

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.

Case No. IPR2024-01225

U.S. Patent No. 7,089,443

PATENT OWNER'S PRE-INSTITUTION SUR-REPLY

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PATENT OWNER'S EXHIBIT LIST

Ex. 2001	Declaration of Dr. David Kaeli
Ex. 2002	Resume of Dr. David Kaeli
Ex. 2003	Declaration of David H. Albonesi
Ex. 2004	L. F. G. Sarmenta, G. A. Pratt, and S. A. Ward. Rational Clocking. In Proceedings of the International Conference on Computer Design, Austin, Tex., October 1995
Ex. 2005	Semeraro et al, "Energy-Efficient Processor Design Using Multiple Clock Domains with Dynamic Voltage and Frequency Scaling," High Performance Computer Architecture (HPCA), February 2, 2002
Ex. 2006	Provisional Application No. 60/311,575, filed August 10, 2001
Ex. 2007	Provisional Application No. 60/337,837, filed November 5, 2001
Ex. 2008	Provisional Application No. 60/337,479, filed November 5, 2001
Ex. 2009	Provisional Application No. 60/338,510, filed November 5, 2001
Ex. 2010	SimpleScalar Tutorial

I. CLAIM 1 OF SHENAI IS UNSUPPORTED BY THE PROVISIONAL.

Claim 1 of Shenai (Ex. 1004) recites in pertinent part,

“a power and clock distribution controller capable of determining voltage, current and clock signal frequency targets for the plural loads ...”

The Provisional Application (Ex. 2006) fails to mention a controller that determines current targets for plural loads. Rather, the controller in the Provisional Application only determines voltage and frequency targets. Ex. 2006, 12 (characterizing permitting “combined frequency and voltage scaling,” without mentioning control of current). The Reply (at 2) cites the following from the Provisional Application as allegedly supporting determining current targets:

... Fourth is a controller circuit which dynamically specifies the connections to be made by the cross-bridge network between the power sources and loads. (Ex. 2006, 8)

* * *

[T]o 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 ... (Ex. 2006, 12) (emphasis added).

* * *

[T]he architecture accommodates ... strategies in the cross-bridge network between the power sources and the load clusters to permit optimization of power, control complexity, or size. (Ex. 2006, 12)

These passages do not disclose determining current targets for plural loads. Rather, the disclosure regarding the determination of current targets was first introduced in Shenai’s utility application, which disclosed in part:

Power and clock distribution controller 450 may be capable of determining voltage, current and clock signal frequency targets for the

plural loads. Ex. 1004, [0026] (emphasis added).

... DC/DC converters 470-476 may be responsive to controller 450, such that they are selectively coupled with loads 410-416 to provide the respective target voltages and currents to the loads. *Id.*, [0031] (emphasis added).

Since the Provisional Application fails to disclose a controller that determines current targets for plural loads, it fails to provide written description support for claim 1 as required by *Dynamic Drinkware, LLC v. Nat'l Graphics, Inc.*, 800 F.3d 1375, 1382 (Fed. Cir. 2015); *see also*, *Purdue Pharma L.P. v. Faulding Inc.*, 230 F.3d 1320, 1323 (Fed. Cir. 2000) (to meet the written description requirement, “one skilled in the art, reading the original disclosure, must immediately discern” the material); *Ariad Pharms., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1352 (Fed. Cir. 2010) (*en banc*) (“[A] description that merely renders the invention obvious does not satisfy the [written description] requirement.”)

II. THE PROVISIONAL LACKS WRITTEN DESCRIPTION SUPPORT FOR A MICROPROCESSOR

Claim 1 of the '443 Patent recites the domains of a “multiple-clock-domain microprocessor,” and Ground 1 relies solely on Shenai (Ex. 1004) for this aspect of Claim 1. However, the Provisional Application (Ex. 2006) lacks written description support for a microprocessor. The Reply (at 3) argues :

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.”

The Provisional Application does not say that its “controller circuit”/power

sources/load clusters are a microprocessor, nor do such components provide inherent support for a “microprocessor.” The Reply does not explain why a controller circuit/power sources/load clusters must be “capable of receiving and executing coded instructions” -- because there is no such requirement. “[W]hen an explicit limitation . . . is not present in the written description whose benefit is sought it must be shown that ... the description requires that limitation.” *Hyatt v. Boone*, 146 F.3d 1348, 1353 (Fed. Cir. 1998) (emphasis added). Here, nothing in the Provisional Application requires that the “load clusters” be a microprocessor.¹ Therefore, the generic disclosure of “load clusters” in the Provisional Application fails to provide written description support for a specific implementation where the “load clusters” are a microprocessor. See *In re Smith*, 458 F.2d 1389, 1395, (CCPA 1972). (description of a genus failed to support claims to a species within the genus). Thus, the Provisional Application also fails to provide written description support for the subject matter relied on in the Petition, as required by *Dynamic Drinkware*.

Respectfully submitted,

Dated: December 23, 2024

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¹ The subsequent utility application, added the loads may comprise other circuitry including "an analog to digital converter utilizing comparators, ... RF power amplifiers, ... LCD displays, TFT displays, ... non-volatile memory units, or circuitry clusters." Ex. 1004, [0025].

CERTIFICATE OF SERVICE

The undersigned certifies that pursuant to 37 C.F.R. § 42.6(e), a copy of the foregoing **PATENT OWNER'S PRE-INSTITUTION SUR-REPLY** was served via email (as consented to by counsel) on December 23, 2024 to lead and backup counsel of record for Petitioners as follows:

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