
BEFORE THE PATENT TRIAL AND APPEAL BOARD

HESAI TECHNOLOGY CO., LTD.
Petitioner

v.

OUSTER, INC.,
Patent Owner

Patent No. 11,422,236
Inter Partes Review No. 2023-01458

PATENT OWNER SUPPLEMENTAL BRIEF

I. Introduction

The Board should again deny institution of *inter partes* review. On July 25, 2024, the Director vacated the Board's March 28, 2024 Decision denying institution (Paper 8, "Inst. Dec.") solely because "the Board should have considered the non-errant portions of Figure 22 of Hall in its unpatentability analysis." Decision Granting Director Review (Paper 14, "Dir. Dec.") at 9. These portions of the Hall reference do not address numerous deficiencies raised in Patent Owner's Preliminary Response (Paper 6, "POPR"), each of which warrants denial of institution. These deficiencies include: 1) Hall's failure to teach the claimed arrangement of pixels as opposed to detectors; 2) Hall's failure to teach any arrangement of detectors; and 3) the lack of motivation to combine Hall with Borowski to arrive at the claimed invention. We address each in turn.

First, nothing in Figure 22 or any other portion of Hall teaches the arrangement of pixels required by the challenged claims of the '236 Patent. Noting Petitioner's argument that each detector in Hall is a pixel, the Director held that "the Board erred in not considering Hall *to the extent* it taught the claimed arrangement of *detectors*." Dir. Dec. at 7-8 ("[D]etectors (i.e., 'pixels' *as argued by Petitioner*)....") (emphases added). The '236 Patent claims, however, require an arrangement of *pixels*, not detectors, and the specification makes clear that there is not always a one to one correspondence between a pixel and a detector, as "each

pixel can include *one or more detectors*.” POPR at 39-40 (quoting Ex. 1001 at 5:52-54) (emphasis added); *see also* Ex. 1001, claims 1, 10, 23. Hall also teaches that a pixel is not the same as a detector; as taught by Hall, a single detector may be used by multiple pixels. POPR at 39-40 (citing Ex. 1004 at 3:18-21, 4:63-67). Finally, Hall does not teach any arrangement of pixels in Figure 22 or anywhere else. Thus, the Board should deny institution because Hall fails to teach the claimed arrangement of pixels required by the ’236 Patent.

Second, even if each detector in Hall were a pixel, Hall does not teach the claimed arrangement of detectors. *See MAHLE Behr Charleston, Inc. v. Frank Amidio Catalano*, IPR2023-00861, Paper 18 at 11-12 (P.T.A.B. May 24, 2024) (denying institution after director review because a prior art figure did not show the claimed dimensions). Although Figure 22 of Hall shows unlabeled circles within cavity 170, the Board held that it was incorrect to assume “that each dark red circle in Figure 22 represents a detector.” Inst. Dec. at 15-16 (quoting POPR at 37).¹ Nor may Petitioner rely on testimony from Dr. Hesselink, who parroted Petitioner’s

¹ Hall’s specification also describes emitters “organized relatively horizontally” in two cavities, whereas Figure 22 shows unlabeled circles in 3x3 grids inside *four* cavities, which further cuts against assuming the circles in Figure 22 represent individual emitters *or* detectors. *See* POPR at 38; Ex. 1004 at 6:67-7:5, Fig. 22.

assumption without further support. *See, e.g.*, Ex. 1003 at 35 (relying solely on Hall Figure 22 to label circles as detectors and emitters), 65 (same). Thus, the Board correctly rejected Dr. Hesselink’s testimony as “conclusory and deficient.” Inst. Dec. at 16; POPR at 38; *see also MAHLE*, IPR2023-00861, Paper 18 at 11-12 (holding expert testimony could not supply missing dimensions). Although Petitioner challenged these findings, the Director did not address the Board’s analysis. *See* Dir. Dec. at 8. Thus, even if the detectors of Hall were the same as pixels, the Board should deny institution because Hall does not teach the claimed arrangement of pixels or detectors.

Third, even if Hall teaches the claimed arrangement of pixels, the Board should deny institution because a POSITA would not have been motivated to combine Borowski’s SPAD arrays with Hall’s rotating LIDAR device, because Hall and Borowski expressly teach that SPAD arrays are unsuited to use in place of Hall’s standard APDs. *See* POPR at 33-36.²

In sum, the Board should again deny institution of *inter partes* review for reasons set forth in the POPR and in this brief.

² Petitioner did not challenge the Board’s ruling on Ground 2 (Matsui/Imai).

IPR 2023-01458
US Patent 11,422,236

Respectfully submitted,

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CERTIFICATE OF SERVICE

I hereby certify that on August 20, 2024, I caused a true and correct copy of the foregoing Patent Owner Supplemental Brief to be served electronically on Petitioner at the following email addresses:

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