

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

TAIWAN SEMICONDUCTOR MANUFACTURING COMPANY LTD.,
Petitioner,

v.

ADVANCED INTEGRATED CIRCUIT PROCESS LLC,
Patent Owner.

IPR2025-00828
U.S. Patent No. 7,579,227

**PETITIONER'S OPPOSITION TO PATENT OWNER'S
DISCRETIONARY DENIAL REQUEST**

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Patent Trial and Appeal Board
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I. Introduction

Referral of this petition to the Board is warranted. There will be no risk of duplicative litigation under the stipulation proffered by TSMC and United Microelectronics Corporation (“UMC”). The Examiner materially erred by overlooking multiple prior art references in the ‘227 patent’s file wrapper, one of which is presented as an anticipatory ground and one as a single-reference §103 ground in the Petition. The Applicant of the ’227 patent violated its duty of candor by concealing from the Patent Office material information. Such unfair dealing by Applicant should not be rewarded with discretionary denial. And compelling economic, national security, and other public interest considerations, and other *Fintiv* factors all make *IPR* of this patent an appropriate use of the Office’s resources, warranting the referral.

First, TSMC has proffered an extraordinarily broad stipulation removing absolutely any overlap between the *IPR* and parallel litigation by foregoing all §§102 and 103 prior art challenges upon institution. United Microelectronics Corporation (“UMC”), which seeks to join this *IPR*, proffered an equally broad and reciprocal stipulation. Instituting TSMC’s Petition provides a true alternative to adjudicate invalidity, and the Board, with its specialized resources and efficient processes, is best suited to correct the examination errors that TSMC’s petition has identified.

Second, the Examiner materially erred by overlooking at least five prior-art references included in the '227 file wrapper—three relied upon by the Chinese and Japanese Examiners to reject pending claims of CN and JP counterparts having nearly identical language as the as-filed '227 patent's claims, and two (Kajiyama and JP-Matsumoto) later relied upon by the Japanese Examiner to reject amended claim 1 (encompassed by U.S. claim 1).

Third, the merits of TSMC's Petition are exceedingly strong with both grounds, Kajiyama (§102) and Matsumoto (single-reference §103), disclosing all limitations of challenged claims, including the limitations leading to the '227 patent's allowance. Indeed, AICP does not contest that most limitations are disclosed by TSMC's grounds.

Fourth, compelling economic, national security, and other public interest considerations all make *IPR* of this patent an appropriate use of the Office's resources—indeed, a compelling one. Secretary Lutnick explained, as a key principle of President Trump, that “national security” is the “key” reason to “bring semiconductors home.” President Trump also issued an executive order stating: “It is the policy of the United States to sustain and enhance America's global AI dominance in order to promote human flourishing, economic competitiveness, and national security.” TSMC, a trusted foundry and the world largest chip maker (providing around 90% of the world's advanced chips), is vital to the US supply

chain with a wide range of applications, including AI (e.g., NVIDIA's AI supercomputers) and military/defense applications (e.g., the F-35 stealth fighter). Given TSMC's vital and strategic contribution in the US supply chain, the Administration has a heightened interest in ensuring that the USPTO corrects its error in issuing this patent.

Finally, other factors also warrant the referral. For example, the settled expectations at stake are not just those of TSMC, but of the American manufacturers and purchasers that depend on TSMC's technology to preserve America's competitive edge in the technology arms race, including AI. The challenged claims were never asserted before AICP acquired the '227 patent in 2024. And TSMC's accused 28 nm technology launched within two years after the '227 patent issued. For more than a decade, TSMC manufactured the accused chips without incident, including for American customers who integrate those chips into their own products. As a further example, this case involved complicated semiconductor technologies that trained PTAB judges would be better suited to adjudicate invalidity.

When holistically assessing the facts, evidence, circumstances, and other considerations (detailed below), TSMC's Petition should be referred to the Board for merits determination.

II. Referral is Warranted by Petitioner’s Broad Stipulation Ensuring No Overlapping Between IPR and Litigation

TSMC and UMC provided extraordinarily broad and reciprocal stipulations to AICP. (TSMC-1053; TSMC-1084.)¹ Those stipulations provide the same offer to remove *all invalidity grounds under Sections 102 and 103*, involving any type of legally recognized prior art in the parallel district court actions, if TSMC’s Petition is instituted, making the Board a true alternative venue for invalidity.

TSMC stipulated:

If either

(a) in response to any of the petitions filed by TSMC against U.S.

Patent Nos.

- 8,198,686 (IPR2025-00682),
- 8,907,425 (IPR2025-00683),

¹ TSMC would not oppose a reply from AICP to address these stipulations. To the extent AICP reiterates its objections from related IPRs that the stipulations are untimely (*see, e.g.*, IPR2025-00682, Paper-14, 1-2), TSMC disagrees—TSMC filed its stipulation quickly in response to recent and rapid evolution in the rules of discretionary denial. *Compare Shenzen Tuozhu Tech. Co. v. Stratasy, Inc.*, IPR2025-00438, Paper-10, 3 (July 17, 2025) (referring, in part due to “a broad stipulation” going well beyond a *Sotera* stipulation), *with Shenzen Tuozhu Tech. Co. v. Stratasy, Inc.*, IPR2025-00354, Paper-11, 2-3 (June 12, 2025) (denying institution despite *Sotera* stipulation).

- **7,579,227 (IPR2025-00828),**
- 7,923,764 (IPR2025-00829),
- 8,253,180 (IPR2025-00830),
- 8,587,076 (IPR2025-00831), or
- 8,796,779 (IPR2025-00832),

the PTAB institutes *inter partes* review and does not subsequently vacate institution,

or

(b) in response to any of United Microelectronics Corporation's ("UMC") petitions against U.S. Patent Nos.

- 8,198,686 (IPR2025-01091),
- 8,907,425 (IPR2025-01090),
- **7,579,227 (IPR2025-01076),**
- 7,923,764 (IPR2025-01079)
- 8,253,180 (IPR2025-01092),
- 8,587,076 (IPR2025-01093), or
- 8,796,779 (IPR2025-01053),

The PTAB institutes *inter partes* review, which is not subsequently vacated or terminated before Final Written Decision,

then

TSMC will not pursue against any of the claims challenged in any instituted IPR proceeding identified above, in any pending litigation, the following:

- (i) the specific grounds raised in that instituted IPR proceeding;
- (ii) any other grounds that could have reasonably been raised before the PTAB in that instituted IPR proceeding (i.e., any ground that could have reasonably been raised under pre-AIA §§ 102 or 103 on the basis of prior art patents or printed publications); or
- (iii) any other invalidity ground under pre-AIA §§ 102 or 103 involving any type of legally recognized prior art, including any patent, printed publication, or system art.

(TSMC-1053, 1-2.) UMC provided equally broad and reciprocal stipulations on all asserted AICP patents. (*See generally* TSMC-1084.)

These stipulations weigh very heavily against discretionary denial. *See, e.g., Tesla, Inc. v. U.S. Sec’y of the Navy*, IPR2025-00341, Paper-12, 2 (June 13, 2025); *Tesla, Inc. v. Intell. Ventures II*, IPR2025-00339, Paper-9, 2 (May 20, 2025). They would ensure this IPR, if instituted, would be a true alternative to litigation and simplify issues in district court.

III. Referral is Warranted in View of the Material Errors by the Examiner and Strong Technical Merits of the Petition

A. Examiner Materially Erred by Overlooking Five References Relied Upon by the Chinese Examiner and Japanese Examiner to Reject Counterpart Claims (Three in the File Wrapper)

When the Examiner materially errs during prosecution, it counsels heavily against discretionary denial. During prosecution, the U.S. Examiner overlooked at least three prior-art references included in the '227 file wrapper, which were relied upon by the Chinese Examiner to reject pending claims of the CN counterpart having nearly identical language as the as-filed '227 patent's claims. The U.S. Examiner also overlooked two prior-art references from JP prosecution (one overlapping with the references relied upon by the Chinese Examiner), relied upon by the Japanese Examiner to reject all pending claims of the as-filed JP counterpart, having nearly identical language as the as-filed '227 patent claims. The U.S. Examiner also overlooked two additional references, Kajiyama and JP-Matsumoto, later relied upon by the Japanese Examiner to reject amended claim 1 (encompassed by U.S. issued claim 1). (*See* Paper-2, 16-19.)

These failures alone and collectively constitute material errors, warranting referral of the Petition to a panel for review of these errors. *See, e.g., Microsoft Corp. v. Partec Cluster Competence Ctr. GmbH*, IPR2025-00318, Paper-9, 3 (June 12, 2025) (referring to panel, despite later trial date, because "Petitioner appears to show

a material error by the Office and it is an appropriate use of Office resources to review the potential error”); *Tesla, Inc. v. Charge Fusion Techs., LLC*, IPR2025-00152, Paper-11, 2 (June 12, 2025) (referring to the panel) (“Petitioner provides persuasive evidence that the Office erred in a manner material to the patentability of the challenged claims by overlooking the teachings of [a reference during prosecution]”); *Anthony, Inc. v. ControlTec, LLC*, IPR2025-00559, Paper-12, 2 (July 16, 2025) (referring to panel and finding reference not considered during prosecution showed material error for 17 and 18 year-old patents).

The Examiner materially erred by overlooking JP-Ono. JP-Ono was included in the file wrapper of the ’227 patent, along with an Office Action rejecting the Chinese counterpart application issued during prosecution of the ’227 patent by the Chinese Patent Office. (TSMC-1002, 156; TSMC-1157.) Importantly, although Applicant represented to the Examiner that it was providing an “English Translation” of that Office Action (TSMC-1002, 72), Applicant actually filed only a partial translation (TSMC-1157), neglecting to provide a translation of the most material aspect of the Office Action—how the Chinese Examiner mapped the prior art to the claim limitations. (TSMC-1156, 18-21.) The Chinese Office Action rejected the pending claims, including a claim having identical scope to as-filed U.S. claim 1 and encompassing issued U.S. claim 1, based on JP-Ono. (TSMC-1156, 2-3, 18-21.) Similarly, the Japanese Examiner found JP-Ono disclosed the limitations

of all examined JP claims, including a claim encompassing issued U.S. claim 1. In both prosecutions, Applicant acquiesced to the Examiners' respective determinations that JP-Ono invalidated the claims, and narrowed the claims to add first and second insulating sidewall limitations².

The Examiner materially erred by overlooking Kajiyama and JP-Matsumoto³. The Japanese Examiner found Kajiyama and JP-Matsumoto discloses the features of amended JP claims. The Petition explains how Kajiyama and Matsumoto, as §§102 and 103 grounds (Paper-2, 53-61, 19-37) render the challenged claims unpatentable, as confirmed by the Japanese Examiner, and notes that the "Office erred in allowing the claims." (Paper-2, 67-68.) AICP failed to rebut Petitioner's arguments directed to material error.

Despite their significance, these references were not discussed by the U.S. Examiner during prosecution of the '227 patent. Had the Examiner relied upon these

² Neither the full translation of the CN Office Action or Applicant's acquiescing response and amendment to the CN Office Action were disclosed to the Examiner during prosecution of the '227 patent. (*see infra* §IV.)

³ The JP Examiner also rejected the as-filed JP claims over WO2004/017418 to Sakai. (TSMC-1005, 4-6; Paper-2, 16-17.) Although not discussed further in this opposition, the failure to consider Sakai was also an error.

references, the Examiner would not have allowed at least claims 1 and 5, consistent with the Chinese and Japanese Patent Office decision.

The facts surrounding Kajiyama and Matsumoto in this case are stronger than in *Anthony* and *Microsoft v. XI*, IPR2025-00253, where the Director denied the patent owner's request for discretionary denial and referred the case.

