

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

XU PEICHENG (HONG KONG) OPTOELECTRIC
TECHNOLOGY CO., LIMITED,

Petitioner

v.

SEMISILICON TECHNOLOGY CORP.,

Patent Owner

Case IPR2024-00156

Patent No. 8,884,546

PATENT OWNER'S
POST-HEARING REPLY SUPPLEMENTAL BRIEF

TABLE OF CONTENTS

I.	“SYNCHRONOUS SIGNALS”	1
A.	Patent Owner’s construction has undisputed intrinsic evidence support	1
B.	Invalidity is not established under any proposed construction	2
II.	“CURTAIN LAMP”	4
A.	Petitioner’s single LED interpretation is impermissibly late	4
B.	Newly-cited ’546 patent portions expose Petitioner’s flawed position	5

Petitioner's Opening Brief (Paper 30) confirms that Petitioner cannot prevail under any construction of "synchronous signals" and under a proper interpretation of "curtain lamp." Petitioner has failed to meet its burden of establishing the unpatentability of the challenged claims and the Board should find them patentable. The Board should also adopt Patent Owner's construction of "synchronous signals" if any construction is needed, and reject Patent Owner's "single-LED" interpretation of "curtain lamp" as late and incorrect.

I. "SYNCHRONOUS SIGNALS"

A. Patent Owner's construction has undisputed intrinsic evidence support

Petitioner's brief demonstrates that Patent Owner's construction is correct. Petitioner quotes Patent Owner's explanations at the Hearing that the Board's preliminary construction of "at the same time" is overly narrow and unsupported, because activities governed by synchronized timing *could* involve activities that occur at the same time *or at other times relative to one another on a time scale*. See Paper 30 at 2-3, quoting Paper 28 at 34:3-11, 33:18-34:2.¹ Petitioner applies a selective and restrictive reading of "synchronous signals" as "activities occurring at

¹ Petitioner suggests that Patent Owner's construction "must exclude activities that occur at the same time," but in fact, Patent Owner said the opposite at the Hearing. See Paper 30 at 3; Paper 28 at 34:3-11.

the same time.” Petitioner’s selective and narrow reading improperly *excludes* from the claim scope the ’546 disclosure of driving light strings in rhythm. *See* Ex. 1001 at 3:30-32. Therefore, the Board is correct to consider that synchronous signals involve activities governed by synchronized timing, consistent with the ’546 patent.

As the Board has noted and Petitioner does not dispute, “in rhythm” in the ’546 patent provides intrinsic evidence support for Patent Owner’s construction. *See* Paper 27 at 2-3. In contrast, Petitioner’s interpretation of “at the same time” is based only on selected and isolated dictionary definition and attorney argument. Even Petitioner’s brief citing the Federal Circuit admits that a construction based solely on extrinsic dictionary definitions cannot prevail over a construction with intrinsic support. *See* Paper 30 at 3-4 (citing *Mosaic Brands, Inc. v. Ridge Wallet LLC*, 55 F.4th 1354, 1362 (Fed. Circ. 2022)). As supported by the very precedent Petitioner cited, Patent Owner’s construction should be adopted because it has intrinsic support and reflects the full definition of “synchronous” in the Microsoft Computer Dictionary cited by the Board. *See* Paper 29, at 1-2; Ex. 3001.

B. Invalidity is not established under any proposed construction

The Board sought limited briefing on whether the references meet the opposing party’s *construction* (i.e., activities governed by synchronized timing). Petitioner’s brief went beyond the Board’s request and attempted to repair other deficiencies in its grounds—the lack of disclosures of “in rhythm” in *Kuang* and *Lys*.

Paper 30 at 4-6. Petitioner's brief relies on distorted readings of *Kuang* and *Lys*, while re-confirming that Petitioner cannot identify *any* disclosures in *Lys* or *Kuang* of *lighting activities occurring at the same time or governed by synchronized timing*.

New mappings of the cited references to "rhythm" are deficient. Petitioner alleges that *Kuang* discloses commanding LED units to "activate according to a predetermined pattern." Paper 30 at 4, citing Ex. 1004 at [0035]. The cited portion of *Kuang* does not explain "a predetermined pattern" or disclose that it is governed by synchronized timing, or disclose LED units turning on/off at the same time or in any rhythm. Nor is there any support for Petitioner's assertion that *Kuang's* predetermined pattern "can be repeated." *See* Paper 30, at 4.

