

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

QD OXFORD UK LIMITED, and
QUANTUM DESIGN INTERNATIONAL INC.,
Petitioner,

v.

MAYBELL QUANTUM INDUSTRIES, INC.,
Patent Owner.

Case No. IPR2026-00291
Patent No. 12,313,320

PATENT OWNER'S DISCRETIONARY DENIAL BRIEF

TABLE OF CONTENTS

I.	BACKGROUND	3
A.	Introduction to Maybell’s Dilution Refrigerator Technology	3
B.	The Parties	8
1.	Patent Owner Maybell	8
2.	Petitioners and Real-Parties-in-Interest	9
C.	Parallel District Court Litigation.....	10
II.	ARGUMENT	11
A.	Petitioners’ 7-Month Filing Delay to Avoid PGR Favors Discretionary Denial.....	11
B.	Petitioners’ Failure to Mitigate the Risk of Inefficiencies and Conflict with the District Court Favors Discretionary Denial	13
C.	Petitioners’ Attempt to “Stress Test” Alternative Claim Constructions Favors Discretionary Denial	15
D.	Several Additional Factors Also Favor Discretionary Denial	17
III.	CONCLUSION.....	20

TABLE OF AUTHORITIES

CASES

<i>All. Laundry Sys., LLC v. PayRange LLC</i> , IPR2025-00950, Paper 11 (Dir. Sept. 19, 2025)	19
<i>Apple Inc. v. Fintiv, Inc.</i> , IPR2020-00019, Paper 11 (PTAB Mar. 20, 2020)	11
<i>Apple Inc. v. Fintiv, Inc.</i> , IPR2020-00019, Paper 15 (PTAB May 13, 2020)	19
<i>Dabico Airport Sols. Inc. v. AXA Power ApS</i> , IPR2025-00408, Paper 21 (Dir. June 18, 2025)	19, 20
<i>Ericsson Inc. v. Pegasus Wireless Innovation LLC</i> , IPR2025-00084, Paper 17 (PTAB June 6, 2025)	11
<i>Ericsson Inc. v. Procomm International PTE Ltd.</i> , IPR2024-01455, Paper 15 (Dir. May 16, 2025)	13
<i>Hisense USA Corp. v. VideoLabs, Inc.</i> , IPR2025-00880, Paper 11 (Dir. Oct. 10, 2025)	18
<i>Infineon Techs. Am. Corp. v. MOSAID Techs. Inc.</i> , IPR2025-01456, Paper 27 (Dir. Mar. 17, 2026)	17
<i>Magnolia Medical Techs., Inc., v. Kurin, Inc.</i> , IPR2026-00097, Paper 17 (Dir. May 14, 2026)	11, 13
<i>Motorola Solutions, Inc. v. Stellar, LLC</i> , IPR2024-01205, Paper 19 (Dir. Mar. 28, 2025)	13
<i>Multi-Color Corp. v. Brook & Whittle Ltd.</i> , PGR2025-00025, Paper 10 (Dir. July 16, 2025)	12
<i>Murata Mfg. Co. v. Georgia Tech. Research Corp.</i> , IPR2025-00383, Paper 14 (Dir. July 29, 2025)	20
<i>MYW Semitech, LLC v. Apple Inc.</i> , 1:25-cv-00504, D.I. 68 (D. Del. Jan. 21, 2026)	18

<i>Phison Elecs. Corp. v. Vervain, LLC</i> , PGR2025-00010, Paper 14 (Dir. July 9, 2025)	14
<i>Pragmatus Mobile, LLC v. Amazon.com, Inc.</i> , 2015 WL 3799433 (D. Del. June 17, 2015)	12
<i>Revvo Techs., Inc. v. Cerebrum Sensor Techs., Inc.</i> , IPR2025-00632, Paper 20 (Dir. Nov. 3, 2025)	15, 17
<i>Samsung Elecs. Co., Ltd., v. Netlist, Inc.</i> , IPR2026-00018, Paper 20,(Dir. April 28, 2026).....	14
<i>Shenzen Tuozhu Technology Co., Ltd, v. Stratasys, Inc.</i> , IPR2025-00354, Paper 11 (Dir. June 12, 2025).....	13
<i>Tesla, Inc. v. Intellectual Ventures II LLC</i> , IPR2025-00340, Paper 18 (Dir. Nov. 5, 2025)	17

