UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Samsung Electronics Co., Ltd., and
Samsung Electronics America, Inc.,
Petitioner

v.

Image Processing Technologies, LLC,
Patent Owner.

CASE IPR2017-01218
Patent No. 8,983,134

PETITIONER'S REPLY TO PATENT OWNER'S SUPPLEMENTAL RESPONSE

Paper No. 35

Claims 3-6 at issue in this IPR each depends from claim 1, which was already found invalid under Gilbert and Hashima in a Final Written Decision in IPR2017-00353. Under the construction of claim 1 adopted in that case, Petitioner's evidence here (including Gilbert and Hashima), demonstrating that claims 3-6 are invalid, stands ***entirely unrebutted***. Even if Patent Owner were to convince the Board its prior construction of claim 1 was wrong, Petitioner has shown claims 3-6 are obvious even under Patent Owner's proposed construction.

I. CLAIMS 1 AND 4-6 DO NOT EXCLUDE STEPS PERFORMED AFTER HISTOGRAM CREATION

In its Final Written Decision, the Board construed the phrase "wherein forming the at least one histogram further comprises determining X minima and maxima and Y minima and maxima of boundaries of the target," stating:

> claim 1 ***does not preclude*** creating a histogram, and ***then determining*** X minima and maxima and Y minima and maxima of boundaries of the target from that histogram, from both being part of the "forming" step.

IPR2017-00353, Paper 37 at 18 (emphasis added). The identical phrase, "wherein forming the at least one histogram further comprises," appears in dependent claims 4-6 and must be construed the same way, as fully supported by the specification.

Patent Owner's attempt to unreasonably narrow the claims' scope, on the other hand, excludes the very embodiment Patent Owner relies on for support—detecting and tracking a target by creating histograms of pixels with DP=1, as

depicted in at least Figures 16-23. Pixels having DP=1 are those exhibiting significant variation from frame to frame (Ex. 1001 at 10:56-61), thus indicating the edges of a moving target. Figure 17 of this embodiment illustrates ***first*** creating histograms of pixels with DP=1 ***and then*** using those histograms to determine X and Y minima and maxima of the target, consistent with the Board's and Petitioner's construction of claim 1.

Because Patent Owner's proposed construction would exclude the process depicted in Figure 17, it is forced to take the unreasonable position that Figure 17 is a separate embodiment from Figures 20-23, and that Figure 17 does not embody claim 1 while Figures 20-23 do. Paper 34 at 2-3. This is not so. Figures 17 and 20-23 all present aspects of the same embodiment of target tracking using histograms of pixels with DP=1. For example:

> [T]he system of the invention is set to identify only ***pixels with DP=1***, and to form a histogram of these pixels … This is illustrated ***in Fig. 17***.

Ex. 1001 at 22:48-55 (emphasis added). Further:

> "***Referring to Fig. 22***, when the area under consideration begins to cross the borders of target 218, the histograms 222 and 224 for the x and y projections will begin to include ***pixels in which DP=1.***"

Id. at 24:38-41 (emphasis added); *see also id.* at 24:1-29, 54-59. Patent Owner's construction, excluding the DP=1 embodiment, cannot be correct.

Further, Patent Owner's assertion that the steps recited in claims 1 and 4-6 must be completed ***while*** the histogram is being calculated (Paper 34 at 3) contradicts claims 4 ("***successively*** increasing the size of a selected area") and 6 (setting X and Y so "that ***only pixels within the selected area*** will be processed"). Indeed, if the selected area were changing ***while*** the histogram was being calculated, claim 6 would be inoperable.

Patent Owner invents an undisclosed embodiment to try to fix this problem, alleging that a histogram formed using a small selected area might be ***added to*** in the next iteration using a larger selected area. Paper 34 at 3-4. But the patent ***nowhere*** describes such a process of adding to an existing histogram and, in fact, contradicts it. First, the patent's system receives and processes data from a video camera as a succession of horizontal scanned lines each comprising a succession of pixels making up an image frame. Ex. 1001 at 9:23-41. Once the scan has completed a frame, for example, there is no way disclosed in the patent to go back and rescan the same frame but exclude those pixels already included in the histogram by the previously used smaller selected area box. Second, the patent teaches that when the last horizontal scan line is processed and the end of the frame is reached, the histogram memory is ***cleared and re-initialized*** before processing the next set of pixels. *Id.* at 17:60-62, 19:63-20:2. Thus, Patent Owner's attempt to reconcile claims 1, 4, and 6 under its already rejected construction requires an

imaginary embodiment inconsistent with what is described in the patent. Patent Owner's overly narrow construction is incorrect.

II. PATENT OWNER'S PROSECUTION HISTORY ARGUMENT WAS ALREADY REJECTED

The Board considered and rejected Patent Owner's prosecution history argument in the Final Written Decision in IPR2017-00353, concluding that Patent Owner had not pointed to "any disavowal of claim scope or any other statement in the prosecution history that clearly limits claim 1 to a particular embodiment in the specification." IPR2017-00353, Paper 37 at 17. Indeed, Patent Owner merely speculates about what the examiner ***might have thought*** the claim scope to be, based on a "pattern of rejections and allowances" over ***different prior art*** applied to ***different claims*** of a ***different application***. Paper 34 at 7. Regardless, it is the ***patentee's*** statements during prosecution, and not the ***examiner's***, that might limit claim scope, and even then, only when there is clear disclaimer. "An ambiguous disclaimer . . . does not advance the patent's notice function or justify public reliance, and the court will not use it to limit a claim term's ordinary meaning." *Sandisk Corp. v. Memorex Prods.*, 415 F.3d 1278, 1287 (Fed. Cir. 2005).

Thus, the rejection of Patent Owner's construction in the Final Written Decision of IPR2017-00353 should be maintained and claims 3-6 found unpatentable under Petitioner's unrebutted evidence.

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