### UNITED STATES PATENT AND TRADEMARK OFFICE

### BEFORE THE PATENT TRIAL AND APPEAL BOARD

NVIDIA CORPORATION, Petitioner,

v.

POLARIS INNOVATIONS LIMITED, Patent Owner.

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Case IPR2017-00381 Patent 7,886,122 B2

Record of Oral Hearing Held: March 8, 2018

Before SALLY C. MEDLEY, BARBARA A. PARVIS, and MONICA S. ULLAGADDI, *Administrative Patent Judges*.



### **APPEARANCES:**

### ON BEHALF OF THE PETITIONER:

JEREMY J. MONALDO, ESQUIRE DAVID HOFFMAN, ESQUIRE DREW GOLDBERG, ESQUIRE Fish & Richardson, PC 1425 K Street, N.W. 11th Floor Washington, DC 20005

### ON BEHALF OF THE PATENT OWNER:

MATTHEW C. PHILLIPS, ESQUIRE DAVID MEEKER, ESQUIRE Laurence & Phillips 7327 SW Barnes Road, #521 Portland, OR 97225

and

Ben Damstedt, Esquire (Nvidia)

The above-entitled matter came on for hearing Thursday, March 8, 2018, commencing at 10:00 a.m., at the U.S. Patent and Trademark Office, 600 Dulany Street, Alexandria, Virginia.



# Case IPR2017-00381 Patent 7,886,122 B2

1	PROCEEDINGS
2	
3	JUDGE PARVIS: Good morning, everyone. This is oral
4	argument in IPR 2017-00381. The patent is U.S. Patent No. 7,886,122 B2.
5	The Petitioner is Nvidia Corporation; the Patent Owner is Polaris
6	Innovations Limited.
7	I am Administrative Judge Parvis. Judges Medley and
8	Ullagaddi are here next to me.
9	At this time, we'd like counsel to introduce yourselves, your
10	partners and your guests, starting with the Petitioner. Please use the
11	microphone.
12	MR. MONALDO: Thank you, Your Honor. Jeremy Monaldo,
13	Fish & Richardson, representing Nvidia Petitioner, joined by David
14	Hoffman, Drew Goldberg and Ben Damstedt for Nvidia.
15	May we approach the bench with copies of our demonstratives,
16	Your Honor?
17	JUDGE PARVIS: Yes.
18	(Pause.)
19	JUDGE PARVIS: Counsel for Patent Owner?
20	MR. PHILLIPS: Good morning, Your Honors, Matthew
21	Phillips and Derek Meeker from Laurence & Phillips for the Patent Owner.
22	JUDGE PARVIS: Thank you.
23	MR. PHILLIPS: We also have copies of our demonstratives.
24	JUDGE PARVIS: Okay. You may approach.
25	(Pause.)
26	JUDGE PARVIS: Before we begin, we want to remind the



# Case IPR2017-00381 Patent 7,886,122 B2

1	parties that the hearing is open to the public and a full transcript of it will
2	become part of the record. Also, please keep in mind that whatever is
3	projected on the screen will not be viewable by anyone reading the
4	transcript. When you are referring to a document on the screen, please state
5	in the microphone information to identify the document that you're referring
6	to, such as Petitioner's demonstratives and the slide number.
7	As you know from our oral hearing order of January 31st, 2018,
8	each side will have 30 minutes total to present its arguments. Because the
9	Petitioner has the burden show unpatentability of the claims, Petitioner will
10	proceed first, followed by Patent Owner. Petitioner may reserve some time,
11	but only for rebuttal of Patent Owner's presentation. I will be using the
12	clock on the side wall over here.
13	So any time you're ready, Counsel for the Petitioner, you may
14	proceed.
15	MR. MONALDO: Thank you, Your Honor. Is it possible to
16	get the clock, the digital clock behind you?
17	JUDGE PARVIS: Do you want this clock working?
18	MR. MONALDO: If that would be if that's possible, that
19	would be great, thank you.
20	JUDGE PARVIS: How much time do you want for rebuttal?
21	MR. MONALDO: I'm hoping to leave ten minutes.
22	(Pause.)
23	JUDGE PARVIS: Okay.
24	MR. MONALDO: May it please the Board, my name is
25	Jeremy Monaldo from Fish & Richardson, representing Nvidia, Petitioner.
26	I'm joined by David Hoffman and Drew Goldberg, from our firm, as well as



# Case IPR2017-00381 Patent 7,886,122 B2

1	Ben Damstedt from Nvidia.
2	Today, we are scheduled to discuss one IPR involving Polaris'
3	122 patent.
4	Moving to slide 2, you'll see that we provided a table of
5	contents for convenient reference to the various sections of our
6	demonstratives. We have organized our slides into seven disputed issues
7	that I'll reference throughout our presentation. Our goal is to use our time
8	efficiently. My first discussion is a brief overview of the 122 patent and
9	then discussing a subset of issues in grounds 1 through 4. That said, our
10	primary objective is to ensure we address any questions Your Honors might
11	have, so please feel free to steer the discussion in any way you deem helpful.
12	With that background, I'd like to move to slide 6 and start with
13	an overview of the 122 patent.
14	As shown in the background section presented in the upper
15	right of slide 6, the inventors of the 122 patent recognized a problem with
16	using a double frequency or high frequency clock for command-and-address
17	data. Because command-and-address data is received less frequently, using
18	the high frequency clock was unnecessary and consumed more power than
19	needed.
20	The summary section shown at the lower right of slide 6
21	describes a proposed solution, using two clocks, a first clock with a lower
22	frequency for commands and addresses, and a second clock with a higher
23	frequency for your data signals.
24	This is illustrated on slide 7 of our demonstratives where you
25	see an annotated version of the 122 patent's figure 4. As you can see on
26	slide 7, you have a low frequency clock, highlighted in green, used for



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