REGULATIONS

37 C.F.R. § 42.104(b)(3).....	16
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OTHER AUTHORITIES

<i>Director Discretionary Process Guidelines</i>	14
<i>Interim Processes for PTAB Workload Management</i> (Dir. Memo, March 26, 2025)	17
<i>U.S. Manufacturing and Small Business Use of AIA Proceedings</i> (Dir. Memo, March 11, 2026)	18

LISTING OF EXHIBITS

Exhibit	Description
2001	U.S. Patent No. 9,699,266
2002	U.S. Patent No. 12,320,557
2003	Letter from A. Olejniczak to R. Pritzker <i>et al.</i> (August 28, 2025)
2004	U.S. Patent App. Pub. No. 2022/0221107
2005	U.S. Patent App. Pub. No. 2023/0008279
2006	Maybell Quantum, “Maybell Quantum Announces \$25M Series A Funding Led by Cerberus,” maybellquantum.com, Mar. 4, 2024. Available: https://www.maybellquantum.com/news/maybell-quantum-announces-25m-series-a-funding-led-by-cerberus . [Accessed: May 18, 2026]
2007	Maybell Quantum, “Maybell Quantum Closes \$40M Series B Led by Addition,” maybellquantum.com, Sept. 3, 2025. Available: https://www.maybellquantum.com/news/maybell-quantum-secures-40-million-series-b . [Accessed: May 18, 2026]

Maybell is a small domestic innovator that designs and builds—in Denver, Colorado—American-made advanced dilution refrigeration technology for scientific research and quantum computing systems. Founded in 2021, Maybell has quickly become America’s leader in the quantum space. However, Maybell is being attacked by foreign companies seeking to disrupt its growing business.

In 2023, Maybell revolutionized the industry with its launch of the Maybell Fridge. Defying conventional thinking, the Maybell Fridge included a novel open-door sample access approach, providing unprecedented access to the experimental setup—a feature embodying U.S. Patent No. 12,313,320 (EX1001). Entrenched international players, such as Petitioners, quickly copied Maybell, adopting Maybell’s innovations in their products and even in their patent applications. Shortly after Petitioners began importing their competing products into the United States, Maybell sued for infringement of the ’320 patent.

Petitioners are trying to use the PTAB as leverage against a smaller U.S. manufacturer to gain an unfair advantage in the district court case in defiance of the Office’s policies and instructions. They (1) delayed filing this IPR to avoid PGR despite the Office’s preference for PGR, (2) omitted filing any stipulation that could have reduced overlap with the litigation, and (3) attacked the claims under alternative claim constructions. Maybell respectfully submits that these strategic decisions, and several other factors, all favor discretionary denial of the Petition.

Petitioners deliberately delayed filing to avoid PGR. Despite having been sued in July 2025, just two months after the '320 patent issued, Petitioners waited over seven months to file this IPR after the PGR window closed. The decision was strategic. By August 2025, less than a month after the suit was filed, Petitioners already had five of the Petition's six prior art references and communicated their intention to attack the patent's validity. Yet, with the prior art in hand, they proceeded to sit on their hands to avoid the more significant estoppel consequences of PGR, despite the Office's preference for prompt PRG filings over delayed IPRs.

IPR would waste resources. Petitioners offered ***no stipulation*** regarding the concurrent litigation between the parties. They are thus free to raise the Petition's grounds in the litigation. And, because they outwaited the PGR filing window, they are also free to rely on already-identified products and systems, regardless of the outcome here. Thus, duplication of effort is virtually guaranteed.

Petitioners seek an unfair advantage via alternative claim constructions. In an apparent attempt to stress-test different approaches, the Petition also presents several alternative claim constructions, in violation of the Office's instructions to apply a single, consistent construction. The Petition argues that the preamble "a dilution refrigerator" (1) should not be given weight; (2) alternatively, should be given its customary meaning; and, (3) as yet another alternative—to shoehorn in non-analogous prior art—should be construed to include ***non***-dilution refrigerators.

These circumstances and the additional factors discussed below strongly favor discretionary denial of the Petition.