In *Anthony*, petitioner argued the Examiner materially erred by granting the challenged claims without issuing an office action. IPR2025-00559, Paper-9, 16 (May 27, 2025). Petitioner stressed the strength of one particular reference, Carter, which was not of record during prosecution of the challenged patent, explaining that “Carter is strikingly similar prior art” and operates in the same manner as the challenged patent. *Id.*, 15. The Director found “Petitioner persuasively explains the patent examiner erred by overlooking the teachings of Carter.” IPR2025-00559, Paper-12, 2 (July 16, 2025.)

In *Microsoft*, the patent owner contended the “examiner allowed the claims because, although the prior art of record taught ‘incremental searching,’ it did not teach incremental searching using two strings in the same field.” IPR2025-00253, Paper-13, 2 (June 25, 2025). The petitioner persuasively showed that the “cited prior art”, which was not of record during examination, “teach both incremental searching as well as searching using two strings in the same field.” *Id.*

The facts here are stronger than *Anthony* and *Microsoft*. First, JP-Ono, Kajiyama and JP-Matsumoto are stronger than “strikingly similar.” JP-Ono was relied upon by the Chinese and Japanese Examiner to reject claims having nearly identical limitations as the as-filed ’227 patent claims. Both Kajiyama and JP-Matsumoto were relied upon by the JP Examiner to reject the JP counterpart claims (encompassed by US issued claim 1). As detailed in the Petition, and acquiesced to by Applicant during JP prosecution, Kajiyama and JP-Matsumoto both disclose all the limitations of ’227 patent’s claim 1. (Paper-2, 17-18, 22-35 (Matsumoto), 54-61 (Kajiyama).) Additionally, as in *Microsoft*, both Kajiyama and Matsumoto explicitly disclose the limitations leading to allowance—i.e., claim elements [1E]-[1H]. (Paper-2, 29-35, 58-61; TSMC-1002, 164 (Notice of Allowance).)

In sum, the Examiner allowed the ’227 patent claims despite their lack of novelty, overlooking at least five references that either anticipate or render obvious issued claims. These material errors should be corrected by the Board and the Petition should be referred.

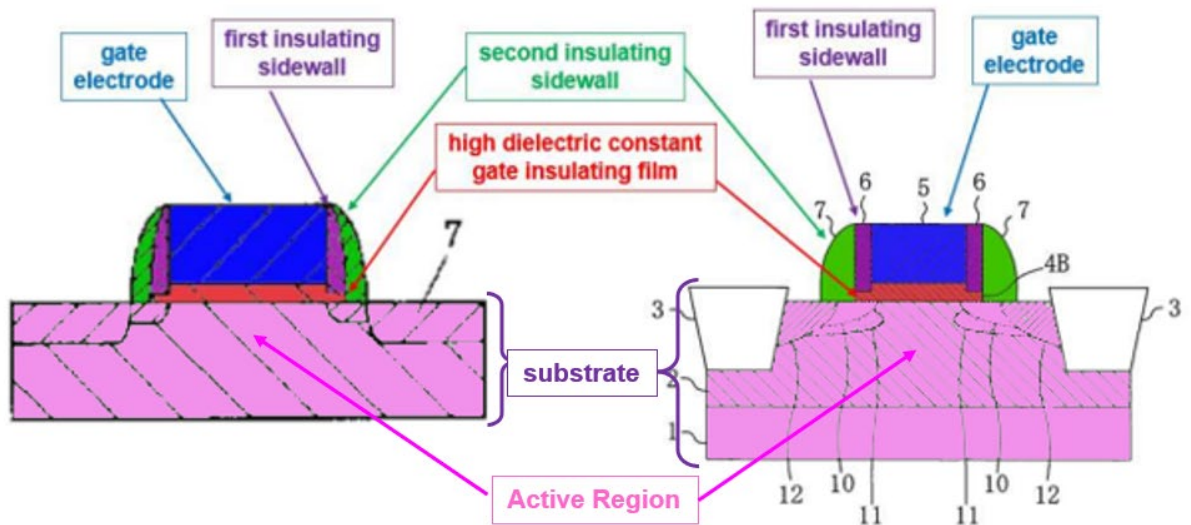
B. Kajiyama (§102) and Matsumoto (single-reference § 103) Disclose All Limitations Including the Missing Limitations That Got '227 Patent Allowed, Which AICP Does Not Dispute

TSMC files strong IPR petitions, evidenced by its stellar track record: a 94% institution rate (by challenged patent) for petitions that reach institution⁴ and a 100% win rate in FWDs.⁵ (TSMC-1086; TSMC-1106, 1.) This petition is no different.

Here, the merits are strong, well-supported, and well-reasoned, and the invalidity positions are straightforward. The grounds are based on two primary references, Kajiyama as a §102 ground and Matsumoto as a single-reference §103 ground. The §103 grounds cover all the dependent claims based on the same primary references. The strength of TSMC's grounds is demonstrated by side-by-side figures below.

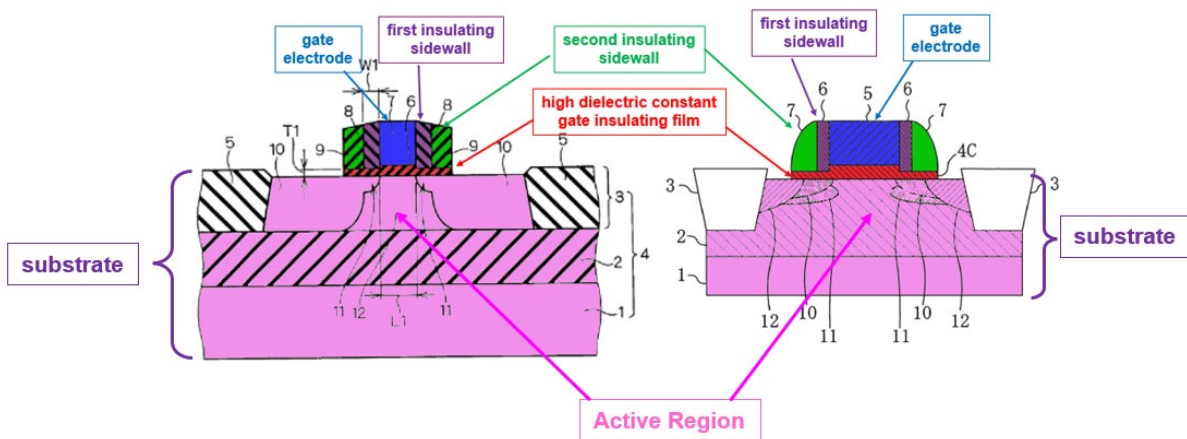
⁴ In other words, for all TSMC petitions reaching an institution decision, the Board has instituted one or more TSMC IPR on 94% of the challenged patents.

⁵ Amendment of a single claim in 42 FWDs was allowed. *See TSMC v. Godo Kaisha IP Bridge 1*, IPR2017-01249, Paper- 47, 34-39 (Dec. 20, 2017). All other challenged claims were found unpatentable.



Kajiya, Figure 1(D)

'227 Patent, Figure 2



Matsumoto, Figure 1

'227 Patent, Figure 3

Given the Petition's strong grounds, for Kajiya and Matsumoto, AICP simply repeats the fabricated argument based on "in" versus "on". Except for this fabricated argument, AICP does not dispute Kajiya and Matsumoto disclose all

the limitations of the challenged claims. (Paper-8, 33-37.) Indeed, AICP cannot contest these limitations—the limitations are clearly disclosed in both primary references.

AICP’s fabricated “in” versus “on” argument conflicts with common knowledge in the art, the ’227 patent specification, and the explicit disclosures of Kajiyama and Matsumoto.

AICP’s argument conflicts with the knowledge of a POSITA. It is well known in the art for planar transistors, the active region—which includes the channel region, source/drain regions, source/drain extensions (or LLD)—is formed *in* the substrate. (See, e.g., TSMC-1033, 76-82; TSMC-1041, 8.) It is also well known in the art that source/drain regions and extensions are formed by implanting dopant ions into the substrate. (TSMC-1003, ¶¶40-43; TSMC-1033, 76-82; TSMC-1041, 121-123.)

AICP’s argument conflicts with the ’227 patent itself. The ’227 specification describes that in “known MISFETs,” “[t]he region of the well 102 surrounded by the STI serves as an active region of the substrate 101.” (TSMC-1001, 1:34-35, Figure 16A.) The ’227 patent adds that in one embodiment, “a p-type well 2 which is to be an active region is formed” through a process whereby “B (boron) is ion implanted *into the substrate 1.*” (TSMC-1001, 13:33-35.) The ’227 patent also describes that in “known MISFETs,” extension regions 110, pocket regions 111, and source/drain regions 112 are “formed in part of the well 102” (i.e., the “active region”). (TSMC-

1001, 1:39-45.) As discussed below, both Kajiyama and Matsumoto teach the same—for example, their transistors are planar and the source/drain regions and extensions are all formed in the substrate by ion implantation, disclosing the limitation “*active region in a substrate.*” (Paper-2, 55-57 (Kajiyama), 22-24 (Matsumoto).)

AICP’s argument conflicts with the explicit disclosures of Kajiyama and Matsumoto. Kajiyama explicitly discloses an “*active region in the substrate,*” like the common knowledge in the art. Specifically, Kajiyama discloses formation of a “n-type MOSFET” starts with “a p-type Si substrate [1]” as shown in Figure 1(D). (TSMC-1011, ¶¶27-28; Paper-2, 55-56; TSMC-1003, ¶¶182-83.) Kajiyama’s Figure 1(D) further shows the “n-type LDD diffusion layer 4” and “n+ source drain diffusion layer 7” in the Si substrate 1. (TSMC-1011, ¶28; Paper-2, 55-56; TSMC-1003, ¶¶182-83.) The active region of Kajiyama—which includes the source/drain regions 7, LLD regions 4, and the channel region therebetween—is in the Si substrate 1.

Despite the clear disclosure, AICP mischaracterizes Kajiyama, arguing Kajiyama’s active region is “‘in’ the element separation layer that is ‘on’ the starting silicon wafer,” and therefore the active region is not “in” a substrate, which is simply the *opposite* of Kajiyama’s actual disclosures.

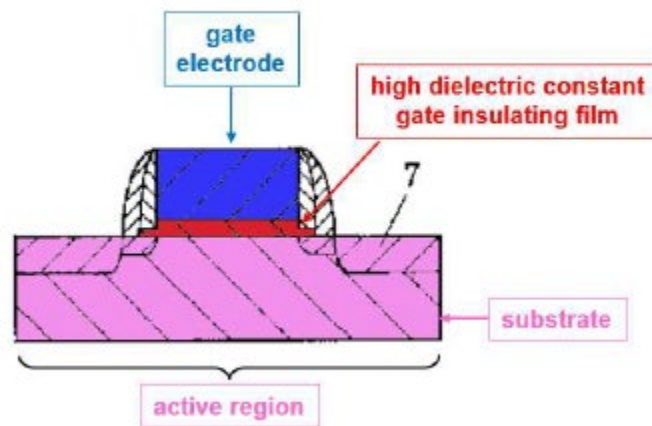
For instance, AICP argues that “Kajiyama teaches that the ‘element separation layer’ deposited on the silicon wafer is ‘a monocrystalline of type p having a (100) surface,’” and that “Kajiyama tells its reader that the ‘p-type silicon monocrystalline’ element separation layer is ‘referred to as a Si substrate.’” (Paper-8, 36.) Contrary to AICP’s arguments, Kajiyama expressly states “In Figure 4, **21 is a semiconductor substrate consisting of a p-type silicon monocrystalline (hereinafter referred to as a Si substrate)**” and repeatedly refers to “Si substrate 21.” (See, e.g., TSMC-1011, ¶¶5-6, 8 (emphasis added).) And in each of the three instances where Kajiyama mentions the “element separation layer,” it is clear that the “element separation layer” (not shown in figures) is formed on the Si substrate 1, 11, 21 (shown in Figures 1, 3, 4):

- “First, as shown in Figure 4(A), after forming an element separation layer (not shown) on the Si substrate 21 consisting of a silicon monocrystalline of type p having a (100) surface” (TSMC-1011, ¶5)
- “First, as shown in Fig. 1(A), after forming an element separation layer (not shown) on the Si substrate 1 having a (100) surface” (TSMC-1011, ¶29)
- “First, as shown in Fig. 3(A), after forming an element separation layer (not shown) on the Si substrate 11 having a (100) surface” (TSMC-1011, ¶40)

Also the above disclosures clearly teach it is the Si substrate 1, 11, 21 that “consist[s] of silicon monocrystalline of type p having a (100) surface.” (TSMC-

1011, ¶5.) Thus, the “p-type Si substrate” and the “element separation layer” are two distinct components. The latter is “equivalent to the ’227 patent’s STI (shallow trench isolation).” (TSMC-1003, ¶¶182-183; TSMC-1001, 7:25-43 (showing an active region with source/drain regions surrounded by STI structures 3).)