Petitioner's belated and distorted discussions about *Lys's* "illumination programs" fare no better. Petitioner relies on columns 26 and 27 of *Lys* for the first time, but the quoted portions do not disclose signals related to activities governed by synchronized timing or activities occurring at the same time. *Lys* does not disclose different light sources illuminating in rhythm with one another, because *Lys* says nothing about governing the illumination programs using synchronized timing to control the light sources to illuminate relative to one another. The "illumination program" embodiment in *Lys* is akin to turning on two independent color changing lights and watching them cycle through colors. Without synchronous signals, the two lights vary their colors out of rhythm and out of synch with one another.

Petitioner has not established in invalidity under Patent Owner’s construction or its own interpretations of “synchronous signals.”

II. “CURTAIN LAMP”

A. Petitioner’s single LED interpretation is impermissibly late

Petitioner makes no attempt to show that its “single-LED” interpretation of “curtain lamp” theory was anywhere in the Petition. Instead, Petitioner admits that it first raised the single LED theory *after* Patent Owner’s Response arguments that the Petition had not shown a “curtain lamp” or “one more light strings” in *Kuang* or *Lys*. Paper 30 at 6-7. Petitioner’s betrayal of its own initial reading and application of the claimed “curtain lamp” is not a permissible response to Patent Owner’s arguments. Instead, Petitioner’s change of position fundamentally altered the thrust of its invalidity grounds in its Reply to patch up holes in its Petition.

The Petition did not even imply Petitioner’s belated theory that a single LED may be a “curtain lamp,” nor is this theory consistent with the Petition’s mappings. *See* Paper 29 at 5-6. Petitioner’s brief yet again presents new arguments and references to the ’546 patent that compound the prejudice to Patent Owner. Paper 30 at 8 (citing Ex. 1001 at 1:10-21 and 6:27-40 for the first time). Petitioner gave no notice of its late theory, depriving Patent Owner and its expert the opportunity to fully respond, and thus depriving the Board an opportunity to fully consider all potential evidence. *See Apple Inc. v. Andrea Electronics Corp.*, IPR2017-00626,

Paper 28 (PTAB July 3, 2018) (“A patent owner . . . is undoubtedly entitled to notice of and a fair opportunity to meet the grounds of [unpatentability].”)

B. Newly-cited '546 patent portions expose Petitioner's flawed position

Petitioner's brief raises yet more new arguments without any citation to the record. Paper 30, at 8. These late arguments do not support Petitioner's single LED theory of curtain lamp. For example, Petitioner quotes descriptions of Fig. 9 and “light emitting diode 52” in the '546 patent. Paper 8, citing Ex. 1001 at 6:27-40. The '546 patent discusses Figure 9 with Figures 7 and 8, which are circuit diagrams showing *strings of multiple LEDs*. See Ex. 1001 at 6:21-31. The next paragraph discusses “light emitting diode 52,” one of the dozens of LEDs shown in Fig. 7. Ex. 1001 at 6:32-40. Fig. 9 does not support interpreting a single LED as a “curtain lamp.”

Finally, Petitioner's new argument that a curtain lamp could have one slave control unit with just one LED makes no sense. Paper 30 at 8. There would be *no reason* to have both a master control unit and a slave control unit to operate just a single LED, rendering most of the components in the '546 patent superfluous. This argument simply exposes the absurdity of Petitioner's argument that a single LED can constitute the claimed curtain lamp.

Respectfully submitted,

Dated: March 31, 2025

By: /Ming-Tao Yang/
Ming-Tao Yang, Reg. No. 62,019
Lead Counsel for Patent Owner

CERTIFICATE OF SERVICE

The undersigned hereby certifies that copies of the foregoing **PATENT OWNER'S REPLY POST-HEARING SUPPLEMENTAL BRIEF** was served on March 31, 2025, via e-mail directed to counsel of record for the Petitioner at the following:

John Handy
john.handy@rimonlaw.com

Jason Xu
jason.xu@rimonlaw.com

Dated: March 31, 2025

By: /Daniel E. Doku/
Daniel E. Doku
Senior Litigation Legal Assistant

FINNEGAN, HENDERSON, FARABOW,
GARRETT & DUNNER, LLP