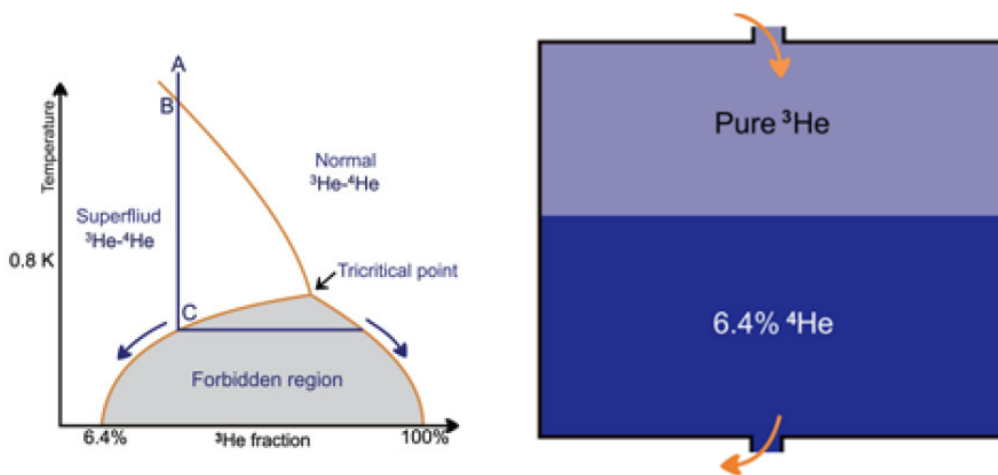
I. BACKGROUND

A. Introduction to Maybell's Dilution Refrigerator Technology

The '320 patent is directed to a novel integrated dilution refrigerator.

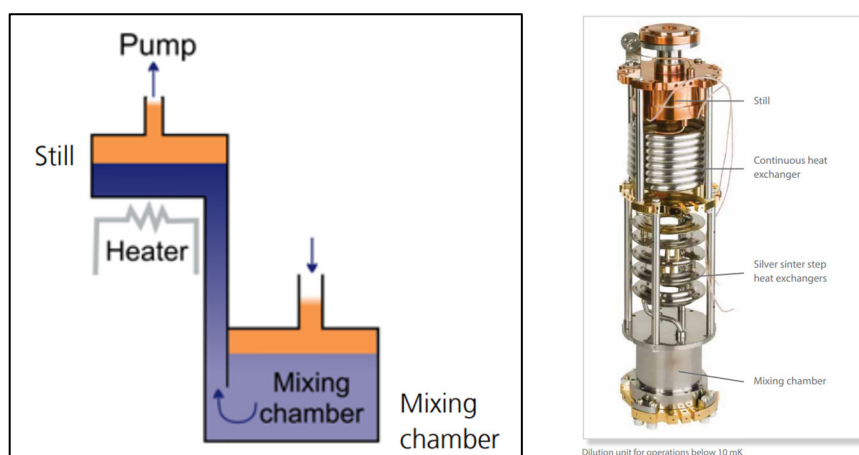
Dilution refrigeration is a specialized technique for cooling a sample (*e.g.*, a qubit of a quantum computer) to near absolute zero (~ 10 millikelvin).

Basics of dilution refrigeration. Dilution refrigeration takes advantage of the atomic differences between helium isotopes (^3He and ^4He). As illustrated by the phase diagram (below left), a mixture of ^3He - ^4He will separate into different phases (*dilute* and *concentrate*) at the critical point (*i.e.*, below 0.87 Kelvin).



EX1003, 5, 7. The above-right diagram shows separation below this critical temperature, with the ^3He -rich “concentrate” phase on top of the heavier ^4He -rich (^3He -poor) “dilute” phase. Removal of ^3He from the dilute mixture causes cooling as ^3He atoms migrate across the phase boundary to occupy vacant energy states.

To remove ^3He atoms from the diluted ^3He - ^4He mixture, a mixing chamber (the coldest part of the dilution refrigerator maintaining a phase boundary) is connected to a still, which distills the ^3He atoms from the ^4He mixture. As ^3He vapor is removed, osmotic pressure pulls ^3He atoms from the diluted ^3He - ^4He mixture in the mixing chamber. ^3He atoms in the concentrate phase in the mixing chamber then cross the phase boundary, resulting in cooling.



EX1003, 7, 10. Vital to dilution refrigerator operation is a mixing chamber at a temperature below 0.87 K so that phase separation of the ^3He - ^4He mixture occurs. These aspects distinguish dilution refrigeration from other cooling techniques.

