UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

TAIWAN SEMICONDUCTOR MANUFACTURING COMPANY LTD.,

Petitioner,

v.

MARLIN SEMICONDUCTOR LIMITED.

Patent Owner.

Case No. IPR2025-01082

U.S. Patent No. 6,888,181 B1

PATENT OWNER'S REQUEST FOR DISCRETIONARY DENIAL OF INSTITUTION

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TABLE OF EXHIBITS

Exhibit	Description
2001 to 2100	RESERVED FOR PRELIMINARY RESPONSE
2101	Website: Foundries to Grow Faster than Integrated Circuits in 2016 (https://marketrealist.com/2015/12/foundries-grow-faster-integrated-circuits-2016/)
2102	Website: Ranked: Seminconductor Foundries by Revenue Share (www.visualcapitalist.com/ranked-semiconductor-foundries-by-revenue-share/)
2103	Website: US Patent No. 6,888,181 B1 – Triple gate device having strained-silicon channel – Google Patents https://patents.google.com/patent/US6888181B1/en?oq=6%2c888%2c181
2104	Declaration of Paul Ahern Regarding Patent Owner's Request for Discretionary Denial of Institution

Pursuant to Acting Director Stewart's March 26, 2025 Memorandum titled "Interim Processes for PTAB Workload Management," Patent Owner Marlin Semiconductor Ltd. ("Patent Owner") respectfully requests that the Director exercise discretion and deny institution of Petitioner Taiwan Semiconductor Manufacturing Company Ltd.'s ("TSMC") Petition for *inter partes* review IPR2025-01082 ("Petition") of U.S. Patent No. 6,888,181 (the "'181 Patent").

I. INTRODUCTION

Discretionary denial is appropriate here because there are settled expectations in the '181 patent, which was in force for 18 years, and expired in March 2024. Moreover, Petitioner has been on both actual and constructive notice of the '181 patent for many years. The original patentee was, like TSMC, another Taiwanese semiconductor foundry, United Microelectronics Corporation ("UMC"), TSMC's main competitor. UMC owned the patent for over 15 years, a time period during which TSMC learned of the patent or should have learned of it, given the size and sophistication of TSMC and UMC's nature as TSMC's main business competitor in the very technological space of the '181 patent's subject matter, semiconductor manufacturing. Further, Patent Owner itself offered Petitioner a license to the '181 patent over a year ago, which Petitioner rejected.

Accordingly, the Board should exercise its discretion and deny institution of the Petition.

II. BACKGROUND

The Patent Office issued the ’181 patent on May 3, 2005, over twenty years ago. Ex. 1001. The patent has been expired for over a year and a half, since March 2024. The ’181 Patent is titled “Triple gate device having strained-silicon channel,” and, consistent with that title, it discloses and claims innovative semiconductor structures and methods of fabrication.

The ’181 patent issued to UMC, a NYSE company based in Taiwan that has been a leading semiconductor designer and manufacturer for 45 years.

Petitioner TSMC is heavily involved in the manufacture and sale of semiconductor transistors, and has been a close and direct competitor of UMC since 1987, as explained below, and was or should have been well-aware of UMC and its semiconductor business and patent portfolio.

Patent Owner and Petitioner are involved in litigation regarding other patents, not including the ’181 patent, before the International Trade Commission, 337-TA-1443, and in the Eastern District of Texas, Case No. 2-25-cv-00171.

III. SETTLED EXPECTATIONS IN THE ’181 PATENT WARRANT DISCRETIONARY DENIAL

“Although there is no bright-line rule on when expectations become settled, in general, the longer the patent has been in force, the more settled expectations should be.” *Dabico Airport Solns. Inc. v. AXA Power ApS*, IPR2025-00408, Decision, Paper 21 (PTAB June 18, 2025). Here, the ’181 patent is expired, after

having been in force for 18 years, longer than most, if not all, patents for which institution has been denied due to settled expectations; it is indeed hard to conceive of a situation in which the expectations are more settled than here. *See, e.g., id.* ("[T]he challenged patent has been in force almost eight years, creating settled expectations."); Ex. 1001. For example, in *Cambridge Industries USA, Inc. v. Applied Optoelectronics, Inc.*, IPR Nos. 2025-00433 and -00435, Paper No. 11, at 3 (PTAB June 27, 2025), the PTAB and the Director found that there were strong "settled expectations" as to the challenged patents because they had been in force for seven and nine years, respectively, and, for that reason, discretionarily denied the petitions. Indeed, settled expectations have been found in patents as little as three years old. *Samsung Electronics Co., Ltd. v. GenghisComm Holdings, LLC,* IPR2025-00788, -789, -790, -791, -792, -793, Paper 11 (PTAB Aug. 22, 2025).

