

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SAMSUNG ELECTRONICS CO., LTD.; and
SAMSUNG ELECTRONICS AMERICA, INC.,
Petitioners,

v.

IMAGE PROCESSING TECHNOLOGIES, LLC,
Patent Owner.

IPR2017-01218
Patent 8,983,134 B2

Before JONI Y. CHANG, MIRIAM L. QUINN, and
SHEILA F. McSHANE, *Administrative Patent Judges*.

McSHANE, *Administrative Patent Judge*.

DECISION
Denying Petitioner's Request for Rehearing
37 C.F.R. § 42.71(d)

I. INTRODUCTION

Samsung Electronics Co., Ltd. and Samsung Electronics America, Inc. (hereafter “Petitioner”) filed a Request for Rehearing (Paper 41, “Req. Reh’g”) of the Final Written Decision entered in this case (Paper 40, “Dec.”), in which we found that Petitioner had demonstrated by a preponderance of the evidence that claim 3 of U.S. Patent No. 8,983,134 B2 (“the ’134 patent,” Ex. 1001) was unpatentable, and claims 4–6 of the ’134 patent had not been shown to be unpatentable. Dec. 45–46. In its Request for Rehearing, Petitioner contends that (1) we misapprehended the ’134 patent claims and specification in requiring the steps of claim 4 be completed within a single frame; (2) based on the alleged erroneous interpretation of claim 4, we misapprehended that Gerhardt did not teach the limitations of claim 4; and (3) we incorrectly concluded that the validity of claims 5 and 6 need not be considered in view of Gerhardt and Bassman, again in light of the alleged erroneous interpretation of claim 4. Req. Reh’g 1–8. For the reasons set forth below, Petitioner’s Request for Rehearing is *denied*.

II. DISCUSSION

A party requesting rehearing has the burden to show a decision should be modified by specifically identifying all matters the party believes were misapprehended or overlooked, and the place where each matter was addressed previously in a motion, opposition, or a reply. 37 C.F.R. § 42.71(d).

Petitioner alleges that we erroneously interpreted claim 4 by requiring that its recitation of “successively increasing the size of a selected area until the boundary of the target is found” must occur within a single frame. Req.

Reh’g 3. Petitioner contends that, in reaching our conclusion, we misinterpreted the claim language and specification. *Id.* More specifically, Petitioner reargues that the Decision’s interpretation is inconsistent with the ’134 patent specification’s disclosure of adjusting the size of the “selected area” or “tracking box” over multiple frames during the process depicted in Figures 21–23 of the patent. *Id.* Petitioner avers that the Decision erred by finding that the determination of target limits, or “lock-on” process, is distinct from a tracking process. *Id.* (citing Dec. 29–30). Petitioner argues that in light of the specification’s disclosure, the process of adjusting the tracking box “on a frame-by-frame basis” occurs not only after the boundaries of the target have been found, but also during the lock-on process. *Id.* at 4–5 (citing Ex. 1001, 24:62–25:2).

Petitioner also contends that the lock-on process occurs over at least three frames, as shown in Figures 21–23, and for each of the figures, a new histogram is created. *Id.* at 5. Petitioner argues that these figures “must depict new frames” because the ’134 patent describes clearing the histogram memory so a new one can be formed by setting the “init=1” signal between frames. *Id.* at 5 (citing Ex. 1001, 17:55–62, 19:63–20:3). Although we credited Patent Owner’s assertion that frame data could be stored and reprocessed, Petitioner alleges that the Decision does not address that the ’134 patent does not disclose reprocessing a frame multiple times, or another mechanism whereby the histogram memories may be cleared and reset except by the end-of-frame “init=1” signal. *Id.* Additionally, Petitioner asserts that claim 6, which depends from claim 4, is inconsistent with Patent Owner’s assertion of “adding to” an existing histogram because the histogram would not include the results of processing “only the pixels within

the selected area” as claim 6 requires, because the histogram would also include data from the previous selected area. *Id.* at 6.

Petitioner further argues that Gerhardt discloses claim 4 if proper claim construction is applied. Req. Reh’g 7. Petitioner avers that the incorrect construction of claim 4 led to the failure to consider the validity of claims 5 and 6 over Gerhardt and Bassman. *Id.* at 7–8.

We are not persuaded that we misapprehended or overlooked any issue in determining that Petitioner had not shown by a preponderance of the evidence that claims 4–6 are unpatentable. As discussed in the Decision, we did not find persuasive Petitioner’s arguments that Gerhardt teaches the limitations of claim 4 because its teaching that incrementally increasing a window size to detect a pupil blob requires the use of several frames.¹ Dec. 30–32. We considered Petitioner’s contention that the use of several frames was acceptable under claim 4, but we did not agree with Petitioner’s position on this issue. *Id.* at 26–30. Independent claim 1, and claim 4 which depends from claim 1, are reproduced below.

1. A process of tracking a target in an input signal implemented using a system comprising an image processing system, the input signal comprising a succession of frames, each frame comprising a succession of pixels, the target comprising pixels in one or more of a plurality of classes in one or more of a plurality of domains, *the process performed by said system comprising, on a frame-by-frame basis:*

forming at least one histogram of the pixels in the one or more of a plurality of classes in the one or more of a plurality of domains, said at least one histogram referring to classes defining said target; and

¹ The Final Written Decision also found that Gilbert and Hashima failed to teach or suggest the limitations of claim 4. *See* Dec. 43–44. Petitioner does not address these references in its Rehearing Request.

identifying the target in said at least one histogram itself, wherein forming the at least one histogram further comprises determining X minima and maxima and Y minima and maxima of boundaries of the target.

4. The process according to claim 1, wherein *forming the at least one histogram further comprises successively increasing the size of a selected area until the boundary of the target is found.*

Ex. 1001, 26:36–50, 26:57–60 (emphasis added).

We considered both the claim language and the specification in the Decision and found that neither supported Petitioner’s positions. Dec. 28–30. As discussed, we found that when claim 4 recites “forming the at least one histogram,” this refers to one step of the process claimed in claim 1, where the steps of the process are performed “on a frame-by-frame” basis. *See id.* at 26, 28–29. In particular, claim 1 is to a process, with the process having the steps of “forming histograms” and “identifying the target.” This process is performed by the system “on a frame-by-frame basis”—that is, the claimed steps are respectively performed on single frame. *See id.* at 28–29. Claim 4 further limits the “forming histogram” step of claim 1, and as part of that step on a single frame, the size of a selected area is “successively increas[ed]” “until the boundary of the target is found.” *Id.* As discussed, we determined that this construction is consistent with the specification, which describes the successive increase of the size of the selected area to find the boundary of the target in a single frame. *See id.* at 29–30 (citing Ex. 1001, 24:25–38).

We find no support for Petitioner’s argument that Figures 21, 22, and 23 of the ’134 patent depict the use of at least three frames. Figures 21–23 of the ’134 patent are reproduced below.

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