Challenges of dilution refrigeration. The extreme temperatures of dilution refrigeration present technical challenges, *e.g.*, the need for extremely effective insulation of an experimental volume configured for ultra-low temperature cooling.

The prior art thus emphasized form factors with small volumes, generally achieved via a circular cross-section to make insulation easier. The figures below illustrate a conventional dilution refrigerator. EX2002, 1:23-2:35, Figs. 1, 2.

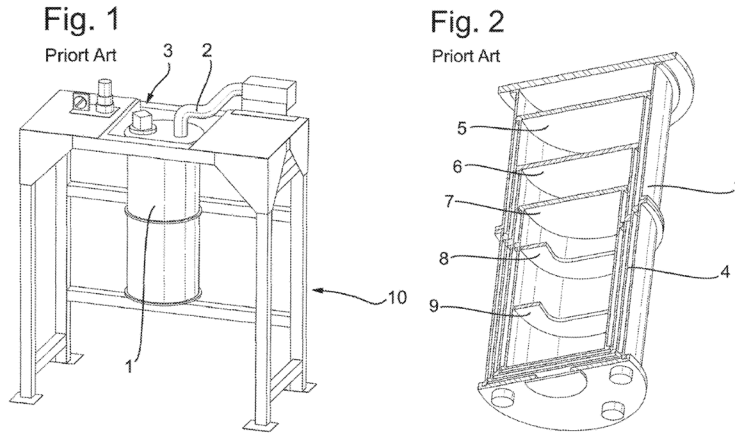


Fig. 1 shows a perspective view of a cylindrical outer vacuum chamber 1 supported by a cryostat support frame 10. Fig. 2 is a perspective view of a cross-section taken through the outer vacuum chamber 1. The pulse tube refrigerator 3 and dilution unit are not shown in Fig. 2. Thermal stages 5-9 are provided in a tiered arrangement, with each stage including a circular plate that is to be cooled to a respective temperature. Each stage is insulated by a cylindrical radiation shield 4, and the shields are arranged as a nested assembly, as is also visible in Fig. 2.

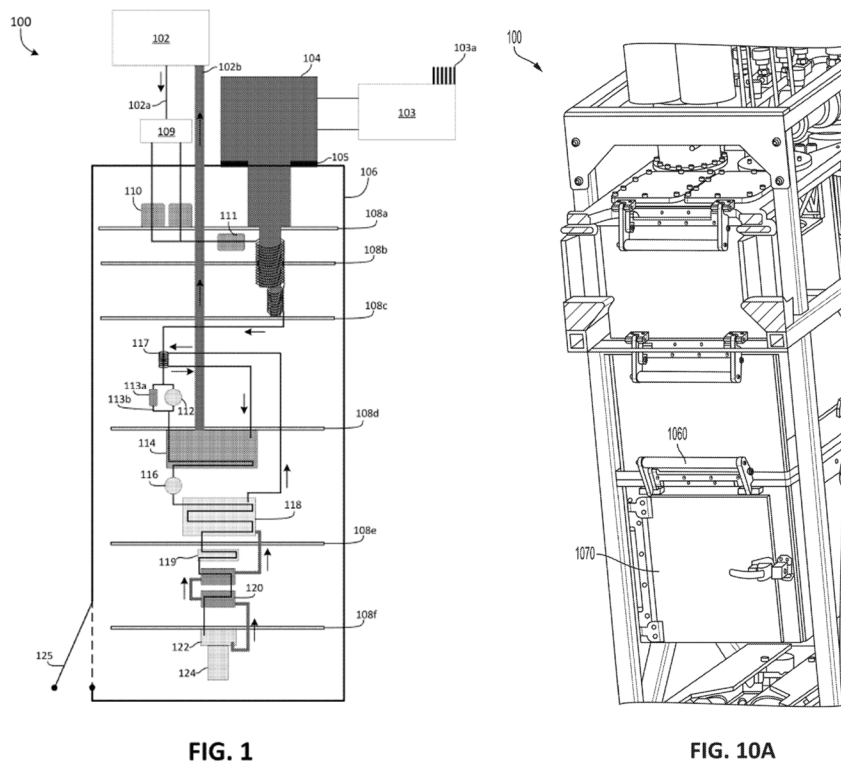
Per conventional design principles, dilution refrigerators use cylindrical dewars. EX2001, 5:5-6. Dilution refrigerators experience high pressure differentials between components, and the strength of cylinders makes them the preferred geometry for storage of pressurized contents. *Id.*, 5:6-10. Because the components of the dilution refrigerators exposed to these pressure differentials (e.g., vacuum components) are cylindrical, other surrounding or nested components also assume a cylindrical or circular shape, to address the packing and thermal performance of the system. *Id.*, 9:31-39.