AICP incorrectly and incoherently argues “the element separation layer” is “referred to as a Si substrate,” and on the other hand argues “the active region . . . is ‘in’ the element separation layer.” (Paper-8, 35-36.) In reality, Kajiyama explicitly teaches what is “referred to as a Si substrate” is substrate 21, not the element separation layer. But even adopting AICP’s incorrect argument, AICP itself concedes that in Kajiyama, the active region is in the substrate. AICP’s attempt to create a dispute over nothing is, in the end, self-contradictory.



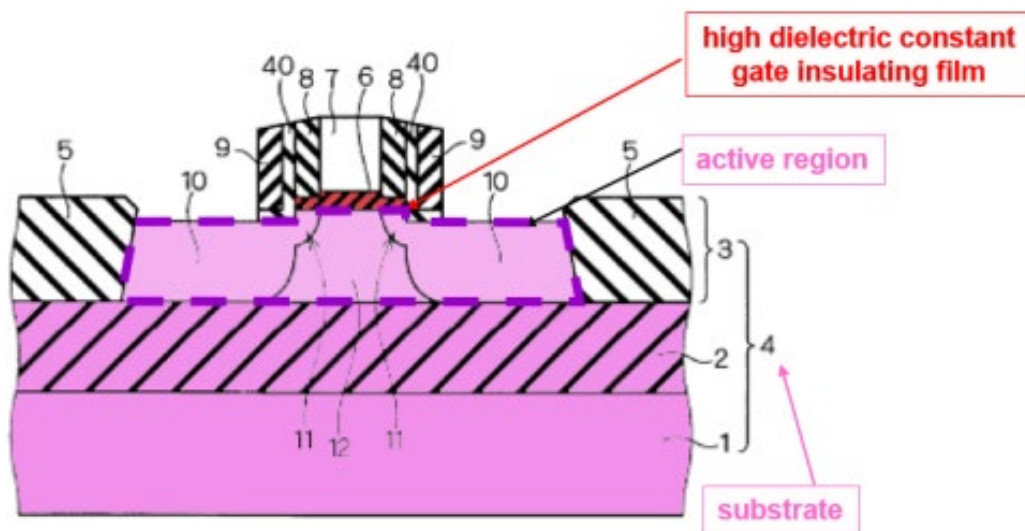
Kajiyama, Figure 1(D)

Likewise, Matsumoto discloses forming its active region in the substrate, consistent with the common knowledge in the art. Matsumoto describes that its

Figure 1 shows “[a]n SOI substrate 4 has a multi-layer structure such that a silicon substrate 1, a BOX layer 2 and a single-crystalline silicon layer 3 are stacked in the order named,” as mentioned in Dr. Lee’s declaration. (TSMC-1009, ¶¶102, 137, 140 (relating fourth embodiment to first embodiment); TSMC-1003, ¶93; Paper-2, 22-24.) Matsumoto further teaches “source/drain regions 10 are formed in the silicon layer 3 by an ion implantation process”; “[a] region between the pair of source/drain regions 10 is defined as a body region 12”; and “[e]ach of the source/drain regions 10 has an extension (or LDD when having a relatively low impurity concentration) 11 extending . . . toward the body region 12 in the upper surface of the silicon layer 3,” which are formed by “performing ion implantation.” (TSMC-1009, ¶105; TSMC-1003, ¶94; Paper-2, 22-23.) Thus, Matsumoto discloses the “device region” (i.e., the active region), which includes the source/drain regions 10, extension 11, and body region 12, is “in the silicon layer 3” of the multi-layer substrate 4. (Paper-2, 22-23.) Dr. Lee explains how Matsumoto discloses the challenged claims, including the limitation “*active region in a substrate.*” (TSMC-1003, ¶¶92-99.) AICP, however, ignores Matsumoto’s explicit disclosure and Dr. Lee’s analysis regarding Matsumoto and twists his statement in the general background to argue Dr. Lee’s position is that the claimed substrate can only be a bulk silicon substrate. (Paper-8, 33-36.) Indeed, in the general technical background section, Dr. Lee states “MISFETs are fabricated on silicon wafers that serve as the **substrate.**” (TSMC-

1003, ¶38 (emphasis in original).) All Dr. Lee's statements convey that the claimed substrate may be an SOI substrate or a bulk silicon substrate. Based on its meritless argument, AICP argues Matsumoto only discloses an active region *on*, not *in*, the substrate. (Paper-8, 35.) To the contrary, Matsumoto clearly and definitively teaches a device with the active region in the silicon layer of a multi-layered substrate, as discussed in the Petition and Dr. Lee's declaration. (See Paper-2, 22-23, TSMC-1003, ¶¶92-99.)

AICP also conveniently ignores the disclosures in other references that refer to SOI structures, like that of Matsumoto, as substrates. For example, textbooks Wolf and Campbell both discuss the use of “SOI-**substrates**” for forming transistors. (See TSMC-1034, 518-19, 564-66; TSMC-1038, 411-12 (discussing use of “silicon on insulator (SOI) substrates”).)



Matsumoto—Figure 22

Notably, a different reference by Matsumoto (JP-Matsumoto) was discussed during prosecution of the JP counterpart to the '227 patent. Matsumoto and JP-Matsumoto have overlapping disclosure, which invalidates the '227 patent claims. Yet, AICP never argued JP-Matsumoto, which also discloses SOI substrates, failed to disclose “*an active region in a substrate.*” (See TSMC-1005, 10-13, 20.) Specifically, the Japanese Examiner rejected the pending JP claim 1 (having overlapping scope to U.S. claim 1 and an equivalent “in a substrate” language⁶) based on JP-Matsumoto. (TSMC-1005, 14-15; Paper-2, 17-18.) To overcome this rejection, Applicant did not attempt to argue JP-Matsumoto disclosed an SOI substrate and thus that its active region was “**on** the substrate” rather than “**in** the substrate,” (TSMC-1005, 20.) Instead, Applicant simply narrowed the claims by adding a limitation. (TSMC-1005, 18.) Thus, Applicant acquiesced that JP-Matsumoto (using SOI substrates like Matsumoto) disclosed all the limitations of then pending JP claim 1, including “*an active region in a substrate.*” AICP’s current attempts to negate the prior acquiescence of the original patent owner, yet reap the benefits of the predecessor’s supposed expectations, cannot stand.

⁶ The Japanese claim recites “an active region **of** the substrate.” The language “of the substrate” and “in the substrate” are equivalent.

C. This Case Involves Complicated Semiconductor Technology and the Trained PTAB Judges Are Best to Adjudicate

AICP admits the district court case is “complex.” (Paper-8, 32, 43-45.) AICP also does not dispute the complexity of the underlying technology,⁷ which involves complicated semiconductor processing, or that trained PTAB judges would be better suited than a lay jury to assess validity. And AICP further concedes a proceeding to address validity “at the *same time* in a *single* proceeding that binds *all* relevant parties” would be preferable. (Paper-8, 43 (emphasis in original); *see also id.*, 15-16, 19-20. Contrary to AICP’s suggestion otherwise, that describes the Board, not the district court. Accordingly, the complexity of the case and technology both weigh *against* discretionary denial. *See, e.g., Tesla v. Navy*, IPR2025-00341, Paper-12, 2-3 (“[T]he complex and diverse litigation proceeding tip[s] the balance against discretionary denial”).

The TSMC and UMC cases are consolidated only for *pre-trial* purposes, as AICP admits. (*See* Paper-8, 43.) As such, the court must hold two separate jury trials, one for UMC and one for TSMC, and resolve two separate rounds of post-trial briefing. Each of those efforts involves seven patents related to different aspects of

⁷ POSITA would have had at least a Master’s degree in electrical engineering, physics, materials science, or related fields, and three years of work experience in semiconductor manufacturing. (*See* Paper-2, 19.)

semiconductor fabrication and design, a highly complex field. The court’s trial and post-trial work would double. The Board, however, can resolve the invalidity issues in a single proceeding for each patent⁸, which would be more efficient than having the parties and the court proceed with two different jury trials before two different juries to resolve the same invalidity issues.⁹ *See Tesla v. Navy*, IPR2025-00341, Paper-12, 2-3 (“complex and diverse litigation proceeding tip[s] the balance against discretionary denial.”); *Intell. Ventures II*, IPR2025-00339, Paper-9, 2-3 (same).

AICP’s reliance on *Nokia* is unavailing. (*See* Paper-8, 43.) Unlike this case, *Nokia*’s scheduled trial date was more than seven months before FWD. And, importantly, *Nokia* petitioners did not offer the strong, reciprocal stipulations TSMC and UMC have offered here, which are much broader than stipulations recently found sufficient to overcome other *Fintiv* factors. *See, e.g., Tesla v. Navy*, IPR2025-00341, Paper-12, 2.

⁸ UMC has sought joinder, agreeing to act as an understudy. (*See* TSMC-1094 through TSMC-1100.)

⁹ AICP incorrectly claims the “six other patents” have “closely related subject matter.” (Paper-8, 2.) They are only “closely related” in the sense that they involve MOSFETs and AICP bought them from the same entity. Each patent, however, describes and claims distinct MOSFET technology.

The complexity of this case and the considerable simplification of issues that would result from having the Board consider TSMC's Petition thus weigh against discretionary denial.

IV. Referral is Warranted by Applicants' "Unfair Dealing" Conduct

There can be no dispute that Applicant withheld material information from the U.S. Examiner during prosecution of the '227 patent. Applicant informed the Examiner that "[a] copy of the Chinese Office Action, together with an English language version thereof, is attached for the Examiner's information," and that the references including JP-Ono and Henson were cited in the Chinese Office Action, and that "the relevance is discussed therein." (TSMC-1002, 158.) However, Applicant only provided a *partial* translation that excluded the discussion of the applied references which Applicant noted was relevant, that is, the most highly material portion of that Office Action (*compare* TSMC-1157 with TSMC-1156.) Notably, Applicant acquiesced to the rejection and amended the claims, which it and failed to inform the U.S. Examiner of. If these had been disclosed, the U.S. Examiner would have rejected the U.S. claims as filed based on the prior-art references including JP-Ono and/or Henson as discussed above.

These failures to comply fully with the duty of candor further tip the balance in this case **against** exercising discretion to deny institution. An applicant's failure to comply with the duty of candor and good faith accords is just as serious a form of

“unfair dealings” as those that have been recognized as appropriate factors in the discretionary-denial decision. *See Tessell Inc. v. Nutanix, Inc.*, IPR2025-00322, Paper-14, 2 (June 12, 2025) (finding Office “may consider unfair dealings as a factor when determining whether to exercise discretion to deny institution”, such as when inventors submit sworn applications to obtain a patent and then advocate for its unpatentability).

