

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

MANUFACTURING RESOURCES INTERNATIONAL, INC.

Petitioner

v.

SAMSUNG ELECTRONICS CO., LTD

Patent Owner

Inter Partes Review No.

IPR2023-01201

Patent No. RE45,117

Filing Date: February 23, 2012

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REPLY TO PATENT OWNER PRELIMINARY RESPONSE

The Board authorized this Reply to address Dr Smith’s testimony. Dr. Smith’s testimony should be afforded little weight because he (1) improperly limited the scope of claim 1 and (2) ignored Petitioner’s motivations to combine. In construing claim 1, Dr. Smith ignored claim differentiation, incorporated limitations from FIG. 1, and misread the ’117 patent’s discussion of JP-2006-162641. In addressing combinations, Dr. Smith relied on general differences in the cited references rather than addressing Petitioner’s motivations to combine.

I. Dr. Smith’s reading of claim 1 is contradicted by claims 11 and 23

Claim 1 recites “the first and second cooling fluid paths are separated from each other.” Dr. Smith argued this requires the air cannot share entry/exit. Ex. 2001, ¶ 74. His interpretation is not supported by the intrinsic evidence and, in fact, is untenable in light of claims 11 and 23, shown below, which modify “separated” and require, by claim differentiation, that claim 1 is broader.

Claim 1	Claim 11	Claim 23
the first and second cooling fluid paths are separated from each other...	the first and second cooling fluid paths are separated from each other <i>such that air flow from the second cooling fluid path to the first cooling fluid path is prohibited</i>	the first and second cooling fluid paths are <i>entirely separated</i> from each other such that air flow from the second cooling fluid path to the first cooling fluid path <i>entirely prohibited</i>

(emphasis added).

Claim 11 prohibits air flow between paths and claim 23 adds “entirely” to modify “separated.” This means that “separated” in claim 1 allows for mixing at

some point, which includes at the entry/exit, or the language in claims 11 and 23 is superfluous. The Federal Circuit addressed this issue in *Phillips v. AWH Corp.* 415 F.3d 1303, 1314 (Fed. Cir. 2005) (en banc) (“Because claim terms are normally used consistently throughout the patent, the usage of a term in one claim can often illuminate the meaning of the same term in other claims. Differences among claims can also be a useful guide in understanding the meaning of particular claim terms.”). Thus, claims 11 and 23 contradict Dr. Smith’s opinion.

II. Dr. Smith improperly limited claim 1 to the embodiment of FIG. 1

Dr. Smith relied solely on FIG. 1 to assert the ’117 patent “explains that the claimed cooling fluid paths each have their own entry and exit and do not mix.” Ex. 2001, ¶74. Limiting claim 1 to the FIG. 1 embodiment contravenes established case law, especially because the text of the ’117 patent does not limit the entry/exit of the cooling paths. *See TurboCare Div. of Demag Delaval v. GE*, 264 F.3d 1111, 1123 (Fed. Cir. 2001) (“There is no basis for reading a limitation from the preferred embodiment into the language of the claim. That is particularly true where another claim restricts the invention in exactly the manner suggested by the district court's narrow claim construction.”).

III. Dr. Smith mischaracterized the ’117 Patent’s Discussion of JP2006-162641

Dr. Smith argued the ’117 patent’s discussion of JP2006-162641 supports a narrow definition of “separated” to require the two paths have separate entry/exit

to avoid inter-heating. Ex. 2001, ¶ 77-78. But this mischaracterizes the disclosure of the '117 patent, which is directed to preventing the “inter-heating problem,” that occur when the display panel and circuit boards are “mounted in the same space.” Ex. 1001, 1:43-48. Thus, the claimed invention of the '117 patent is to separate the display panel and circuit boards such that air that passes by the display panel to cool it does not pass by the circuit boards and vice versa. Ex. 1001, 3:47-55. This separation purportedly prevents the inter-heating. *Id.* The '117 patent's discussion of JP2006-162641 has nothing to do with separate air entry/exit as Dr. Smith alleges and claims 1-2 and 5 are silent as to separate cooling path entry/exit.

IV. Dr. Smith ignored Dr. Meinhart's motivations to combine

Contrary to Dr. Smith's allegations, Petitioner and Dr. Meinhart provided extensive motivations to combine the references in each ground. *See, e.g.,* Pet., pp 32-36, 50-54, 59-60, 73-76, and 82 (all citing Ex. 1003). In response, Dr. Smith relied on general characterizations of the references to suggest they are different while ignoring their specific teachings, including that they are directed to solving the same heat problem the '117 patent purports to solve, in the same way.

Dr. Smith's testimony should be given little weight and IPR instituted.

Respectfully submitted,

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CERTIFICATE OF SERVICE

The undersigned hereby certifies that on the date below a copy of this **Reply to Patent Owner's Preliminary Response** has been served by email upon the following:

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