As shown in Fig. 2 above, the vacuum chamber 1 and shields 4 have a cylindrical shape, consistent with conventional design principles. EX2002, 1:43-2:10. The dilution unit shown in Fig. 2 includes a still stage 7 with a still mounted thereto, an intermediate temperature “cold plate” stage 8, and a mixing chamber stage 9 with a mixing chamber mounted thereto. The stages are connected by a set of heat exchangers, and operational fluid ($^3\text{He}/^4\text{He}$ mixture) is circulated around the dilution unit during cooling.

This complex approach was developed to handle extraordinary cooling and simplify production, but Maybell’s inventors recognized that it provides limited access to the coldest experimental region, and the cylindrical shape makes poor use of space due to low packing efficiency.

The ’320 patent innovation. The ’320 patent inventors recognized that, for quantum computing to be scalable, the industry needs reliable, easy-to-use, and compact dilution refrigerators. EX1001, 4:23-27. The inventors developed dilution refrigerators with access to the experimental volume within the vacuum chamber, easy interaction with other equipment, and increased utilization of available space, as well as distributed cooling systems that can be integrated with a commercial server rack infrastructure for scaling quantum computing. *Id.*, 4:27-36, 16:49-23:2.

According to one embodiment, an experimental volume 124 (e.g., a sample stage or plate) may be thermally coupled to the mixing chamber 122 and configured to support a sample and/or quantum device. *Id.*, 12:66-13:2. Because the experimental volume 124 is thermally coupled to the mixing chamber 122, the sample and/or quantum device may be held at or near the mixing chamber temperature. *Id.*, 13:2-5.



The experimental volume 124 may be accessed when dilution refrigerator 100 is not in operation through an opening in the vacuum chamber 106 and door 125. *Id.*, 13:6-9. The door 125 may be, in some embodiments, a removable panel (e.g., secured with mechanical fasteners) or may be a hinged door openable using a clamped handle (e.g., as shown in the example of Fig. 10A above). *Id.*, 13:9-12.

Not long after Maybell’s patent filing, Petitioner Oxford Instruments filed its own patent application touting the need for a “cooling system that is better adapted for an industrial or commercial setting” to accommodate “the building of ever larger quantum computers.” EX2002, 2:30-35.

B. The Parties

1. Patent Owner Maybell

Maybell is a quintessential example of American innovation—designing and building its dilution refrigerators in Denver, Colorado. Maybell is creating infrastructure to meet the growing demands of the quantum computing industry. Its American-made systems are used by leading research institutions, national laboratories, and commercial quantum developers in the U.S. and around the world. Maybell is a small company, with less than 100 employees.

Maybell has raised more than \$65 million in funding (EX2006, EX2007) and has received contracts and grants from the Defense Innovation Unit’s (DIU) National Security Innovation Capital, DARPA, Air Force Research Lab, Fermilab, Lawrence Berkeley National Laboratory, and National Institutes of Standards and Technology (NIST). Despite its small size, Maybell has become the world’s leading innovator in quantum cryogenics, with more than 25 patents on critical quantum computing technology. Since 2022, Maybell has invested tens of millions of dollars developing dilution refrigerator products that practice the ’320 patent.

Maybell also led efforts to create America's Quantum Tech Hub. In 2023, the U.S. Department of Commerce designated Colorado's Elevate Quantum a "Regional Technology Hub." Elevate Quantum was born from the strategic vision of Corban Tillemann-Dick, co-inventor of the '320 patent and founder of Maybell. Elevate Quantum is committed to accelerating the commercialization of quantum technologies. As the government's only major place-based investment in quantum ecosystem development, Elevate Quantum promises to accelerate quantum technology throughout the region to enhance U.S. economic and national security.

