

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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KINGSTON TECHNOLOGY COMPANY, INC.,  
Petitioner

v.

POLARIS INNOVATIONS LTD.,  
Patent Owner.

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Case IPR2016-01622  
Patent 6,850,414

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**PETITIONER'S SURREPLY TO PATENT OWNER'S MOTION TO  
AMEND**

Pursuant to the Board's order of October 10, 2017, Petitioner submits this response to Patent Owner's Motion to Amend Reply (hereinafter "MTA Reply") in view of *Aqua Products, Inc. v. Matal*, No. 2015-1177, 2017 WL 4399000 (Fed. Cir. October 4, 2017). For the reasons set forth hereinafter, Petitioner asserts that proposed substitute claim 9 is unpatentable.

**I. "INDIVIDUALLY CONNECTED" DOES NOT EXCLUDE A CONNECTION SOCKET**

The Board has already rejected Patent Owner's individually connected argument, and it should do so again. As it did in its Preliminary Response, *see* PPOR at 31-32, PO asserts that Simpson fails to disclose the "housing of each one of said semiconductor memories . . . being individually connected to said printed circuit board," as recited in canceled claim 1, because Simpson's ECC chip is connected to the PCB via a socket. MTA Reply at 10-11. As the Board has already noted, this argument relies on a construction of "connected" that the Board declined to adopt. Inst. Dec. at 13. The Board correctly acknowledged that "[t]he '414 patent does not explicitly define 'connected'" or support a construction that would exclude connection by a connector such as a socket. *Id.* at 8.

PO now suggests that the word "individually" modifies the term "connected" such that the combination ("individually connected") requires memory chips to be "directly connected to a printed circuit board." MTA Reply

at 10. PO's only support for this construction comes from a portion of the deposition of Dr. Subramanian that involved a confusing hypothetical arrangement of stacked memory chips, which are not at issue in the '414 patent. *Id.* (citing Ex. 2012 at 234:6-237:22); *see also* Ex. 2012 at 222:10-242:25. From this PO asserts because an upper chip housing in the hypothetical **stacked chip** arrangement (shown in Ex. 2013) "has no physical connection to the printed circuit board, it would therefore not be individually connected" to a PCB and that thus a chip in a socket would not be individually connected. This line of reasoning is severely flawed. Unlike a chip stack, a socket is explicitly a means for connecting individual chips to a PCB. Whether a chip is plugged into a PCB socket or soldered onto PCB contact pads, the chip is still individually connected to the PCB, both mechanically and electrically.

Finally, even if the phrase "individually connected" were found to require a direct physical connection between a chip housing and a PCB, Simpson teaches such connections. *See* Simpson Fig. 1 chips 12a-12h (which are described on page 10 as being "electrically and mechanically connected to the substrate. The preferred way is to use a soldering process to connect terminals of each device to the electrically conducting interconnections of the substrate."). Moreover, any contention by PO that such connections do not also apply to Simpson's ECC chip 16a (shown in Fig. 1 as connected via a socket) is also misplaced. Simpson

explicitly states that “[t]he quantity, position and type [of memory chips and sockets] are dependent upon the **design preferences of the module designer.**” *Id.* at 14:10-12 (emphasis added); *see also* Ex. 2012 at 261:5-262:18 (Dr. Subramanian explaining the flexibility of Simpson’s design and rationale for replacing sockets with solder).

## II. PETITIONER HAS PROVIDED AMPLE EVIDENCE THAT SIMPSON IN VIEW OF THE INTEL SPECIFICATION RENDER OBVIOUS SUBSTITUTE CLAIM 9

In the Opposition, Petitioner provided ample *uncontested* evidence that it was both possible and within the skill of a POSITA to design a memory module that incorporates both the standard PCB size (*e.g.*, 5.25” by 1.2”) of the Intel Specification and Simpson’s chip arrangement. *See e.g.*, Opposition at 4-11; Ex. 1022; Ex. 1011; Ex. 1012; Ex. 1013; Ex. 1014. Petitioner also explained at length various *uncontested* reasons that a POSITA would be motivated to produce such a design. *See e.g.*, *Id.* at 11-14; Ex. 1022; Ex. 1017. Thus, PO chose to attack Simpson’s age and Simpson’s purpose; both of which are irrelevant to patentability. *See* MTA Reply at 11. According to the PO, Simpson, which was published in 1995, is “ancient” in relation to the ’414 patent. However, the mere age of a prior art reference has no bearing on patentability. *In re Wright*, 569 F.2d 1124 (CCPA 1977) (“The mere age of the references is not persuasive of the unobviousness of the combination of their teachings.”). The fact that Simpson was

motivated to solve a different problem than the '414 patent also does not diminish Simpson's explicit disclosure that reads on the limitations of substitute claim 9.

*KSR International Co. v. Teleflex Inc. (KSR)*, 550 U.S. 398, 404 (2007); *In re Kahn*, 441 F.3d 977, 987 (Fed. Cir. 2006); *Cross Med. Prods., Inc. v. Medtronic Sofamor Danek, Inc.*, 424 F.3d 1293, 1323 (Fed. Cir. 2005); *State Contracting & Eng'g Corp. v. Condotte America, Inc.*, 346 F.3d 1057, 1068 (Fed. Cir. 2003).

Instead, PO's arguments reveal a fundamental misunderstanding of the law of obviousness. PO consistently argues that the cited references must be directed to solving the same problem as the '414 patent and that the teachings of secondary references must be bodily incorporated into the physical apparatus of the primary reference. *See e.g.*, PPOR at 2, 6, 12, 14, 15, 19, 39; Ex. 2012 at 164, 166-167, 173-178, 187-192, 224, 264; MTA Reply at 12.

However, in *KSR* the Supreme Court rejected the idea that prior art references need to address the same "problem that the patentee was trying to solve" and rejected a strict adherence to the teaching-suggestion-motivation (TSM) test. *KSR*, 550 U.S. at 420, 421. Instead, obviousness under §103 is supported by a "combination of familiar elements . . . when it does no more than yield predictable results." *Id.* at 416.

Moreover, obviousness does "not require a 'specific hint or suggestion in a particular reference,' only a reasoned explanation that avoids conclusory

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