This duty of candor has historically been characterized as including a duty of “fair dealing.” *See* MPEP § 2011.4 (Rev. 2, Apr. 1980) (referring to “the required standard of candor and fair dealing with the Patent Office” (quote and citation omitted)); *cf. Spectrum Solutions LLC v. Longhorn Vaccines & Diagnostics, LLC*, IPR2021-00847, Paper-142, 14-15 (July 11, 2024) (reviewing sanctions imposed for party’s failure to “meet its duty of candor and fair dealing in its actions before the Board”).

CN Prosecution: On June 20, 2006, Applicant filed a counterpart application with the Chinese Patent Office. (*See* TSMC-1156, 4.) The Chinese application was filed with substantially identical claims as the as-filed claims of the ’227 patent. (*Compare* TSMC-1156, 2-3, 7-8 *with* TSMC-1002, 44-48.) The Chinese Patent Office acted issuing an Office Action on March 20, 2009, over *five months* before the ’227 patent issued and over *two months* before the June 02, 2009 Notice of Allowance, that rejected the then-pending independent CN claim as lacking novelty

over JP-Ono. (TSMC-1157; TSMC-1156, 10-12, 18-21.) To overcome the rejection over JP-Ono, Applicant amended its claims on August 3, 2009, again before the issuance of the '227 patent, to include the first and second sidewall limitations. (TSMC-1156, 22-29.)

Although the Office Action and acquiescing amendment in Chinese prosecution occurred before the '227 patent issued, and despite their clear materiality and relevance to the positions taken by Applicant in U.S. prosecution, Applicant did not bring them to the attention of the U.S. Examiner. Applicant had ample opportunity to do so in the IDS filed on April 16, 2009 providing the partial translation of the first few pages of the CN Office Action. (TSMC-1002, 156; TSMC-1157, 1-3.) Moreover, procedures existed for Applicant to withdraw the case from issuance to subject material information, like its acquiescing amendment. Instead, Applicant chose to selectively disclose only a single foreign prosecution event (the Chinese Office Action) purporting to disclose to the U.S. Examiner an English translation of the Office Action rejection discussing the relevance of the prior-art references applied by the Chinese Examiner but providing only a partial translation that excluded the most material content—how the Chinese Examiner mapped the prior art to the claim limitations (*Compare* TSMC-1157 with TSMC-1156, 18-21.)

Applicant's selective, incomplete, and misleadingly characterized disclosures violated its duty of candor. "Materiality is not limited to prior art but embraces *any* information that a reasonable examiner would be substantially likely to consider important in deciding whether to allow an application to issue as a patent." MPEP § 2001.04 (internal quote and citation omitted.); *see also* MPEP § 2001.06(a) (requiring disclosure of "material prior art or ***other information*** cited or brought to [applicants'] attention in any related foreign application" (emphasis added)); *c.f.* MPEP § 2001.06(c) (requiring disclosure of "any assertion that is made during litigation and/or trial proceeding which is contrary to assertions made to the examiner," as well as "the existence and the nature of any allegations relating to validity"); MPEP § 2001.06(e) (requiring disclosure of "submissions" to other agencies, "particularly any assertion that is made which is contradictory to assertions made to the examiner"). For instance, applicants must "promptly correct the record" if they "discover[] that an earlier position taken in a submission to the USPTO... was incorrect or inconsistent with other statements made by the party." MPEP § 2001.04. And "[p]artial disclosure of material information about the prior art to the PTO cannot absolve a patentee... if the disclosure is intentionally selective." *Am. Calcar, Inc. v. Am. Honda Motor Co.*, 768 F.3d 1185, 1190 (Fed. Cir. 2014).

Applicant's unfair dealings during prosecution should not be rewarded with discretionary denial.

V. Referral is Warranted Because the Settled Expectations of Petitioner and Others Outweigh AICP's Alleged Expectations

A. TSMC and Others Have Settled Expectations that the '227 Patent Will Not Be Enforced

Although “[t]he ’227 patent has been in force since August 25, 2009,” (Paper-8, 37), that does not help AICP’s position under the circumstances. In fact, it should weigh heavily in TSMC’s favor. That is because TSMC first commercialized the accused 28 nm technology over two years after issuance of the ’227 patent. (*See* TSMC-1116, TSMC-1117.) For 13 years, no one asserted the ’227 patent against that technology.

The ’227 patent issued in August 2009, almost 15 years before AICP sued TSMC. (*Compare* TSMC-1001, cover (item 45), *with* Ex-2009, 5(Dkt. 1).) Meanwhile, plans for the accused 28nm TSMC technology were first announced in September 2008 (for 28HP) and August 2009 (for 28HPL), and the product went into volume production by at least October 2011. (TSMC-1116; TSMC-1117.) Although TSMC had manufactured chips using the accused technology continuously for 13 years, even introducing additional processes using the accused technology, none of the ’227 patent’s prior owners ever sought to enforce it against TSMC. Only when AICP acquired the ’227 patent nearly 15 years after issuance was it first enforced. Such continuous manufacture of the accused chips, with no enforcement for more than a decade, should weigh heavily against discretionary denial. It shows

TSMC—and others who implement TSMC’s accused technology—had settled expectations the ’227 patent would not apply to the accused technology. *See Intel Corp. v. Proxense LLC*, IPR2025-00327, Paper-12, 2-3 (June 26, 2025) (explaining it “weigh[s] against a patent owner’s claim of settled expectation” when “a patent may have been in force for years but may not have been commercialized, asserted, marked, licensed, or otherwise applied in a petitioner’s particular technology space”).¹⁰ When AICP acquired the ’227 patent, it assumed those expectations.

B. AICP Should Assume the Settled Expectations Created by Prior Owners

As a new owner of the ’227 patent, AICP cannot overwrite the settled expectations of TSMC and others. Analogizing to real property law, the settled expectations of others would exceed those of a new property owner under such circumstances. *See* Restatement (First) of Prop. § 459 cmt. a (1993) (“Through lapse of time old rights become obscure. A long continued use raises reasonable expectations of its continuance.”); *Anaheim Gardens, L.P. v. United States*, 953 F.3d

¹⁰ In a related IPR, AICP argued its newly minted infringement allegations are enough to demonstrate “commercialization”—by others, not by AICP or its predecessors-in-interest. IPR2025-00682, Paper-14, 4-5. This novel legal theory depends on adopting AICP’s unproven and contested infringement allegations as fact, and would imply every patent ever asserted has been “commercialized”—an absurd result.

1344, 1350-51 (Fed. Cir. 2020) (noting “the timing of the purchase and knowledge of the purchaser”—especially “a sophisticated investor”—are relevant considerations in determining whether a purchaser had reasonable investment-backed expectations” in the takings context); *Nordlinger v. Hahn*, 505 U.S. 1, 12-13 (1992) (“[A]n existing owner rationally may be thought to have vested expectations in his property or home that are more deserving of protection than the anticipatory expectations of a new owner at the point of purchase.”).

AICP did not even exist before June 2024 and thus could not have had any expectations—settled or otherwise—beforehand. When AICP acquired patents (like the '227 patent) that had never been asserted in any proceeding, with the intention of asserting them, the only reasonable expectation is that their validity would be challenged. AICP was founded June 12, 2024, only a few months before suing TSMC.¹¹ (*See* TSMC-1087; TSMC-1088.) Its sole business is to buy dubious patents and sue entities, like TSMC, that provide valuable public services and help drive the U.S. economy. That should weigh against discretionary denial.

¹¹ AICP seems to be owned by another company, called AMTL LLC. (*See* TSMC-1088.) In contrast with TSMC’s U.S. investments, well exceeding \$150 billion (*see infra* §VI), AMTL had an annual tax assessment of \$300. (*See* TSMC-1105.)

Nor did the market have any expectations the '227 patent would be meaningfully enforceable. The market's expectations would have been to the contrary given the accused 28nm technology had been in use for over a decade with no assertion of the patent.

AICP's reliance on *iRhythm* and the "advanced age" of the '227 patent is strained here because other factors, including TSMC's settled expectations, the Examiner's material error, and Applicant's unfair dealings outweigh the mere age of the patent. (*See* Paper-8, 39-40.) Moreover, not only was the '227 patent never enforced against TSMC or its customers, but it was never asserted or adjudicated in any proceeding until **two days** after AICP acquired it. (*Compare* TSMC-1089, 3 with Ex-2009, 5 (Dkt. 1).) And nothing suggests any entity has ever marked any product with the '227 patent or otherwise provided constructive notice.

When discussing settled expectations, AICP wrongly suggests TSMC should have filed its petition sooner, including before TSMC was sued, because a published application of a family member of the '227 patent was cited **by an Examiner** in 2012 during prosecution of a TSMC patent and the '227 patent's pre-issuance publication was cited **by a different Examiner** in 2023 during prosecution of yet another TSMC patent. (*See* Paper-8, 37-40.) Neither of these Examiners considered the published applications relevant enough to use in an Office Action. And importantly, AICP never alleges that TSMC was aware of the issued '227 patent. (*See* Paper-8, 38-40.)

Regardless, such an argument is unreasonable because it requires everyone, including TSMC, to check every patent application. As Judge Gilstrap correctly observed, that notion “is not too far a step from saying you knew there was this PTO in Virginia, and you should just go check everything there and see if anything there applies.” (*Intell. Ventures II LLC v. Sprint Spectrum, L.P.*, No. 2:17-CV-00662-JRG), 2019 WL 1987172, at *2 (E.D. Tex. Apr. 12, 2019) (quoting Pre-Trial Hearing Before the Hon. Judge Rodney Gilstrap, *Intell. Ventures I LLC v. T-Mobile USA, Inc.*, No. 2:17-CV-00577-JRG, at 61:3-6 (E.D. Tex. Jan. 14, 2019), ECF No. 297 (TSMC-1090, 4)). In fact, approximately 300,000 or more U.S. utility patents issue each year. (*See* TSMC-1059, 1 (data for 2009 through 2020).) Thus, no entity could realistically assess all issued patents.

In all the time since plans for TSMC’s accused 28 nm technology were first announced in September 2008 and it went into volume production (by October 2011), TSMC never knew about the ’227 patent and never had any reason to challenge it. The prior owner of the ’227 patent, however, knew of its rights and had ample opportunity to assert them against TSMC, whose activities were far from secret or *de minimis*.

Sound public policy also counsels against discretionary denial here. Entities like AICP should not be rewarded for acquiring and asserting dormant patents against technology in use far longer than they have existed. Accepting AICP’s

position would undermine the public interest. It would perversely incentivize companies to wait until their patents reach an advanced age before enforcing them, or to lie in wait to assert patents near the end of their life merely because they will be insulated from IPR. To ensure a balanced system where the PTAB improves the overall efficiency of the patent system, the settled expectations analysis must weigh the impact on both the patent owner and the public.

Under circumstances like the ones at issue here, on balance, the age of the '227 patent and the products accused in litigation should weigh against discretionary denial, not in favor of it. *See* §§II, III.2-3; *see also Anthony Inc. v. ControlTec, Inc.*, IPR2025-00559, Paper-12, 2 (July 16, 2025) (petitions involving 17- and 18-year-old patents referred to merits panel); *Tesla v. Navy*, IPR2025-00341, Paper-12 (18-year-old patent); *Tesla v. Intell. Ventures II*, IPR2025-00339, Paper-9 (14-year-old patent); *Amazon.com, Inc. v. NL Giken, Inc.*, IPR2025-00250, Paper-14 (May 16, 2025) (13-year-old patent); *Amazon.com, Inc. v. NL Giken, Inc.*, IPR2025-00407, Paper-14 (May 16, 2025) (11-year-old patent); *Savant Techs. LLC v. Feit Elec. Co.*, IPR2025-00260, Paper-16 (June 12, 2025) (11-year-old patent). A patent's age should not be automatically weighed in favor of discretionary denial without considering the full context, especially when, as here, there was "a material error in examination" and a complex litigation. *See, e.g., Eunsung Global Corp. v. HydraFacial LLC*, IPR2025-00445, Paper-14, 2-3 (July 10, 2025).