The Elevate Quantum designation was part of a \$10 billion authorization in the bipartisan CHIPS and Science Act of 2022, with a goal of spurring investment in American innovation critical to U.S. economic and national security. The designation aims to drive over \$1 billion in federal funding to the region, *inter alia*, for a quantum-focused startup accelerator, and other quantum-related programs.

2. Petitioners and Real-Parties-in-Interest

Real parties-in-interest are Petitioners, Oxford NanoScience Limited, Oxford Instruments PLC, and Oxford Instruments Nanotechnology Tools Ltd. Based in Oxford, England, last year Oxford Instruments launched a dilution refrigerator product with a new form factor mimicking the invention of the '320 patent.

In 2025, Oxford Instruments agreed to sell Oxford Instruments NanoScience (including its Quantum business) to Quantum Design International Inc.

C. Parallel District Court Litigation

In July 2025, Maybell sued Oxford Instruments PLC and Oxford Instruments Nanotechnology Tools Ltd. for infringement of the '320 patent. *Maybell Quantum Indus., Inc. v. QD Oxford UK Ltd.*, No. 1:25-cv-00949 (D. Del.). Oxford Instruments PLC and Oxford Instruments Nanotechnology Tools Ltd. were initially named defendants. When the sale of Oxford's dilution refrigerator business was completed in January 2026, Quantum Design International, Inc. and newly-formed QD Oxford UK Limited were substituted as defendants. Petition, 5.

The defendants have delayed the litigation at every turn. Although they claimed they needed a lengthy 90-day extension to respond to the complaint, just a month after the case was filed, in August 2025, they sent Maybell a letter detailing 50 alleged prior art products, patents, and publications. EX2003. The letter charted the Wikus reference (Ground 5 herein) against all claims. In total, the letter included five of six references relied upon in the Petition, *i.e.*, Batey (EX1009), Dain (EX1010), PWS (EX1012), Garside (EX1007), and Wikus (EX1008).

Then, instead of answering the complaint, defendants filed a series of partial motions to dismiss. The current motion seeks to dismiss only one indirect infringement claim. Because the motion cannot result in dismissal of the case, and thus only further delays the litigation, Maybell has requested that discovery commence, but Defendants have not timely responded to Maybell's request.

Defendants’ litigation stall tactics mean the court has yet to issue a scheduling order or set a trial date. Defendants have not, however, requested a stay.

II. ARGUMENT

Petitioners’ dilatory IPR filing, lack of any stipulation to avoid overlap with the litigation, and alternative claim construction theories all violate the Office’s policies, thus supporting discretionary denial. *Magnolia Medical Techs., Inc., v. Kurin, Inc.*, IPR2026-00097, Paper 17 (Dir. May 14, 2026). In addition, several *Fintiv* factors and other considerations also support discretionary denial.

A. Petitioners’ 7-Month Filing Delay to Avoid PGR Favors Discretionary Denial

Almost immediately after the filing of the complaint in July 2025, Petitioners had their prior art in-hand and communicated to Maybell their intention to challenge the ’320 patent’s validity. EX2003. They nevertheless waited over seven months, until just after the PGR window closed on February 27, 2026, to file the present IPR petition. The Office has long cautioned would-be petitioners against delaying their filings, explaining that failing to file “expeditiously” risks discretionary denial. *Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 11, 11-12 (PTAB Mar. 20, 2020) (precedential) (“*Fintiv*”); *see also Ericsson Inc. v. Pegasus Wireless Innovation LLC*, IPR2025-00084, Paper 17, 13-14 (PTAB June 6, 2025) (denying institution where petitioner waited five months after having the relevant prior art in-hand as reflected in its invalidity contentions).

The timing of Petitioners' IPR filing suggests "they may be seeking a tactical advantage, given they were aware of the prior art asserted in their IPR petition many months before filing the petition ..." *Pragmatus Mobile, LLC v. Amazon.com, Inc.*, 2015 WL 3799433, *1 (D. Del. June 17, 2015) (Stark, J.) (denying stay). Within one month of Maybell's infringement suit, Petitioners had already compiled 50 prior art patents, products, and publications and fully charted one reference (Wikus, EX1008) against the claims of the '320 patent. EX2003. Among these were five of the six references underlying four of the five Grounds contained in the Petition, viz., Batey (EX1009), Dain (EX1010), PWS (EX1012), Garside (EX1007), and Wikus (EX1008).

