

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 IPR2017-00114  
Patent 7,206,978 B2

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Before SALLY C. MEDLEY, BARBARA A. PARVIS, and  
MATTHEW R. CLEMENTS, *Administrative Patent Judges*.

PARVIS, *Administrative Patent Judge*.

FINAL WRITTEN DECISION  
*35 U.S.C. § 318(a) and 37 C.F.R. § 42.73*

I. INTRODUCTION

Kingston Technology Company, Inc. (“Petitioner”) filed a Petition for *inter partes* review of claims 1–6 and 8–14 of U.S. Patent No. 7,206,978 B2 (Ex. 1001, “the ’978 patent”). Paper 2 (“Pet.”). In support of its Petition,

Petitioner proffers a Declaration of Dr. Vivek Subramanian. Ex. 1003. Polaris Innovations Ltd. (“Patent Owner”) filed a Preliminary Response. Paper 6 (“Prelim. Resp.”). Upon consideration of the parties’ contentions and supporting evidence, we instituted an *inter partes* review pursuant to 35 U.S.C. § 314, as to claims 1, 6, 8–11, 13, and 14 of the ’978 Patent. Paper 10 (“Dec.”).

Subsequent to institution, Patent Owner filed a Patent Owner Response (Paper 17, “PO Resp.”). In support of its Patent Owner Response, Patent Owner proffers the Declaration of Dr. Joseph Bernstein. Ex. 2004. Petitioner filed a Reply to Patent Owner’s Response (Paper 21, “Pet. Reply”). On December 6, 2017, we held an oral hearing. Paper 32 (“Tr.”).

This Final Written Decision is entered pursuant to 35 U.S.C. § 318(a). For the reasons that follow, we determine that Petitioner has demonstrated by a preponderance of the evidence that claims 1, 6, 8–11, 13, and 14 of the ’978 Patent are unpatentable.

#### *A. Related Matters*

The parties state that the ’978 Patent is the subject of a pending lawsuit in the Central District of California, i.e., *Polaris Innovations Ltd. v. Kingston Tech. Co.*, Case No. 8:16–cv-300 (C.D. Cal.)<sup>1</sup> and the lawsuit includes assertions against Petitioner. Pet. 1; Paper 3 (Patent Owner’s Mandatory Notices), 1.

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<sup>1</sup> This lawsuit is referred to herein as the “companion district court lawsuit.”

*B. The '978 Patent*

The '978 Patent is directed to error detection in a circuit module. Ex. 1001, 1:7–8. Figure 3 of the '978 Patent is reproduced below.