VI. *Inter Partes* Review of This Patent is an Appropriate Use of Office Resources in View of the Compelling National Security, Economic, and Public Interest Considerations

Compelling economic, national security, and other public interest considerations all make *inter partes* review of this patent an appropriate use of the Office's resources—indeed, a compelling one. The semiconductor chips manufactured by TSMC are vital to U.S. industries (from Apple and NVIDIA to Meta and Tesla); and to U.S. military (e.g., missile guidance systems and F35 stealth fighters) . TSMC is investing \$165 billion in the U.S. (an unprecedented direct foreign investment), and is a trusted partner for the U.S. supply chain—providing around 90% of the world's advanced chips (*see* TSMC-1147)—contributing to American national security, economy, innovation, and public interest, and achieving the national goals of protecting the U.S. supply chain in high-tech industries and preserving U.S. leadership in artificial intelligence (AI), as the President, the Secretary of Commerce, and the Administration more broadly have recognized.

These vital U.S. economic and national security interests and TSMC's unprecedented investments, however, are threatened by AICP with an injunction¹²

¹² In related IPRs, AICP attacks TSMC's public interest arguments as irrelevant because it allegedly will not seek injunctive relief. (IPR2025-00682, Paper-14, 5.) But that position contradicts AICP's complaint, which requests an injunction. (Ex-2001, 51.)

through an erroneously-issued patent. Unfortunately, a lay jury lacking in technical training may accord too much deference to the validity of an erroneously issued patent. Given the extraordinarily broad impact of TSMC’s technology on the U.S. national security, economy, innovation, and public interest, it is difficult to imagine a more compelling case for the use of the Board’s resources than this one.

A. Discretionary Denial Would Harm Compelling U.S. National Security, and Public Interests

As Secretary Lutnick explained in an interview from TSMC’s Arizona location in April 2025, “national security” is the “key” reason to “bring semiconductors home.” (TSMC-1123, 2.) That has been a key principle of President Trump’s agenda: “Our national security depends on bringing our supply chain home. This is especially true when we are dealing with critical technology, computer chips that are not only important to our civilian world ... but also to our military.” (TSMC-1111, 40.)¹³ “President Trump has made it a fundamental

¹³ See also <https://rollcall.com/factbase/trump/transcript/donald-trump-remarks-economic-investment-united-states-march-3-2025/#2> (President Trump stating that TSMC’s investments are “a tremendous move,” “a matter of economic security,” and “a matter of national security”); <https://rollcall.com/factbase/trump/transcript/donald-trump-speech-nrcc-republican-dinner-april-8-2025/#161> (describing TSMC as a “great company ... biggest chip company in the world” and “spending \$200 billion in Arizona, building one of the biggest plants in the world”); <https://www.youtube.com/watch?v=tGPWU3NmbVE>, at 0:05-0:23, 0:30-0:44 (praising TSMC in Arizona); <https://www.youtube.com/watch?v=hKvIyvmzybc>, at 0:30-0:44 (discussing TSMC’s Arizona investment).

objective to bring semiconductor chip manufacturing home to America,” praising that “TSMC, the greatest manufacturer of chips in the world, is coming to America with a \$100 billion investment.” (TSMC-1119.)

For national security, TSMC makes semiconductors for a wide range of “military-grade” devices used by the Department of Defense. (TSMC-1135, 5; TSMC-1115, 59 (“[T]he U.S. Department of Defense rel[ies] heavily on Taiwan foundries (particularly TSMC) to manufacture the computer chips needed for their products.”); TSMC-1136, 2-3 (TSMC is the world’s leading manufacturer of radar system chips).) Independent observers have identified the positive impact on U.S. national security and on the F-35 fighters in particular, from “the effort to have advanced semiconductor fabrication facilities onshored in Arizona.” (TSMC-1137, 2.)

TSMC offers multiple technologies, ranging from 28nm to 3nm, to power widespread military/defense applications, applications that include avionics, missile guidance, radar systems, radar electronic warfare, radiation-hardened systems, power systems, imaging for defense and aerospace, secure communications. The U.S. Air Force estimates “90% of its precision-guided munitions rely on TSMC chips.” (TSMC-1093, 4.) And a similar calculus applies to warships, satellites, and communication systems. (*Id.*) AICP asserts the ’779 patent against military-grade products manufactured by TSMC, for example,

defense-grade FPGA chips from AMD/Xilinx used for military avionics, missiles & munitions, and electronic warfare. (*See* TSMC-1153, 4.)

For a patent that never should have issued to pose such a threat against compelling U.S. national security and public interest, the Administration has a heightened interest in ensuring that the USPTO corrects its error in issuing this patent

B. Discretionary Denial Would Harm U.S. Leadership in AI and High-Tech Races

The U.S. government has recognized the importance of AI to the national security. On January 23, 2025, the President issued an executive order stating: “It is the policy of the United States to sustain and enhance America’s global AI dominance in order to promote human flourishing, economic competitiveness, and national security.” (TSMC-1129, 1.)

As the bi-partisan U.S.-China Economic and Security Review Commission in its 2024 Report to Congress explains, the U.S. is faced with fierce competition from China. (TSMC-1163, 3.) This long-term strategic competition will “shape the rapidly evolving global technological landscape” and could “transform society, create new industries ... and alter the character of warfare.” (*Id.*, 9.) The country that “secures a lead in key technologies—particularly those with first mover advantages—will tip the balance of power in its favor and reap economic benefits

far into the 21st century.” (*Id.*) AI is one of the “key emerging technology areas” over which the U.S. and China compete. (*Id.*, 10.) And China is making rapid advancements in its AI capabilities, not only to advance its economic growth, “but also for military applications such as autonomous unmanned systems, data processing, decision-making, and cognitive warfare.” (*Id.*, 11.)

TSMC is an important part of the American AI-dominance strategy. (*See* TSMC-1130 (Ansys collaboration); TSMC-1131 (Cadence collaboration).) AI applications require immense computational power, which in turn require high-performance chips. As a global leader in AI technology and the world’s largest contract chipmaker, TSMC is “steering” the AI wave that “[m]any tech giants are currently riding.” (TSMC-1126, 2.) TSMC “produces the advanced processors that Nvidia, AMD and Apple rely on to bring AI to life,” for example, NVIDIA’s next-generation Blackwell AI chips for NVIDIA’s AI supercomputers. (TSMC-1126.)

TSMC-built chips power the vast majority of electronic devices in the world, including smartphones, laptops, computer services and other devices used in cars and consumer goods. (TSMC-1124, 2.) TSMC unleashes and enables innovations by its customers, including Apple, NVIDIA, AMD, Broadcom, Qualcomm, Microsoft, Meta, Alphabet, Amazon, and Tesla, and many others, securing U.S. leadership in the high-tech competition.

Given the extraordinarily broad impact of TSMC's technology on the U.S. economy and national security, it is an appropriate use of the Board's resources to review and correct examination errors in this case.

C. TSMC Is a Top Patent Filer in the U.S., with 43,000+ Issued Patents and a Consistent Track Record of Pursuing Only Meritorious Invalidity Challenges

TSMC does not ask lightly for the USPTO to use its resources. In addition to TSMC's contributions to the U.S. economy, national security, and semiconductor supply chain, TSMC is a major innovator with deep regard for patent rights. TSMC relies on the U.S. patent system to protect its technology and its investments. It holds around 40,000 issued U.S. patents and believes in a strong patent system. Indeed, "[a]s one of the largest U.S. patent holders, TSMC strongly believes in the patent system." (TSMC-1113, 1-2.) TSMC is one of the most frequent patent filers in the U.S., with a 99% allowance rate for its U.S. applications since 2019. (*See* TSMC-1144 (allowance rate); TSMC-1113, 1.) TSMC has maintained a top-2 ranking for U.S. patent applications from 2022-2024 and has reached historical high of top-2 for U.S. patent grants in 2024. (TSMC-1145; TSMC-1146.)

But a robust patent system includes a self-correction mechanism. TSMC recognizes that some patents should not have been issued, and in those limited instances it will use the IPR process. Because of this judicious approach, TSMC has consistently prevailed in its challenges to patents that threaten to block real

innovation: 100% of its instituted IPRs reaching FWD have found the challenged claims unpatentable, and 94% of its IPR petitions have been instituted (counting by challenged patents). (*See* TSMC-1086; TSMC-1106.)

This Petition continues TSMC's trend of meritorious challenges, and referring this Petition to the Board is essential to the health of a properly functioning patent system, compliance with the Patent Office's stated mission, this country's military readiness, and furthering the Administration's priorities. The Board, with its specialized resources and efficient processes, is best suited to correct the examination errors that TSMC's petition identifies and ensuring erroneously issued patents cannot be leveraged by foreign actors to impede innovation and progress in the U.S.

D. AICP Has Not Contributed to the U.S. Economy or National Security

AICP has presented no considerations that can outweigh TSMC's many contributions to the U.S. national interests. AICP has no expectations to unsettle; its theory is that the use of TSMC's chips by U.S. customers infringes a patent that issued *after* TSMC began manufacturing chips using the accused technology. AICP just seeks to *disrupt* settled expectations by TSMC, its customers, and the extensive investment that underlies the adoption and use of TSMC chips in the United States.

VII. Referral Is Warranted by the Other *Fintiv* Factors

TSMC and UMC have stipulated away the ability to assert any §§102 and 103 challenges for any type of legally recognized prior art in district court upon institution, greatly simplifying those proceedings. TSMC was also diligent. When it became clear that then-ongoing efforts to resolve the dispute privately were not progressing, TSMC filed its Petition promptly. That was shortly after receiving infringement contentions and approximately two weeks before serving invalidity contentions. By the DI deadline, *Markman* briefing will have barely begun, and the close of fact discovery will remain approximately 2½ months away.

Although jury selection may be tentatively scheduled before the Final Written Decision (“FWD”), a very high probability suggests it will be delayed several months. The median time to trial in Judge Gilstrap’s patent cases over the past year has been 25.5 months,¹⁴ ranging up to 29.3 months, and just 1 of 14 trials began on time. Even if the scheduled date does not move, the Board still will reach a final resolution before the court. Post-trial briefing in Judge Gilstrap’s court takes, on average, over 4½ months, and resolving those motions takes 9 months after trial on average. Here, the parties would not receive final resolution from the district court

¹⁴ This is four months longer than TSMC’s schedule in the present case.

until about **8 months** after the statutory deadline for the Board's FWD. With Judge Gilstrap's case load recently doubling, those timelines are likely to expand.

Accordingly, the date currently scheduled for jury selection should not be dispositive. This is especially true when considering additional factors weighing heavily in favor of institution. (*See* §§III-V.) For example, the accused 28 technology was announced in 2008-2009 and widely entered the market in 2011. Nothing suggests any previous owner of the '227 patent ever sought to enforce it against chips made using TSMC's technology. When AICP bought the patent two days before suing TSMC, that disrupted settled expectations that a dormant, decade-old patent would not be asserted against TSMC's 13-year-old technology. Now that AICP has initiated a complex, 7-patent district court case involving sophisticated semiconductor technologies, the Board and its trained PTAB judges are better suited to evaluate the '227 patent's validity.

A. Factor 1 (Stay Likelihood): The Court Has a Record of Granting Stay Motions on Similar Facts

Factor 1, properly considered for how the district court will likely rule on a post-institution motion to stay, should weigh against discretionary denial. TSMC filed its initial stay motion April 28, 2025. (*See* Ex-2004, 13 (Dkt. 99).) It remains pending. Focusing solely on that motion, AICP argues Factor 1 favors denial because the district court often denies *pre-institution* motions. (*See, e.g.,* Paper-8, 17-19.) In

so doing, AICP improperly focuses on how the district court might rule *before* an institution decision. (Paper-8, 17-18.) That is the wrong question.