The only remaining reference (Chow, EX1011) is substantially similar to another patent publication that was also identified in Petitioners' August 2025 letter (EX2004)—sharing a common filing date, co-inventors, drawings, and disclosures. Thus, less than a month after the complaint, Petitioners possessed virtually all the information they needed to prepare the instant Petition.

The delay was a tactical choice to avoid the PGR window, since PGR carries a higher institution threshold and a broader estoppel than IPR. Petitioners' gamesmanship violates the Office's expressed preference for PGR over IPR. *Multi-Color Corp. v. Brook & Whittle Ltd.*, PGR2025-00025, Paper 10, 2-3 (Dir. July 16, 2025) (precedential).

The Office has explained that PGRs are preferred “because they must be filed no later than nine months from the grant of the patent (35 U.S.C. § 321(c)), are close in time to examination, and occur before expectations in the patent rights are settled.” *Id.*, 2. Petitioners’ strategic delay to avoid the PGR window thus favors discretionary denial. *Ericsson Inc. v. Procomm International PTE Ltd.*, IPR2024-01455, Paper 15, 2-3 (Dir. May 16, 2025) (disapproving of petitioner’s failure to sufficiently “explain why it waited nearly a year to file the Petition”).

B. Petitioners’ Failure to Mitigate the Risk of Inefficiencies and Conflict with the District Court Favors Discretionary Denial

Petitioners have not filed *any* stipulation that they will forego overlapping validity challenges in the district court proceeding. Thus, Petitioners have done nothing to mitigate concerns of inefficiency or duplication of effort as required to make this IPR proceeding a “true alternative” to the district court litigation.

Magnolia, IPR2026-00097, Paper 17, 3-4; *Motorola Solutions, Inc. v. Stellar, LLC*, IPR2024-01205, Paper 19, 3-4 (Dir. Mar. 28, 2025) (vacating prior institution decision and denying institution). Exercising discretion to deny the petition in this case would reduce the inefficiencies and burdens on the parties to maintain two parallel proceedings. *Id.*; *see also Shenzhen Tuozhu Technology Co., Ltd, v.*

Stratasys, Inc., IPR2025-00354, Paper 11, 2-3 (Dir. June 12, 2025) (denying institution despite stipulation, where stipulation failed to sufficiently address inefficiencies relative to district court litigation).

As noted above, Petitioners have already identified prior art products, patents, and publications upon which they intend to rely. EX2003. By deliberately avoiding PGR, they have sidestepped PGR's broader estoppel provision.

Petitioners likely wish to preserve their ability to rely upon all of their identified prior art regardless of the outcome here. Indeed, without a *Sotera* stipulation, Petitioners are free to assert not only all of the purported product prior art, but also the very same grounds presented in the Petition.

Even where challenged patents have been in force for a short time, the absence of a stipulation to address concerns of duplicative efforts and potentially conflicting decisions “tips the balance in favor of discretionary denial.” *Phison Elecs. Corp. v. Vervain, LLC*, PGR2025-00010, Paper 14, 3 (Dir. July 9, 2025).

Of course, now it is too late for Petitioners to rely upon a stipulation. As the Director has explained, “[i]f a petitioner chooses to file a stipulation, such as a *Sotera* stipulation, they should file it as soon as practicable, so that the patent owner may address the impact of the stipulation in its discretionary denial brief.”

Director Discretionary Process Guidelines § I.D.2¹; *Samsung Elecs. Co., Ltd., v. Netlist, Inc.*, IPR2026-00018, Paper 20, 3 (Dir. April 28, 2026) (rejecting untimely prior art stipulation).

¹ <https://www.uspto.gov/patents/ptab/interim-director-discretionary-process>.

C. Petitioners’ Attempt to “Stress Test” Alternative Claim Constructions Favors Discretionary Denial

Discretionary denial is also appropriate based on Petitioners’ failure to offer a “single claim construction that best captures the true meaning of the patent claim.” *Revvo Techs., Inc. v. Cerebrum Sensor Techs., Inc.*, IPR2025-00632, Paper 20, 4 (Dir. Nov. 3, 2025) (precedential); *see also* 37 C.F.R. § 42.104(b)(3) (requiring the petition to identify “[h]ow the challenged claim is to be construed”). Flouting this requirement, Petitioners offer alternative claim interpretations for five grounds involving different prior art asserted against the same claims. Petitioners nowhere explain why competing claim constructions are necessary, and they largely ignore the intrinsic record. *See* Pet. 13-15; EX1002, ¶¶ 103-110.

