitioner’s burden in the Petition to prove that the same high frequency emphasis level setting technique of the '128 Patent is described in Fukuda (*i.e.*, to prove obviousness). It did not do so in the Petition and does not do so here.¹

The examples mentioned of alleged “emphasis processing” in the Reply are inapposite. As a preliminary matter, the Petition (and Reply) fails to show how Fukuda’s enhancement of “generated noise components” (Reply at 2) is the claimed “emphasis processing” because noise can be both low frequency, high frequency, or a combination of both.

¹ The mere statement that “emphasis processing is disclosed, for example, in Japanese Un-examined Patent Publication No. 7-162862 [same disclosure as Fukuda].” (Reply at 2, n. 1 (citing SAMSUNG-1001, 2:25-32)) is inapposite because Fukuda may describe emphasis processing but not the high frequency emphasis processing of the '128 Patent. That “Fukuda’s ‘emphasis circuit’ [was mapped] to emphasis processing during prosecution of the Japanese counterpart to the '128 Patent” (*id.*) only indicates the novelty and non-obviousness of the '128 Patent claims over Fukuda which was considered already.

Petitioner's example of Fukuda's "limiter" that "limits the amplitude of the output signal" based on whether amplitude of the input signal is greater than a set parameter "L" is irrelevant. Reply at 3 (citing Ex. 1005, 6:21-30). In other words, Petitioner admits that Fukuda's limiter sets a maximum amplitude value such that, where the input signal is greater than "L," the amplitude will be limited. However, the claimed "emphasis level" relates to how much high frequency component amplitudes in a signal *are increased* (*i.e.*, "value that represents the amount by which the amplitude of the high frequency components of the video signal is increased"). Even if Fukuda's enhanced components constituted emphasis processing, the Petition fails to demonstrate the claimed "setting an emphasis level" because Petitioner does not describe how Fukuda discloses *setting a value* by which the high frequency components in a signal are increased. Similarly, the vague description of setting the "enhancement degree" smaller than a "suppression degree" also does not "set a value." Petitioner's Reply actually highlights that Fukuda only mentions high frequency components of signals with respect to their suppression or "limit[ing] the amplitude" but not on "setting a value by which the high frequency components in a signal are increased." Fukuda's "enhanced components" do not indicate a specific value as required by the proper construction of "emphasis level" (which Petitioner now apparently agrees to in this proceeding).

Furthermore, Petitioner's argument that "mode signals" satisfy Patent Owner's proposed construction of "emphasis level" is similarly misguided. A mode is not a value by which an amplitude can be increased. As Petitioner admits, Fukuda's modes only indicate the amount of compression. For example, one such mode (that Petitioner relies on) is a "high compression rate" mode. However, Fukuda's high compression rate mode only indicates the relationship between Fukuda's "enhancement degree" to the "suppression degree." As Fukuda discloses, the greater the suppression degree, the more the high frequency components are sacrificed:

Furthermore, in mode 1 (high compression rate mode), since the enhancement degree is set smaller than the suppression degree, the high frequency component of the original signal is sacrificed, but the coding noise generated in the high frequency components can be removed more, so that the picture quality is improved.

Ex. 1005, 14:8-13. Fukuda shows no indication of *the value* that the amplitude is increased at the enhancement degree, only a relationship between the enhancement and suppression degrees. And Petitioner does not point to any such indication.

Therefore, the Petition is deficient because it fails to show at least the claimed "emphasis level" is disclosed or rendered obvious by Fukuda.

II. PETITIONER FAILS TO DISCLOSE ALL THREE OF THE REQUIRED “CONTROL DATA CARRIED BY THE INPUT VIDEO SIGNAL, A PICTURE STATE DETECTED FROM THE INPUT VIDEO SIGNAL AND ENCODING CONDITIONS FOR INPUT VIDEO SIGNAL”

Petitioner’s restriction of analysis to “at least one factor among. . .” ignores the remainder of the claim limitation of “*setting an emphasis level to the input video signal in accordance with at least one factor. . .*” and ought to be rejected.

The parties do not dispute that “at least one” modifies the subsequent term “factor.” Reply at 5. Therefore, unlike *SuperGuide Corp. v. DirecTV Enters., Inc.*, 358 F.3d 870 (Fed. Cir. 2004) and *SIMO Holdings Inc. v. Hong Kong uCloudlink Network Tech. Ltd.*, 983 F.3d 1367 (Fed. Cir. 2021), where “at least one of” or “a plurality of” modified each member of a subsequent list, Claim 1’s “at least one of” only modifies “factor among . . .” *Id.* Therefore, the ’128 Patent does not require at least one of control data, at least one of a picture state, and at least one of encoding conditions.” *Id.*

While the ’128 Patent does describe each factor in its own embodiment, that is not dispositive regarding whether disclosing only one factor renders obvious the claim limitation, as Petitioner incorrectly suggests, because focusing only on “at least one factor” ignores the rest of the claim limitation. Reply at 7. The claim language is clear that an emphasis level is set in “accordance with at least one factor,” which explicitly opens the possibility of setting an emphasis level in

accordance with two or three of the listed factors. Additionally, the use of the word “among” implies part of a group. Therefore, “at least one factor among” means that the “at least one factor” belongs to a group. The group must exist such that “at least one factor” belongs to and is selected from the group of factors.

As noted in Patent Owner’s Preliminary Response (Paper No. 6 at 17-18), the Board has already made a similar determination about similar claim language. The challenged independent claim (Claim 1) in *Samsung Elecs. Co. v. Apex Beam Techs. LLC* recited “at least one of a first antenna virtualization vector and a second antenna virtualization vector is associated with the first antenna port group.” *Samsung Elecs. Co. v. Apex Beam Techs. LLC*, IPR2023-00603, Institution Decision, Paper No. 10, 22-23 (P.T.A.B. Oct. 20, 2023).² Written differently, Claim 1 in that proceeding is: “at least one [vector among] a first antenna virtualization vector and a second antenna virtualization vector is associated with the first antenna port group.” *Id.* While a minimum of one vector needs to be associated with the first antenna port group, the Board “conclude[d] that the plain and ordinary meaning of this claim limitation requires both a first antenna virtualization vector and a second antenna virtualization vector.” *Id.*

² Notably, Petitioner does not address this case cited in Patent Owner’s Preliminary Response at all in its Reply.

The same construct is present in this proceeding where the claim recites “setting an emphasis level to the input video signal in accordance with at least one factor among control data carried by the input video signal, a picture state detected from the input video signal and encoding conditions for the input video signal.” While emphasis level is set in accordance with a minimum of one of the three listed factors, all three factors are required to be available by the plain and ordinary meaning of Claim 1 of the ’128 Patent. Put simply, if the claim recited “setting an emphasis level to the input video signal in accordance with at least one factor among [a plurality of factors],” the claim would require the claimed setting have an emphasis level in accordance with at least one factor and the claimed plurality of factors. Here, the plurality of factors is spelled out as “control data carried by the input video signal, a picture state detected from the input video signal and encoding conditions for the input video signal.” This specified plurality is therefore required by this claim limitation.

Petitioner does not advance any argument that all three factors are disclosed by or rendered obvious by its combination of references.

III. CONCLUSION

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

Respectfully submitted,

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CERTIFICATE OF SERVICE

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