

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

LENOVO (UNITED STATES) INC.,
Petitioner,

v.

UNIVERSITY OF ROCHESTER
(INTELLECTUAL VENTURES I LLC),
Patent Owner.

Inter Partes Review No.
IPR2024-01225

Patent No. 7,089,443
Filing: January 23, 2004
Issue Date: August 8, 2006

**PETITIONER'S REPLY TO PATENT OWNER'S
PRELIMINARY REPLY**

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Ex. 1004 (*Shenai*)

Claim 1
[1.0] A power distribution management apparatus for supplying power to a plurality of loads, the apparatus comprising:
[1.1] a power and clock distribution controller capable of determining voltage, current and clock signal frequency targets for the plural loads;
[1.2] plural power sources responsive to the controller so as to be selectively coupled with the loads to provide the target voltage and current to the loads,
[1.3] wherein the power sources have switching frequencies of at least one megahertz; and
[1.4] plural clock signal sources responsive to the controller and coupled with the loads so as to provide clock signals to the loads at the target frequencies.

Ex. 1004 (*Shenai*) is prior art under §102(e) because it claims priority under §119(e) to four provisional applications, including App. No. 60/311,575 (Ex. 2006) filed on Aug. 10, 2001. Ex. 1004 is entitled to the benefit of Ex. 2006 under §119(e) because Ex. 1004 was filed “not later than 12 months” after Ex. 2006 (noting per §119(e)(3) that Aug. 10, 2002, was a Saturday and Ex. 1004 was filed on Monday) and Ex. 1004 references and claims priority to Ex. 2006. Both Exs. 1004 and 2006 have Krishna Shenai as an inventor. Further, as discussed below, the priority claim is perfected because “the provisional application has proper support for the subject matter as required by [] §119(e) and that at least one claim of the reference is supported by the written description of the relied upon provisional application in compliance with pre-AIA 35 U.S.C. 112, first paragraph...” MPEP §2136 (Pre-AIA 35 U.S.C. 102(e)); *see also Dynamic Drinkware v. Nat’l Graphics, Inc.* 800 F.3d 1375, 1380 (Fed. Cir. 2015).

I. EX. 2006 PROVIDES SUPPORT FOR CLAIM 1 OF EX. 1004

Dynamic Drinkware (DD) requires that the “provisional application provided written description support” for at least one claim of the application . . . claiming its benefit. 800 F.3d 1375, 1380. Ex. 2006 provides support for at least claim 1 of Ex. 1004:

Ex. 1004 Claim 1	Ex. 2006 (App. No. 60/311,575)
[1.0]	“management of the performance and power consumption of integrated or distributed load clusters using high-frequency power

	converters.” P.10; <i>see also</i> Fig. 2.
[1.1]	“to control the cross-bridge network, to specify dynamically the voltage output by each of n power sources, and to specify the clock frequency delivered to each of m load clusters, a dynamic controller is provided. It is envisioned that the dynamic controller will operate with the cooperation of [] power optimization algorithms...” P.12; <i>see also</i> Fig. 2.
[1.2]	<i>See</i> [1.1]; <i>see also</i> “controller circuit which dynamically specifies the connections to be made by the cross-bridge network between the power sources and loads.” P.8. “cross-bridge network between the power sources and the load clusters to permit optimization of power, control complexity, or size.” P.12; <i>see also</i> Fig. 2.
[1.3]	“each power source will operate at a switching frequency of 1 to 500 MHz.” P.11.
[1.4]	<i>See</i> [1.1]; <i>see also</i> “Each load cluster receives an independent clock frequency from a unique clock generator.” P.11; <i>see also</i> Fig. 2.

Thus, Ex. 1004’s priority claim to Ex. 2006 is correct under the first prong of *DD*. 800 F.3d 1375, 1380.

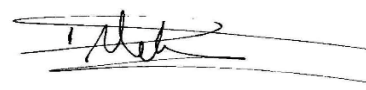
II. EX. 2006 SUPPORTS EX. 1004 AS RELIED ON IN THE PETITION

DD requires that “the written description in the earlier [provisional] application supports” the subject matter relied on in the Petition. 800 F.3d 1375, 1381-1382; *see also* IPR2021-00058, Paper 14 at 11. Identical disclosure of terms in the provisional is not required to claim priority. *See* 800 F.3d 1375, 1379-1381. Instead, “written description support” requires that the disclosure “reasonably conveys to those skilled in the art that the inventor had possession of the claimed subject matter as of the filing date.” *Ariad Pharms., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1351 (Fed. Cir. 2010) (*en banc*). The portions of Ex. 1004 relied on in the Petition, including *Shenai*’s “power distribution management apparatus”

including “loads,” “clocks,” “converters,” and a “controller” have written description support in Ex. 2006 disclosing a “power and performance management architecture,” “load clusters,” “independent clocks,” “converters,” and “controller.” Ex. 2006, pp.10-11; *see also* Fig. 2 of Ex. 2006 closely matching relied upon Ex. 1004, Fig. 4. Contrary to Patentee’s assertion, written description support for terms such as “microprocessor” is provided by Ex. 2006. *See* Paper 7 at 28. According to the 1999 Modern Dictionary of Electronics, a microprocessor is defined as “an electronic integrated circuit, typically a single-chip package, capable of receiving and executing coded instructions.” Rudolf Graf, 7th Ed. (1999), 472. Ex. 2006’s “controller circuit” and power sources “integrated monolithically along with the load clusters using existing integrated circuit (IC) fabrication techniques” would be understood to provide written description for a “microprocessor.” Ex. 2006, pp.10-11. The plural loads 410/412/414/416 shown in Fig. 4 of Ex. 1004 correspond to clusters 1-4 in Fig. 2 of Ex. 2006. A POSITA would have understood that Ex. 2006 teaches the functionality of the power distribution management apparatus in both applications. Thus, Ex. 1004 is entitled to Ex. 2006’s Aug. 10, 2001 filing date.

Accordingly, Ex. 1004 should be accorded a priority date of Aug. 10, 2001, and this IPR should be instituted.

Dated: December 19, 2024

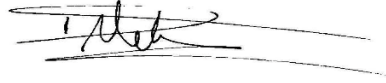


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CERTIFICATE OF SERVICE

Pursuant to 37 C.F.R. § 42.6, the undersigned hereby certifies that this
“PETITIONER’S REPLY TO PATENT OWNER’S PRELIMINARY REPLY”
was served by filing this document through the Patent Trial and Appeal Case
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