Further, Petitioner has been, or should have been, well aware of the '181 patent for many years. The original patentee was United Microelectronics Corporation, UMC, another semiconductor foundry located in Taiwan, like Petitioner TSMC. Ex. 1001. In 2015, for example, UMC was TSMC's main competitor. Ex. 2101 (December 2015 article stating, "Taiwan (EWT) is the largest semiconductor manufacturer, housing the world's top two foundries, namely TSMC (TSM) and UMC (United Microelectronics).") And UMC has continued to be a primary competitor to TSMC since then, and is still one of

TSMC's largest competitors—as recently as January of this year, UMC was ranked number 3 in semiconductor foundry market share, where TSMC was number 1. Ex. 2102. As a very large company, which TSMC's briefing on this issue in other IPR proceedings goes out of its way to point out in great detail, TSMC carefully monitors its competitors and their patent grants *Taiwan Semiconductor Mfg. Co. Ltd. v. Marlin Semiconductor Ltd.*, IPR2025-00847, Paper 10, at 31-46 (PTAB Aug. 15, 2025).

Indeed, TSMC has actually been aware of the '181 patent for many years through TSMC's prosecution of its own patents. The '181 patent has been cited during the prosecution of at least eighteen TSMC patent applications. Ex. 2103 (Google Patents "Cited By" entries). This actual awareness favors denial. *IRhythm Tech., Inc. v Welch Allyn, Inc.*, IPR2025-00363, -00374, -00376, -00377, and -00378, Paper 10 at 3 (PTAB June 6, 2025) ("Petitioner's awareness of Patent Owner's applications and failure to seek early review of the patents favors denial and outweighs the above-discussed considerations.").

The '181 patent has also been commercialized, at least in the form of licensing. For example, Intel Corporation and Samsung Electronics Co., Ltd. have taken licenses to the '181 patent. Ex. 2104 (Ahern Declaration). Further, a license to the '181 patent was offered to TSMC over a year ago by Patent Owner. *Id.* TSMC refused and delayed filing IPRs until it got sued on other patents by Patent

Owner. *Id.* Thus, not only has TSMC been on notice of the '181 patent (which is not required for settled expectations to attach), but the patent has been the subject of actual licenses as to others and attempted licensing efforts as to TSMC specifically.

Petitioner may argue that Patent Owner acquired the '181 patent only four and a half years ago and therefore has not owned it long enough to acquire settled expectations in it, as it has argued in other proceedings. *See, e.g.*, IPR2025-00847, Paper 10, at 26-30. But that is not the proper analysis, and Petitioner has pointed to no cases where the fact that a patent has been sold has been found to be relevant. IPR2025-00847, Paper 10, at 26-30. Indeed, as explained below, the decisions on this matter confirm that it is irrelevant. *DataDome S.A. v. Arkose Labs Holdings, Inc.*, IPR2025-00693, Paper 13 (PTAB Aug. 14, 2025) (denying institution due to settled expectations where patent owner acquired the challenged patent a few years prior). The settled-expectation analysis concerns the age of the patent, among other things, not the length of ownership by any individual entity. This is seen not only in the analysis itself in the decisions issued by the Acting Director, but in the rationale for why actual notice of a patent is not required for settled expectations to attach: the patent is published and made available for interested entities to learn about it. Acting Director Stewart has held that "patent applications (after 18 months) and issued patents are almost always publicly available to provide notice

to the public, other inventors, competitors, and commercial interests . . . *[a]s such*, actual notice of a patent or of possible infringement is not necessary to create settled expectations." *Dabico*, IPR2025-00408, Paper 21 at 3. There is no relevance in that rationale as to who owns the patent at any given moment or how long they have owned it. Instead, the focus is on the patent itself, the fact that it has been in force for a sufficient amount of time, and that it is sufficiently available to interested entities.

This follows the general principle that the full set of rights as to a patent, as with a piece of property generally, gets transferred with the sale of the patent or other property. Entities purchasing patents expect that the settled expectations of the prior owner, if they exist, carry forward and that the purchaser steps into the shoes of the prior owner, acquiring the same expectations the prior owner had at the time of transfer. Moreover, as a public policy matter, it would hurt the transferability of patents if selling a patent lessens the rights that the patent owner has to something less than the full set of rights, as it would diminish the patent's value.

Indeed, in cases following nearly the same exact fact pattern of this case, discretionary denial has been granted. In *DataDome S.A. v. Arkose Labs Holdings, Inc.*, IPR2025-00693, Paper 13, decided August 14, 2025, just as here, the patents were owned by an entity that acquired them a few years prior, not the original

patentee. *Id.* In total, one of the patents had been in force for 10 years, "creating strong settled expectations for Patent Owner." *Id.* Further, just as Petitioner argues here, in that case, "Petitioner argue[d] that ***it*** had settled expectations that the challenged patents would not be asserted against it because the previous patent owner never asserted the challenged patents." *Id.* However, in that case, just like here, Patent Owner sent letters identifying the challenged patent and offering a license, an offer that was rejected by the petitioner. *Id*. The Acting Director found that "Petitioner's assertions of settled expectations do not overcome Patent Owner's strong settled expectations" and the petition was discretionarily denied. The same result is appropriate here.

Nor is it dispositive that the patent is not in litigation elsewhere and thus there is no trial date regarding validity. For example, in *Intel Corp. v. Proxense, LLC*, IPR Nos. 2025-00327, -00328, and -00329, Paper No. 12 at 2 (PTAB June 26, 2025), the PTAB and the Director discretionarily denied the three petitions—even though there was no underlying district court trial date—because there were settled expectations as to the three challenged patents since they had been in force for nine years and, therefore, inter partes review was not "an appropriate use of Board resources."