The relevant inquiry is how the court will likely rule *after* institution. In the Eastern District of Texas, when the court denies a pre-institution stay motion it routinely *provides leave to refile* after institution. *See AGIS Software Dev. LLC v. Google LLC*, No. 2:19-CV-00361-JRG, 2021 WL 465424, at *1 (E.D. Tex. Feb. 9, 2021) (calling it “th[e] Court’s well-established practice”). AICP mischaracterizes such orders as outright denials. Stay motions after institution are generally granted on timelines like this one. Moreover, because it shows diligence, TSMC’s early motion to stay strengthens its position that the case would be stayed *after* institution. *See Uniloc USA, Inc. v. Avaya Inc.*, No. 6:15-CV-01168- JRG, 2017 WL 2882725, at *2 (E.D. Tex. Apr. 19, 2017) (Gilstrap, J.) (“When considering a motion to stay, courts have adopted the filing date of the motion as the proper time to measure the stage of litigation.”); *e-Watch Inc. v. Apple, Inc.*, No. 2:13-CV-1061-JRG-RSP, 2015 WL 12915668, at *3 (E.D. Tex. Mar. 25, 2015).

Although this factor sometimes may be regarded as neutral (*see Apple Inc. v. Fintiv, Inc.*, IPR2022-00976, Paper-9, 10 (Nov. 15, 2022)), this is only true “[i]n the absence of specific evidence,” *Sand Revolution II, LLC v. Continental Intermodal Grp.–Trucking LLC*, IPR2019-01393, Paper-24, 7 (June 16, 2020) (informative). Here, we have guideposts with very similar facts.

As the court itself characterized a more advanced schedule, “[t]he most burdensome parts of the case— filing and responding to pretrial motions, preparing for trial, going through the trial process, and engaging in post-trial motions practice—all lie in the future.” *Cywee Grp. Ltd. v. Samsung Elecs. Co.*, No. 2:17-CV-00140-WCB, 2019 WL 11023976, at *6 (E.D. Tex. Feb. 14, 2019) (Bryson, J., of the Federal Circuit sitting by designation) (granting stay although “claim construction had been conducted and discovery was nearly complete”). By the DI deadline, *Markman* briefing will not have been completed, the *Markman* hearing and all the “most burdensome parts” of the case will have yet to occur. (*See also* § VII.B.)

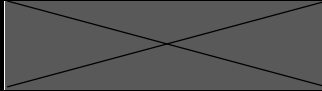
Contrary to AICP’s position, the court often stays litigation even when the FWD deadline lags the scheduled trial date by several months. *See, e.g., Resonant Sys., Inc. v. Samsung Elecs. Co.*, No. 2:22-CV-00423-JRG, 2024 WL 1021023, at *2-4 (E.D. Tex. Mar. 8, 2024) (Gilstrap, J.) (5 months); *Commc’n Techs., Inc. v. Samsung Elecs. Am., Inc.*, No. 2:21-CV-00444-JRG, 2023 WL 1478447, at *2-5 (E.D. Tex. Feb. 2, 2023) (Gilstrap, J.) (same); *Broadphone LLC v. Samsung Elecs. Co.*, No. 2:23-CV-00001-JRG, 2024 WL 3524022, at *2-3 (E.D. Tex. July 24, 2024) (Gilstrap, J.) (3 months). AICP’s reliance on *Chrimar* is unavailing. There, “[t]he Court did not receive the [stay] motion *until the eve of pretrial.*” *Chrimar Sys. v. Adtran, Inc.*, No. 6:15-CV-618- JRG, 2016 U.S. Dist. LEXIS 188613, at *17 (Dec. 9, 2016) (emphasis added). Here, institution will happen more than seven months

before the earliest possible trial date (which, as explained for Factor 2, is statistically overoptimistic).

Examining schedules the court has found to weigh affirmatively in favor of a stay reveals a stay would be very likely if IPR were instituted in the present case. *See Resonant Sys.*, 2024 WL 1021023, at *2-4 (granting stay with claim construction briefing underway, two depositions taken, close of fact discovery two months away, and IPR filed three months after invalidity contentions); *Commc’n Techs.*, 2023 WL 1478447, at *3 (“[W]ith the close of discovery, the claim construction hearing, and the trial setting all in the future, the Court concludes that this factor weighs in favor of a stay....”).

By the court’s own standards, the present case is in its early stages. The court has only ruled on pro forma motions. There have been only two depositions, both related to venue and TSMC’s pending motion to transfer, not substantive issues involving the ’227 patent. Comparing the present case’s timeline to comparable timelines before Judge Gilstrap suggests the present case’s stage favors a stay. (*Compare Ex-2008 with TSMC-1063 through TSMC-1069.*)

Stage	<i>Commc’n Techs.</i> (Stayed)	<i>Resonant Sys.</i> (Stayed)	Present Case
Service of Complaint	209 days (7 mos.) before IPR	226 days (7½ mos.) before IPR	223 days (7½ mos.) before IPR
	43 days before IPR		

INV contentions	IPR FILED		
		2 days after IPR	16 days after IPR
CC Briefing Begins	13 days before DI	20 days before DI	8 days before DI
	Decision on Institution		
CC Hearing	50 days after DI	36 days after DI	35 days after DI
Close Fact Discovery	2½ months after DI	2 months after DI	2½ months after DI
Close Expert Discovery	4 months after DI	3½ months after DI	4 months after DI
Jury Selection	7½ months after DI	7 months after DI	7 months after DI
FWD	5 months after Jury Selection	5 months after Jury Selection	5 months after Jury Selection

TSMC’s facts in this case are as strong as the ones above, if not stronger. In both of those cases, the same judge presiding over TSMC’s case found the stage of the case weighed affirmatively *in favor* of a stay. *See Resonant Sys.*, 2024 WL 1021023, at *4 (“stage in the case also *weighs in favor of a stay*.”) (emphasis added); *Commc’n Techs.*, 2023 WL 1478447, at *3. If the judge presiding over the present case found that to be true in *Communication Technologies* and *Resonant Systems*, there is no reason think he would find otherwise here, where the facts weigh at least as heavily in TSMC’s favor. *Cf. Broadphone*, 2024 WL 3524022, at *2-3 (granting stay even when IPR filed more than 10 months after complaint and seven months after service, finding stage of the case did not weigh against stay).

AICP baselessly faults TSMC for filing IPR petitions “almost eight months” or “more than eight months” after the Complaint. (Paper-8, 19.) The time for filing an IPR is not measured from the date of the lawsuit (August 1, 2024) but the date when the petitioner receives service or a service waiver is filed (Sept. 4, 2024). (*See* Ex-2009, 6(Dkt. 13).) For this Petition, that gap is just over seven months (well within the statutory deadline). TSMC filed its petitions promptly once it became clear that then-ongoing efforts to resolve the dispute privately were not progressing. At the time, TSMC had recently received AICP’s initial infringement contentions (which were deficient and supplemented in response to TSMC’s motion to strike) and had approximately two weeks to serve invalidity contentions. *See Tesla, Inc. v. Autonomous Devices, LLC*, IPR2023-01172, Paper-21, 9 (Jan. 8, 2024) (finding petitioner’s “diligence in filing the Petition ... before serving its initial invalidity contentions” weighs “against discretionary denial”). And, as the table above shows, Judge Gilstrap has granted stays in cases with more advanced schedules than the present case.

Finally, AICP argues granting TSMC’s stay motion would not stay the action as to UMC because UMC did not join that motion. (Paper-8, 13, 19-20.) The fact that UMC did not join that motion is immaterial. At the time, UMC had not yet filed IPRs and had no basis to join. For AICP to suggest UMC will not move to stay the case post-institution based on its understudy petitions is untrue. (*See* TSMC-1084,

15 (“[UMC] further stipulates that it will ... seek a stay of that Litigation pending resolution of the instituted IPR.”).) Given the overlap in patents, the similarity in petitions, the extraordinarily broad stipulations proffered by UMC and TSMC, and the fact the cases are consolidated for pre-trial purposes, a stay almost certainly would be applied to both TSMC and UMC while the Board determines the merits of the IPRs in joint proceedings.

Importantly, TSMC’s and UMC’s broad and reciprocal stipulations will eliminate absolutely all overlap between this IPR and district court. (*See* §II.) AICP’s arguments regarding UMC are thus moot.

Factor 1, properly considered for how the district court will likely rule post-institution, should weigh against discretionary denial.

B. Factor 2 (Parallel Trial Date): The Board Is Likely to Issue a Final Order Before the District Court

Factor 2 should weigh against discretionary denial because the Board will likely issue its FWD before trial begins, and certainly before the district court renders its final judgment. The case is scheduled for jury selection June 22, 2026, but is overwhelmingly likely to be delayed, based on practical considerations and historical data. For instance, eight cases are scheduled to begin jury selection on the currently scheduled trial date, with 19 cases scheduled to begin jury selection throughout June 2026. (*See* TSMC-1150.)

AICP incorrectly argues “the June 2026 trial date is consistent with statistical evidence... showing that cases pending before the presiding judge (Judge Gilstrap) that went to trial in the previous year have a median time-to-trial of 672 days (about 22 months),” which would result in a trial date of “June 2026 (the same as the currently scheduled trial date).” (Paper-8, 22.) First, AICP’s calculation uses irrelevant and inapplicable data—for 31 of its 37 cases, its median calculation uses *canceled* trial dates, not actual or even rescheduled trial dates. (Ex-2027, 1.) Twenty-one of these cases did not even hold trial during the specified time (more than half settled, one stayed for IPR, and six are still delayed). (TSMC-1152, 3.) Of the 16 cases that actually held trial, four are non-patent cases. Moreover, AICP’s data is underinclusive, missing at least four patent cases.

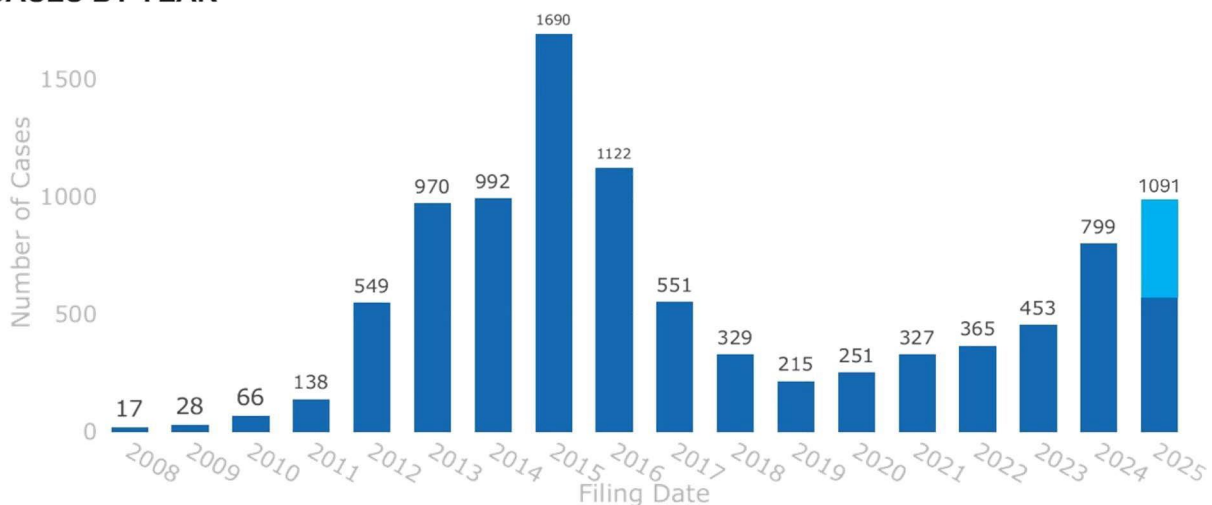
In reality, looking more specifically at Judge Gilstrap’s patent jury trials over the past year, the median time to trial is significantly longer—25.5 months, which places the trial date for this matter (approximately September 15, 2026) within two months of FWD. (*See* TSMC-1152, 3.) This schedule is consistent with the latest official statistics from the United States Courts, showing a median time to trial in the Eastern District of Texas of 25.9 months. (TSMC-1055, 35.)

