UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SAMSUNG ELECTRONICS CORPORATION, LTD., AND
SAMSUNG ELECTRONICS AMERICA, INC.,
Petitioners

v.

IMAGE PROCESSING TECHNOLOGIES, LLC,
Patent Owner

CASE IPR2017-01218
Patent No. 8,983,134 B2

PATENT OWNER IMAGE PROCESSING TECHNOLOGIES LLC'S RESPONSE TO PETITIONER'S SUPPLEMENTAL BRIEF

Paper No. 33

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The Board authorized Image Processing Technologies, LLC ("Image Processing") to file this response. Paper 31 (Order), 2 (stating that Petitioner's brief raised new claim interpretation issues). The correct claim construction of element [1c] under *Phillips* is dispositive of this IPR because the Petition and its exhibits do not show that the prior art teaches or suggests this claim element, (*see* Paper 11 (Institution Decision), 18 (Gerhardt), 28 (Gilbert, Hashima)), and no additional evidence or argument has been authorized (Paper 26 (Order), 4).

The IPR2017-00353 panel did not have the benefit of a full record, *e.g.*, Ex. 2011 (Hart deposition), so that Panel's claim interpretation should not control.

I. The Natural and Correct Reading of Element [1c] Requires that Determining Target Boundaries Must Occur as a Part of the Formation of the Histogram.

Under *Phillips*, the Board attempts to identify the correct construction in light of the claim language, specification, and prosecution history, not the broadest construction. *PPC Broadband v. Corning Optical Commc'ns*, 815 F.3d 734, 740 (Fed. Cir. 2016) (under *Phillips*, the PTO should seek "the construction that most accurately delineates the scope of the claim invention"). Under *Phillips*, the meaning most closely aligned with the plain language of claim element [1c] "forming the…histogram…***comprises*** determining…boundaries of the target," requires that determining the boundaries be part of forming the histogram.

Samsung reads element [1c] unreasonably broadly as encompassing an

unlimited amount of post-histogram-formation activity prior to determination of the target boundaries.[1] *See* Ex. 2011, 114:14–115:23. As Dr. Hart stated in deposition:

> **Q** Is there any limitation on how much additional processing can be done after the histogram is formed in order to find boundaries?
>
> **A** I don't see any limitation on the amount of computation or analysis. I think '134, Claim 1 and specifically Element 1C says that you form a histogram and determine the X and Y minima and maxima as boundaries of the target. And I think that [if] determination is based on the formation of that histogram . . . then you satisfied the restrictions of Element 1C.

Ex. 2011, 115:11–23. Allowing an unlimited amount of post histogram-formation processing reads out the "comprising" language, and instead merely requires both a "forming" step and a "determining" step with no relationship between the steps.

II. The Specification Supports Image Processing's Construction

Contrary to Samsung's assertion, the lock-on tracking embodiment (Ex. 1001, 23:59–25:2, Figs. 20–23) is an embodiment of claims 1–6 that teaches iteratively adjusting a selected area while forming a histogram such that the X and Y minima and maxima of boundaries of a target are determined as part of forming

[1] *Phillips* requires consideration of claim language, specification, and prosecution history. The *Phillips* doctrine of construing claims to preserve their validity applies to AIA trials. *See* Changes to the Claim Construction Standard for Interpreting Claims Before the PTAB, 83 FED. REG. 21221, 21223 (May 9, 2018).

the histogram. *See* Paper 15, 8–13. The lock-on tracking embodiment is consistent with dependent claims 4–6. The embodiment teaches setting boundaries in the x and y histogram formation units 28 and 29 such that only the pixels falling in the bounded area will be processed. Ex. 1001, 24:1–12, 35–54. The embodiment teaches processing "successively larger areas" and "adjusting the center of the area" for which pixels are processed based upon the shape of the object. Ex. 1001, 24:1–12. Pixel data from an expanded area area can be added to a histogram of the smaller original area. *See* Ex. 2011 (Hart depo.), 79:14–83:24.

Thus, Samsung's interpretation of claim 6 is incorrect. Paper 29, 2. Claim 6 is consistent with the lock-on tracking embodiment and merely requires setting X and Y value boundaries in the histogram formation units to adjust the selected area. This is how the lock-on tracking embodiment changes the area in the box shown in Figures 21–22 while the histogram is being calculated. Ex. 1001, 24:1–12, 35–54.

Samsung's attempt to mix the lock-on tracking embodiment with Figure 17 fails. The specification distinguishes between (i) a video conference embodiment (Figures 15–19, 22:4–23:58) for tracking a person in a video conference, including tracking the user's head, Ex. 1001, 22:19–23:34 (*see* Paper 15, 35); and (ii) the lock-on tracking embodiment (Figures 20–23, 23:59–25:2) for tracking a simulated object (Figures 20–21, item 218) selected by the user via the mouse. (*See* Paper

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