The cases Petitioner has cited in other proceedings do not support referral to a panel. The decision in *Anthony Inc. v. ControlTec, Inc.*, IPR2025-00559, Paper

12 (July 16, 2025), did not discuss settled expectations at all, and found that the Examiner specifically made "a material error" during prosecution, not alleged or shown in the Petition here. The decision in *Tesla v. Navy*, IPR2025-00341, Paper 12 (PTAB June 13, 2025) and *Tesla v. Intell. Ventures II*, IPR2025-00339, Paper 10 (PTAB June 13, 2025), did not discuss settled expectations and instead focused on the fact that "Petitioner has filed a broad stipulation" and "the district court proceeding involves eleven patents spanning nine different families that involve a diverse range of subject matter," and "the Board previously determined there was a reasonable likelihood that similar claims of an ancestor patent were unpatentable in three separate proceedings with respect to some of the challenged patents in these proceedings," none of which is argued or shown in the Petition here. In the decision in *Amazon.com, Inc. v. NL Giken, Inc.*, IPR2025-00250, IPR2025-00407, Paper 14 (PTAB May 16, 2025), there was no discussion of settled expectations. The decision in *Savant Techs. LLC v. Feit Elec. Co.*, IPR2025-00260, Paper 16 (PTAB June 12, 2025), did not discuss settled expectations, either, and instead focused on the question of repeated petitions on different claims, which the Acting Director found not concerning due to the timing of Patent Owner's assertion of additional claims in litigation.

IV. COMPELLING ECONOMIC, PUBLIC HEALTH, AND NATIONAL SECURITY INTERESTS FAVOR DENIAL

The settled expectations as to the ’181 patent, described above, warrant denial of the petition. As explained above, that result is important for economic policy interests in creating transparent, predictable, and consistent markets for patents.

TSMC may argue, as it has in other proceedings, that its importations of chips into the U.S. is a large and important operation, and as an entity it files a lot of patent applications and spends a lot of money in the U.S., and thus it should be afforded special treatment by the PTAB and should be permitted to seek invalidation of a patent for which settled expectations has attached. IPR2025-00847, Paper 10, at 31-46.

The Acting Director recently found these arguments not supporting referral to a panel. *Taiwan Semiconductor Mfg. Co. Ltd. v. Marlin Semiconductor Ltd.*, IPR2025-00848, Paper 11, at 3 (PTAB Sept. 3, 2025). Moreover, TSMC in fact has it backward in every regard. Marlin is a small company whose lawsuit against TSMC protects the U.S. computer chip industry from importation of the infringing products that TSMC is attempting to bring into the country to illegally compete with the products of U.S. companies. Here, Patent Owner offered TSMC a license to the ’181 patent but TSMC refused. Instead of paying a fair amount to be

permitted to practice the ’181 patent in the United States, TSMC chose to rely on a different strategy, one based on litigation tactics and ever-increasing legal expense. Since filing IPRs on the five patents in suit in the ITC, Case Number 337-TA-1443, TSMC has sought to increase its leverage against its much smaller litigation rival by seeking *inter partes* review of five additional patents that are not in suit. *See* IPR2025-01265; IPR2025-01054; Pet.; IPR2025-01484; IPR2025-01527. These patents have been in effect ten years, nine years, eighteen years (expired), nearly eight years, and ten years respectively, and all have had settled expectations attach. The fact that Petitioner would ask the PTAB to spends its resources assessing the validity of an expired patent, U.S. 6,888,181 (IPR2025-01082), is emblematic of its scorched-earth approach to increase litigation costs on a small patentee. Petitioner should not be rewarded for this approach.

Ultimately, TSMC’s desire to import infringing products does not justify disturbing the settled expectations in the ’181 patent, and much less so when the motivation is to create litigation pressure in hopes that Patent Owner will be forced to abandon its suit in the ITC. Although TSMC has complained that the ITC case is an “attempt to block U.S. access to the most advanced TSMC technologies,” blocking infringing products from entering the country illegally is necessary to protect local industry. IPR2025-00847, Paper 10, at 31-46. Without such enforcement, infringing products will overtake U.S. development.

Regardless, the ITC matter is not directly at issue here, as the ’181 patent is not in litigation. Simply put, there is nothing that should disturb the settled expectations in the ’181 patent, and the petition should be denied.

V. CONCLUSION

For the above reasons, the Petition should be discretionarily denied.

Dated: October 21, 2025

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CERTIFICATE OF WORD COUNT

Pursuant to 37 C.F.R. §42.24(d), Patent Owner hereby certifies, in reliance on the word count of the word-processing system (Microsoft Office Word 2010) used to prepare this preliminary response, that the number of words in this paper is 2,402. This word count excludes the tables of contents, tables of authorities, certificate of word count, certificate of service, and table of exhibits.

Dated: October 21, 2025

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CERTIFICATE OF SERVICE

I certify that a copy of Patent Owner's Discretionary Denial was served by electronic mail on the following counsel of record:

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