Additionally, except for one case, *all* of Judge Gilstrap’s patent jury trials were delayed—half by four months or more, with a maximum of seven months and a mean and median of 3.8 months. (*See* TSMC-1152, 3.) Here, the historically

average delay would put trial only a month before FWD. A delay of at least 4.7 months, as occurred in one third of Judge Gilstrap’s recent patent jury trials, would put the trial date *after* FWD. (See TSMC-1152, 3.) Statistically, therefore, the Board may reach a resolution before trial begins.

These delays are almost certain to worsen by the scheduled jury selection date here. The trials above involve cases filed in 2022 and 2023. *Id.* The present case was filed in late 2024. As indicated below, the district court’s case filings before Judge Gilstrap have essentially *doubled* since 2022 and 2023—a continuing trend, with over 1000 cases projected by the end of 2025. (See TSMC-1057 (showing 568 cases as of July 18, 2025 and projected total of 1091).)

CASES BY YEAR



TSMC-1057 (modified to include prorated 2025 projection)

Delays are thus likely to lengthen compared to last year’s median of nearly four months and maximum of seven months. (See TSMC-1152, 3.)

Focusing solely on the scheduled trial date also fails to account for litigation realities. The Board's decision becomes immediately appealable to the Federal Circuit, whereas a jury verdict is followed by post-trial briefing and orders further delaying resolution by many months. Since 2023, post-trial briefing alone in Judge Gilstrap's court has taken, on average, more than 4½ months. (*See* TSMC-1058.) And obtaining an order resolving post-trial motions has taken, on average, nine months after trial. (*See* TSMC-1058.) Accordingly, it would be incredibly unlikely for the district court to issue a final, appealable order before the Board does. The Board, not the district court, can provide the most expeditious resolution here.

AICP further assumes UMC's understudy petition will not be joined, presenting this as a basis to argue further delay. (*See* Paper-8, 15.) But if UMC is joined, as it has requested, both proceedings would proceed on the same schedule, adding no delay whatsoever. (*See* TSMC-1094 through TSMC-1100.) Even if not, UMC's stipulation still would preclude it from asserting §§102 and 103 grounds if TSMC's Petition is instituted. (*See generally* TSMC-1084.)

AICP's forum shopping should not be rewarded. AICP could have sued TSMC in Arizona, for example, where TSMC has spent many billions of dollars to build U.S. manufacturing facilities and employ engineers, but that would not have allowed AICP to game the *Fintiv* analysis. (*See* TSMC-1055, 65 (38.3-month time to trial in D. Ariz.)) AICP instead filed in a district with a reputation for fast trial

schedules but no meaningful connection to the dispute (as set forth in TSMC’s motion to transfer). Such forum shopping should not be rewarded by immunizing the ’227 patent from Board scrutiny. Members of Congress and the Chief Justice of the Supreme Court have raised concerns about such forum-shopping practices, including concerns that *Fintiv* Factor 2 “credit[s] unrealistic trial schedules” and will “create[] harmful incentives for forum shopping.” (TSMC-1060, 1; *see also* TSMC-1061, 1-2 (noting concerns about concentration of patent cases in certain venues because of patent owner incentives); TSMC-1062, 5.) The main purpose of Factor 2 is to ensure efficiency and avoid duplicative efforts. Given TSMC’s and UMC’s broad, reciprocal stipulations here, there can be no repetition or inefficiency: the IPR would be a true alternative, as Congress intended. *See* 77 Fed. Reg., 48612 (Aug. 14, 2012) (“The purpose of the AIA and this final rule is to establish a more efficient and streamlined patent system that will improve patent quality and limit unnecessary and counterproductive litigation costs.”).

Regardless, Factor 2 is not dispositive and must be weighed together with other factors. Discretionary denial has been withheld in cases with scheduled trial dates predating the FWD by as much or more than the present case. *See Shenzhen Tuozhu Tech. Co. v. Stratasy, Inc.*, IPR2025-00531, Paper-10, 2 (4-month difference); *Padagis US LLC v. Neurelis, Inc.*, IPR2025-00464, Paper-12, 2 (7-month difference) (July 16, 2025); *Intell. Ventures II*, IPR2025-00339, Paper-10, 2

(1.5-month difference); *ParTec*, IPR2025-00318, Paper-9, 3 (1-month difference).

The circumstances here warrant the same outcome, especially since TSMC has entered a stipulation far broader than in any of these exemplary cases. *See, e.g., Tesla v. Navy*, IPR2025-00341, Paper-12, 2-3 (broad stipulation outweighed other *Fintiv* factors, including trial date).

**C. Factor 3 (Investment in Parallel Proceeding at the DI Deadline):
District Court Case Will Be In Its Early Stages, With the
Markman Hearing After the DI Deadline**

“If, at the time of the institution decision, the district court has not issued orders related to the patent at issue in the petition, this fact weighs against exercising discretion to deny institution.” *Fintiv*, IPR2020-00019, Paper-11, 10. Factor 3 thus weighs against discretionary denial, because DI is before the completion of claim construction briefing and the *Markman* hearing, and the court has yet to hold any hearings related to the ’227 patent.

AICP points only to the parties’ early invalidity and infringement contentions and a modicum of discovery. (*See* Paper-8, 23-26.) That is not enough. *See SAP Am. Inc. v. Cyandia, Inc.*, IPR2024-01433, Paper-13, 10-11 (Apr. 7, 2025) (rejecting notion that such activities constitute significant investment and concluding Factor 3 favors institution); *Kia Corp. v. Emerging Automotive LLC*, IPR2024-01167, Paper-14, 16-17 (Jan. 27, 2025) (same); *Autonomous Devices*, IPR2023-01172, Paper-21, 7-9 (same).

Meanwhile, AICP concedes fact discovery, expert discovery, and the *Markman* hearing fall well after DI. (See Paper-8, 24-25.) Those dates confirm Factor 3 weighs ***against*** discretionary denial. See *SAP*, IPR2024-01433, Paper-13, 11 (finding Factor 3 weighs against discretionary denial where *Markman* hearing rescheduled from before DI to after DI); *Kia*, IPR2024-01167, Paper-14, 17; *Autonomous Devices*, IPR2023-01172, Paper-21, 8-9.

Comparing the timeline here to other cases with analogous timelines, as in the table below, confirms Factor 3 weighs against discretionary denial. (*Compare* Ex-2008 with TSMC-1070 through TSMC-1078.)

Stage	<i>SAP</i> (Instituted)	<i>Kia</i> (Instituted)	<i>Pictiva</i> (Instituted)	Present Case
Service of Complaint	219 days (9½ mos.) before IPR	294 days (10 mos.) before IPR	287 days (9½ mos.) before IPR	223 days (7½ mos.) before IPR
INV contentions	72 days before IPR	109 days before IPR	98 days before IPR	
	IPR Filed			
				16 days after IPR
CC Briefing	47 days before DI	53 days before DI	72 days before DI	8 days before DI
CC Hearing			30 days before DI	
	Decision on Institution (DI)			
CC Hearing	17 days after DI	18 days after DI		35 days after DI
Fact Discovery Close	1 month after DI	1 month after DI	4 <i>days</i> after DI	2½ months after DI

Stage	<i>SAP</i> (Instituted)	<i>Kia</i> (Instituted)	<i>Pictiva</i> (Instituted)	Present Case
Expert Discovery Close	2½ months after DI	2½ months after DI	1½ months after DI	4 months after DI
Jury Selection	6 months after DI	6 months after DI	5 months after DI	7 months after DI
FWD	6 months after Jury Selection	6 months after Jury Selection	7 months after Jury Selection	5 months after Jury Selection

In all three cases above, Factor 3 was found to weigh affirmatively *against* discretionary denial. *See SAP*, IPR2024-01433, Paper-13, 11; *Kia*, IPR2024-01167, Paper-14, 17; *Samsung Display Co. Ltd. v. Pictiva Displays Int’l Ltd.*, IPR2024-01222, Paper-12, 7 (Mar. 6, 2025). There is no reason to find otherwise here, where the case schedule has not advanced as much.

Unlike the cases above, the DI in the present case precedes completion of claim construction briefing and precedes the *Markman* hearing by more than one month—more than in any of the cases above. The present case is much less advanced by comparison. Each of the dates for the close of fact discovery, close of expert discovery, and jury selection is 1-2½ months longer relative to the DI. If those schedules weigh against discretionary denial, the same must be true here.

Moreover, as explained for Factor 1, “the most burdensome parts of the case” still “all lie in the future” after DI. *Cywee*, 2019 WL 11023976, at *6. Comparing the present case to comparable cases before Judge Gilstrap demonstrates the court itself would agree the stage of this case is not advanced. (*See supra* §VII.A.)

AICP's arguments to the contrary lack merit. Although discovery is underway, that should not be a significant factor let alone dispositive. Discovery begins after the case management conference in every case. *See* Fed. R. Civ. P. 26(a)(1)(C). What matters, as shown above, is the significant substantive work that would remain after DI, such that investment in the parallel proceedings before DI will have been minimal. So much time remains in the schedule after DI that instituting IPR would minimize (perhaps altogether eliminate) the investment by the parties and the court necessary to resolve the disputes.

AICP does not dispute the timeline above. Instead, it cites inapposite caselaw addressing very different facts to exaggerate the degree of parallel investment.

AICP's reliance on *Chrimar* is unavailing. There, "[t]he Court did not receive the [stay] motion *until the eve of pretrial*"—the case's final stage, by which time the district court and parties had invested significant resources. 2016 U.S. Dist. LEXIS 188613, at *17 (emphasis added). Circumstances here are vastly different. AICP's reliance on *Truesight* fares no better. (*See* Paper-8, 25 (citing *Samsung Elecs. Co. v. Truesight Commc'ns LLC*, IPR2024-01477, Paper-12 (April 21, 2025)).) There, the close of fact discovery was just two weeks after DI, and the *Markman* hearing had already taken place. That is not a "comparable stage" to the facts at issue here. *Id.* By the DI in the present case, claim construction briefing will have barely started, not to mention that the *Markman* hearing will be held more than

one month after DI, and fact discovery will remain open for 2½ more months. (Ex-2008, 5.)

Nor does AICP's reliance on *Digital Doors* support its position. (See Paper-8, 24.) As AICP admits, *Digital Doors* did not even find Factor 3 favored discretionary denial. (See Paper-8, 24.) Moreover, IPR was *instituted*. See *International Business Machines Corp. v. Digital Doors, Inc.*, IPR2023-00973, Paper-10, 25 (Jan. 19, 2024).

Moreover, TSMC has entered an exceedingly broad stipulation that weighs heavily against discretionary denial. See, e.g., *Tesla v. Navy*, IPR2025-00341, Paper-12, 2. If instituted, TSMC's IPR would minimize, or even eliminate, the investment of resources in the parallel proceeding. In contrast, the *Truesight* petitioner entered only a basic *Sotera* stipulation (see IPR2024-01477, Paper-3, 89); the *Digital Doors* petitioner entered only a *Sand Revolution* stipulation (see IPR2023-00973, Paper-2, 74); and the *Chrimar* petitioner offered no stipulation.

AICP's complaint about TSMC's alleged "delay" of "more than eight months" rings hollow. (See Paper-8, 25.) The time for filing an IPR is not measured from the date of the lawsuit but from the date when the petitioner is served or a service waiver is filed. Here, the timespan between the service waiver and filing was just over seven months. (See Ex-2009, 6(Dkt. 13); see also, e.g., *Tesla v. Navy*, IPR2025-00341, Paper-12 (petition filed seven months into statutory deadline

referred to panel).) TSMC filed its petition after realizing that then-ongoing efforts to resolve the dispute privately were not progressing. At that time, TSMC had just received infringement contentions and had approximately two weeks to serve invalidity contentions.

