

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 IPR2016-01621 (Patent 6,438,057 B1)

Case IPR2016-01622 (Patent 6,850,414 B2)

Case IPR2016-01623 (Patent 7,315,454 B2)

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Record of Oral Hearing  
Held: November 14, 2017

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Before SALLY C. MEDLEY, JEAN R. HOMERE, and KEN B.  
BARRETT, *Administrative Patent Judges*.

Case IPR2016-01621 (Patent 6,438,057 B1)  
Case IPR2016-01622 (Patent 6,850,414 B2)  
Case IPR2016-01623 (Patent 7,315,454 B2)

APPEARANCES:

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The above-entitled matter came on for hearing on Tuesday,  
November 14, 2017, commencing at 1:00 p.m., at the U.S. Patent and  
Trademark Office, 600 Dulany Street, Alexandria, Virginia.

Case IPR2016-01621 (Patent 6,438,057 B1)  
Case IPR2016-01622 (Patent 6,850,414 B2)  
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P R O C E E D I N G S

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JUDGE BARRETT: Good afternoon everyone. We are on the record. We have today a final hearing in three cases, IPR2016-01621, IPR2016-01622, and IPR2016-01623, Kingston Technology Company v. Polaris Innovations. I am Judge Barrett. Next to me are Judges Medley and Homere. Let's start with the parties' appearances. Who do we have from petitioner?

MR. HOFFMAN: Your Honor, David Hoffman. With me are my colleagues, Liz Ranks, Ken Hoover and Martha Hopkins.

JUDGE BARRETT: Thank you. And for patent owner?

MR. WEATHERWAX: Hello, Your Honor. Ken Weatherwax for patent owner with my colleagues, Nathan Lowenstein and Shawn Chi, and also a representative of the patent owner, Polaris Innovations, Brian Richardson.

JUDGE BARRETT: Thank you. All right. The tentative plan today is to take these cases serially, one at a time in case number order.

MR. LOWENSTEIN: If I may, Your Honor, Nathan Lowenstein. I talked to Mr. Hoffman before the proceedings and we've agreed to do 1623 second. I have a plane to catch. If we could do that, that would be most appreciated.

JUDGE BARRETT: That's fine. So 1621 first, 1623 second, and then 1622 last.

MR. LOWENSTEIN: Thank you.

Case IPR2016-01621 (Patent 6,438,057 B1)  
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1           JUDGE BARRETT: So we set forth the procedure in our trial  
2 order, but just to remind everybody how this is going to work, for each  
3 case each party will have 30 minutes total. For clarity of the transcript,  
4 please be sure to identify demonstrative pages or pages from the record  
5 verbally so that gets into the transcript. For all three cases, petitioner  
6 will go first and may reserve time for rebuttal. Patent owner will then  
7 have an opportunity to present its response, and petitioner can present  
8 its rebuttal arguments with whatever time it has remaining.

9           In case 1622, that's the case with the motion to amend, patent  
10 owner has indicated that it feels it still may bear some burden after the  
11 *Aqua Products* decision, so I will give you whatever remaining time you  
12 have at the end but only to address petitioner's arguments regarding the  
13 motion to amend.

14           I will be watching the clock and I will give counsel a warning  
15 when you are reaching the end of your time. As another reminder, no  
16 new evidence or arguments should be introduced today. Anything that  
17 is not already in the papers will not be considered.

18           Any questions or concerns?

19           MR. HOFFMAN: No, Your Honor.

20           MR. WEATHERWAX: No, Your Honor.

21           JUDGE BARRETT: With that, let us begin with the 1621  
22 case and petitioner.

23           MR. HOFFMAN: Thank you, Your Honors. I would like to  
24 reserve ten minutes or whatever time I don't use for my rebuttal.

Case IPR2016-01621 (Patent 6,438,057 B1)

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1           A brief overview of the slides, hopefully I will cover them all,  
2 but if I don't, this is what I intended to cover. A brief introduction to the  
3 '057 technology, a discussion of the Atkinson and Broadwater prior art  
4 patents, a discussion of the reasons to combine, then why it's obvious to  
5 use a diode to detect temperature with Atkinson, and then how Atkinson  
6 shows the refresh unit and the refresh timing unit of claims 6 and 7, and  
7 then lastly potentially a discussion of the patent owner's expert's use of  
8 what we believe was the wrong standard in evaluating the evidence.

9           The '057 patent is about adjusting the DRAM refresh rate  
10 using the temperature of the DRAM array. In order for a DRAM  
11 memory to keep its contents, it has to be periodically refreshed. That  
12 process, how often it has to be refreshed, is related to power. The more  
13 you refresh, the more power you use.

14           Similarly, as the temperature goes up or down, how often you  
15 have to refresh changes. So while at a cooler temperature, you may  
16 only have to refresh every once in a while. At a higher temperature, you  
17 have got to refresh more often or you'll lose the contents of your  
18 memory. And you can see that in the little exhibit from the abstract. It's  
19 about adjusting the refresh rate.

20           What I think is most instructional about the '057 patent is what  
21 you see on this is slide 5. It's Figure 2 from the '057 patent. And there  
22 you see a chart which shows that at a lower temperature, there's a lower  
23 refresh rate. And then at a higher temperature, there is a higher refresh  
24 rate. Similarly, as you can see, there's a section of the '057 patent on  
25 slide 5 that shows the same thing. In one embodiment you detect that

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