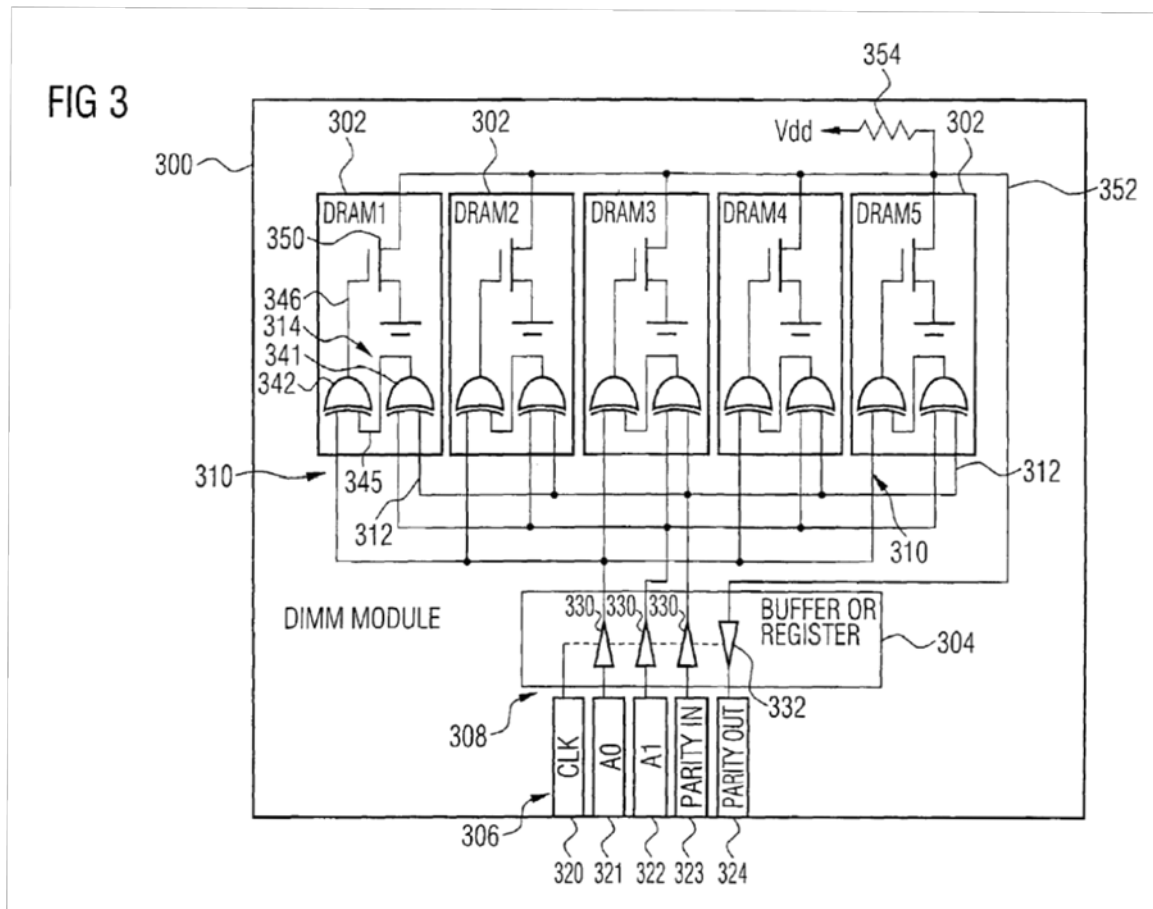


Figure 3 illustrates a schematic view of a memory module.

As shown in Figure 3 above, each of dynamic random access memory (DRAM) chips 302 on module board 300 is connected to one of sub-buses 310. *Id.* at 4:43–49. An indication signal generating unit 314 is embedded in each memory chip 302. *Id.* at 4:51–52. Clock, address, check, and error signals are received from the motherboard by terminals 320–324 in

connector portion 306 (*id.* at 4:53–60), which is connected to buffer 304 via module main bus 308 (*id.* at 4:45–46).

Indication signal generating unit 314 includes two exclusive OR (XOR) gates 341 and 342. *Id.* at 5:16–17. Indication signal generating unit 314 receives command and address bits and the check signal. *Id.* at 5:18–26. Indication signal generating unit 314 outputs indication signal 346. *Id.* at 5:26–33.

### *C. Illustrative Claim*

We instituted an *inter partes* review as to claims 1, 6, 8–11, 13, and 14 of the '978 Patent. Dec. 33. Claims 1 and 13 are independent claims. Claims 6, 8–11, and 14 depend, directly or indirectly, from claims 1 or 13. Independent claim 1, reproduced below, is illustrative of the claimed subject matter:

1. A circuit module comprising:
  - a module board;
  - a plurality of circuit units arranged on the module board, each circuit unit consisting of a single integrated circuit memory chip;
  - a main bus having a plurality of lines, branching into a plurality of sub-buses having a plurality of lines, each of the sub-busses being connected to one of the plurality of circuit units;wherein each circuit unit comprises an indication signal generating unit for providing an indication signal based on a combination of the signals received on the plurality of lines of the sub-bus connected to the respective circuit unit, and an indication signal output for outputting the indication signal.

Ex. 1001, 7:30–44.

*D. Instituted Grounds of Unpatentability*

We instituted *inter partes* review as to claims 1, 6, 8–11, 13, and 14 of the '978 Patent based on the following grounds (Pet. 10–12):

Reference(s)	Basis	Challenged Claim(s)
Raynham <sup>2</sup> and Seyyedy <sup>3</sup>	§ 103(a)	1, 10, 11, 13, and 14
Raynham, Seyyedy, and Humphrey <sup>4</sup>	§ 103(a)	6
Raynham, Seyyedy, and Admitted Prior Art <sup>5</sup>	§ 103(a)	8
Raynham, Seyyedy, and Cromer <sup>6</sup>	§ 103(a)	9
Humphrey alone or in combination with Admitted Prior Art	§ 103(a)	1, 6, 8, 10, 11, and 13
Humphrey, Admitted Prior Art, and Cromer	§ 103(a)	9

II. DISCUSSION

*A. Overview*

A patent claim is unpatentable if the differences between the claimed subject matter and the prior art are such that the subject matter, as a whole, would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.

35 U.S.C. § 103(a). The question of obviousness is resolved on the basis of

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<sup>2</sup> U.S. Patent No. 5,127,014, issued June 30, 1992 (Ex. 1005) (“Raynham”).

<sup>3</sup> U.S. Patent No. 6,282,689 B1, issued Aug. 28, 2001 (Ex. 1009) (“Seyyedy”).

<sup>4</sup> European Patent Application 0 084 460 A2, published July 27, 1983 (Ex. 1008) (“Humphrey”).

<sup>5</sup> Admitted Prior Art (i.e., Ex. 1001, 1:11–38, 1:41–43, 1:57–59, Figs. 1, 2 (cited in Pet. 15–18, 22, 23)).

<sup>6</sup> European Patent Application EP 1 029 326 B1, published Aug. 23, 2000 (Ex. 1007) (“Cromer”).

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