AICP’s “delay” argument also seems to fault TSMC for making good-faith efforts to explore a potential resolution of the parties’ disputes that would obviate the need to file IPR petitions. TSMC’s counsel reached out to AICP on December 16, 2024—four months before filing this Petition. (*See* TSMC-1082, ¶2.) AICP responded nearly two months later, on February 6, 2025. (*Id.*, ¶3.) After reviewing TSMC’s positions and materials, AICP’s principals came to Taiwan to meet TSMC’s principals on March 12, 2025. (*Id.*, ¶4.) The parties held six teleconferences thereafter to continue their discussions. (*Id.*, ¶5.) With then-ongoing efforts to resolve their dispute not progressing, TSMC filed this Petition.

Encouraging patent settlement negotiations can free up judicial and agency resources, provide a quicker path to resolving disputes between parties, and avoid lengthy and costly litigation. *See, e.g., Asahi Glass Co., Ltd. v. Pantech Pharms., Inc.*, 289 F. Supp. 2d 986, 991 (N.D. Ill. 2003) (“The general policy of the law is to favor the settlement of litigation, and the policy extends to the settlement of patent infringement suits.”). To hold against TSMC, for purposes of discretionary denial, the time spent negotiating settlement would undermine sound public policy for

encouraging parties to resolve disputes privately and conserve governmental resources. TSMC's laudable conduct should weigh *against* discretionary denial here, not become a cudgel that discourages good-faith dispute resolution efforts.

AICP also incorrectly attempts to weigh the volume of invalidity contentions against institution, claiming it increases the amount of investment in the district court.¹⁵ (*See* Paper-8, 5-6, 24.) This argument misses the point. In a case involving seven patents like the present case, the volume of invalidity contentions is not out of the ordinary. And such complexity underscores how much IPR would minimize, or even eliminate, the investment in the parallel proceeding. (*See supra* §II.) Thus far, such activities have not been found relevant. *See Cambridge Indus. USA, Inc. v. Applied Optoelectronics, Inc.*, IPR2025-00437, Paper-10, 2-3 (June 26, 2025) (referred without mentioning invalidity contentions served 10½ months before DI¹⁶); *SAP*, IPR2024-01433, Paper-13, 10-11; *Kia*, IPR2024-01167, Paper-14, 16-17; *Autonomous Devices*, IPR2023-01172, Paper-21, 7-9.

Nor can AICP rely on its infringement contentions. As a plaintiff, AICP must prepare infringement contentions regardless of whether IPR is instituted. That is typically done before filing suit to satisfy Fed. R. Civ. P. 11. Keeping those

¹⁵ Preparing contentions does not burden the court, which never receives them.

¹⁶ Here, initial invalidity contentions were served approximately 6½ months before the DI.

contentions secret and producing them as required under the court’s procedural schedule hardly demonstrates investment. That is especially true here. AICP served supplemental contentions because its initial contentions were admittedly deficient. (See Ex-2011, 1-3 (AICP admitting “omission of a claim limitation,” need to provide “additional detail,” and need to chart another product); Ex-2012, 1-3 (similar).) That demonstrates a *lack* of investment by AICP.

Even more strained, AICP argues that “by the time this proceeding would be instituted (if at all), the parties will have invested even more time and effort into the discovery process in the Lawsuits,” which is tautological in almost any parallel proceeding before IPR is instituted. (Paper-8, 7.) That does not warrant discretionary denial. Discovery in the district court, especially as it relates to invalidity, has thus far been minimal and will remain so by the DI deadline, counseling against discretionary denial.

AICP’s alleged “significant motion practice” does not help its case either. (Paper-8, 7-8.) It is hard to see how TSMC’s motion to stay or motion to transfer venue constitute significant investment. Instead, those motions would halt or transfer the litigation—saving significant investment in the litigation by the Court.¹⁷ And the

¹⁷ TSMC’s venue challenge, if successful, would change the trial schedule and the court itself, further undermining any notion of substantial investment or overlap.

court has not yet ruled on those motions. Only two depositions to date have occurred, and both related to venue, not substantive issues related to the '227 patent. The court has only ruled on pro forma motions.

Because investment in the district court has been and will remain minor by the DI, Factor 3 weighs against discretionary denial.

**D. Factor 4 (Overlap Between Petition and Parallel Proceeding):
TSMC and UMC Have Committed to Extraordinarily Broad
Stipulations to Eliminate All Overlap If Board Institutes IPR**

Factor 4 weighs strongly against discretionary denial because TSMC and UMC have committed to extraordinarily broad stipulations that would completely eliminate all overlap between this IPR and the district court for *both* parties if IPR is instituted. These stipulations render AICP's arguments regarding Factor 4 moot. (See TSMC-1053, 1-2; TSMC-1084, 13-16.)

TSMC offered a *Sotera* stipulation with its petition. Now aware of further developments in discretionary denial practice, TSMC offered a stipulation that extends well beyond *Sotera*, making this IPR an absolute alternative to district court for invalidity. It eliminates all invalidity grounds based on any patent, printed publication, or other type of legally recognized prior art (including system art). This weighs even more heavily against discretionary denial than a *Sotera* stipulation. See *Tesla v. Navy*, IPR2025-00341, Paper-12, 2 (rejecting discretionary denial request where petitioner "filed a broad stipulation" that was narrower than TSMC's).

TSMC’s invalidity contentions are immaterial. (*See* Paper-8, 26-27.) Effective upon IPR institution, the TSMC and UMC stipulations ***remove all prior art***, including the IPR grounds—meaning there would be ***no invalidity issues based on prior art*** in the district court. (*See* TSMC-1053, 1-2; TSMC-1084, 13-16.) Although AICP has speculated in related IPRs the stipulations might not prevent some hypothetical and unspecified “future litigation involving the [asserted] patent[s]” (*see, e.g.*, IPR2025-00682, Paper-14, 2), any such litigation would be combined with the existing litigation or barred by claim preclusion. *See, e.g., In re PersonalWeb Techs. LLC*, 961 F.3d 1365, 1374 (Fed. Cir. 2020) (“judgment on the merits in a prior suit bars a second suit involving the same parties or their privies based on the same cause of action.” (quoted source omitted)).

Further, AICP admits there are “additional, unasserted claims” (claims 3, 6, and 9) at issue here. (*See* Paper-8, 27.) Under Factor 4, “additional challenged claims not at issue in the district court ... weigh[] against exercising discretion to deny institution.” *Pictiva*, IPR2024- 01222, Paper-12, 8. Although AICP argues inclusion of additional challenged claims should not be entitled to weight (Paper-8, 27-28), their presence weighs against discretionary denial and provides the Board an opportunity to correct the material errors that infect all claims. (*See infra* §III.A.) AICP’s attempt to downplay the significance of these additional challenged claims thus lacks merit.

TSMC's and UMC's broad stipulations and the non-overlapping claims challenged in TSMC's Petition both contribute to the hefty weight of Factor 4 against discretionary denial.

E. Factor 5 (Whether the Parties Are Same): IPR and Litigation Parties Are Almost Always Same

The parties before the Board and district court are the same. Although Factor 5 can weigh *slightly* in favor of discretionary denial under such circumstances, it may also be neutral since it is so frequently true.

F. Factor 6 (Other Considerations):

Other considerations including strength of the petition, material error, Applicant's unfair dealings, case complexity, and TSMC's settled expectations weigh heavily *against* discretionary denial. (§§III-V.) AICP's considerations offered for Factor 6 are meritless and fail to overcome TSMC's strong showing. (See Paper-8, 32-45.)

1. No Inconsistency Exists Between TSMC's Positions in the District Court and in the Petition

AICP attempts to distract from the compelling merits of TSMC's Petition by pointing to TSMC's district court enablement contentions—an argument that is both factually and legally incorrect. (See Paper-8, 36-37.) There is no consistency between TSMC's district court lack-of-enablement contentions and its positions in the Petition.

AICP fails to apprise the Board that TSMC's lack-of-enablement contentions are based on AICP's overbroad interpretation of the claims to support its infringement allegations. (*See* Ex-2016, 281-83.) Thus, to the extent AICP's incorrect interpretations apply for infringement, TSMC contends the claims then lack enablement. The lack of enablement under AICP's interpretation of claims has no bearing on, let alone gives rise to any inconsistency with, TSMC's arguments regarding invalidity based on prior art in this Petition, as the Petition applies the claim terms and prior art in the same way a POSITA would have. Thus, contrary to AICP's arguments, the prior art presented in the Petition is enabling whereas the claims of the '227 patent under AICP's incorrect interpretations are not enabled.

2. AICP's Alleged Foreign Discovery Needs Do Not Favor Discretionary Denial and Should Be Ignored

AICP argues it "requires third-party discovery from foreign custodians in Japan, which the district court is best suited to facilitate." (Paper-8, 32; *see also id.*, 4, 40-42.) To hear AICP tell it, "accurately determining the invention date of the '227 patent" is "necessary to determine whether the Wang reference cited in the petition is prior art." (Paper-8, 32.) Yet, AICP has failed to request such discovery in district court. (*See generally* TSMC-1092.) AICP's protestation that obtaining discovery from Japan is essential is therefore implausible in view of its complete lack of demonstrated effort to obtain such information. (*See* Paper-8, 40-41.)

Regardless, AICP's suggestion that it might somehow antedate Wang, which is only a secondary reference in one ground out of the Petitioner's seven grounds, strains credulity. (*See* Paper-2, 2-3.)

AICP has no basis to allege an earlier priority date. The district court's local patent rules require a plaintiff, in its initial infringement contentions, to identify, "[f]or any patent that claims priority to an earlier application, the priority date to which each asserted claim allegedly is entitled." E.D. Tex. P. R. 3-1(e); *see also* E.D. Tex. P. R. 3-2. AICP did not identify a priority date earlier than the filing date of JP2005-227457 for any claim of the '227 patent and its brief identifies no evidence to suggest an earlier invention date. (*See* TSMC-1091, 5-6.)

Wang's filing date predates the '227 patent's priority date by over three months and its provisional date predates the '227 patent's by more than eight months. To suggest, without evidence, the Applicant might have invented the '227 patent claims that far before the application filing lacks credibility. Moreover, any evidence would now be approximately 20 years old and difficult to obtain.

AICP's alleged need for foreign discovery thus should be disregarded.

3. No Forum Has Adjudicated Any Claim of the '227 Patent.

No forum has yet considered the validity of the '227 patent. (*See* TSMC-1102.) The only cases involving the '227 patent are the two district court actions against TSMC and UMC and their respective Petitions. (*See* TSMC-1101.)

VIII. The Board's Resources Would Be Well Spent on This IPR

As noted above, TSMC has a strong record of success at the Board. The same quality challenges are present here, where TSMC's Petition clearly shows a material error made during prosecution and unfair dealings by Applicant. And simply by instituting IPR, TSMC's and UMC's broad and reciprocal stipulations guarantee a simplification of issues in district court by removing *all* prior art, including system art, from the parallel proceedings.

IX. Conclusion

For the foregoing reasons, this Petition should be referred.

Date: August 13, 2025

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CERTIFICATE OF WORD COUNT

As calculated by the “Word Count” feature of Microsoft Word for Microsoft 365, the foregoing **Petitioner’s Opposition to Patent Owner’s Discretionary Denial Request** contains 13,748 words, excluding this Certification and the following: Table of Contents, Tables of Authorities, and Certificate of Service.

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CERTIFICATE OF SERVICE

The undersigned hereby certifies, in accordance with 37 C.F.R. § 42.205, that the foregoing **Petitioner's Opposition to Patent Owner's Discretionary Denial Request** were served on August 13, 2025, via e-mail directed to counsel of record for Patent Owner at the following:

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