Petitioners present three alternative constructions of “dilution refrigerator”:

1. *not* limiting (Pet., 14-15);
2. *if limiting*, “ordinary and customary meaning” (*id.*, 13); and
3. *broadened* to include *non*-dilution refrigerators and all “cryogenic vacuum devices and systems,” (*id.*, 10; EX1002, ¶ 109).

These are all mutually exclusive options. Obviously, the preamble cannot be both non-limiting (Option 1) *and* limiting (Option 2). Similarly, the term cannot be given its customary meaning (Option 2) *and* stretched to include devices incapable of dilution refrigeration (Option 3). Petitioners declined to pick one as required.

As discussed above, dilution refrigeration is a well-known technology. Petitioners recognize the customary meaning of a dilution refrigerator (Option 2) as “a cryostat that provides cooling based on spontaneous phase separation of ^3He and ^4He ... [w]hen a mixture of ^3He and ^4He is *cooled below $\sim 0.87\text{ K}$.*” Pet., 3 (citing EX1002, ¶¶61-62; EX1003, 5). However, Petitioners also want an alternative, so that they can rely on prior art references disclosing other types of devices that are *not* dilution refrigerators.

Option 3 attempts to shoehorn in cryostats such as the one described in Dain (Grounds 1, 3), which has an aspirational operating temperature (-150°C or 123 K) *three orders of magnitude greater* than the temperature required for dilution refrigeration (*i.e.*, below $\sim 0.87\text{ K}$). EX1010, ¶ 0008; EX1002, ¶ 77 (contending “Dain also addresses similar unmet needs in the art that the ’320 patent identifies, such as storage systems “be[ing] able to reach *the required low temperature...*”). Thus, while they avoid explicitly disclosing their construction, Petitioners are transparently interpretating “dilution refrigerator” to cover, for Grounds 1 and 3, devices that cannot perform dilution refrigeration.

Reference	Refrigeration System Disclosed
Dain	vertical door serving as the front panel of the chamber. The preferred embodiments of the ULT refrigeration system provide long term processing of biological material at ultra-low temperature, e.g. down to -90 deg.C , with an ultimate target of -150 deg.C . The embodiment provides temperature accu- EX1010, ¶ 0008. As noted above, -150°C corresponds to 123 K .

The Director has cautioned against presenting alternative constructions in a petition because the Office “is not in the business of aiding parties to stress test claims constructions to see which will prevail.” *Infineon Techs. Am. Corp. v. MOSAID Techs. Inc.*, IPR2025-01456, Paper 27, 4 (Dir. Mar. 17, 2026). By presenting at least three alternative constructions, Petitioners disregarded the Director’s repeated instruction to “pick one.” *Id.*; see also *Tesla, Inc. v. Intellectual Ventures II LLC*, IPR2025-00340, Paper 18 (Dir. Nov. 5, 2025) (informative) (failure to explain the need for a broader construction warrants discretionary denial). As in *Revvo* “[t]he appropriate course of action under these circumstances is to deny institution.” *Revvo*, IPR2025-00632, Paper 36, 4.

D. Several Additional Factors Also Favor Discretionary Denial

U.S. National Security Interest. As Congress recognized in the CHIPS and Science Act of 2022, quantum technology is critical to U.S. economic and national security. Ensuring that domestic companies can supply U.S. dilution refrigeration needs, rather than relying on foreign manufacturers, is crucial. *Interim Processes for PTAB Workload Management* (Dir. Memo, March 26, 2025) (“national security interests” relevant to discretionary denial).

Further, Petitioners are part of a large conglomerate with almost 1,000 employees and more than 30 facilities around the world, and their accused dilution refrigerator products are designed and manufactured exclusively in England.

Conversely, Maybell’s small, innovative domestic business offers a groundbreaking line of dilution refrigerators that are designed and built in the United States. These facts strongly support discretionary denial of the Petition. *U.S. Manufacturing and Small Business Use of AIA Proceedings* (Dir. Memo, March 11, 2026) (size and location (domestic versus foreign) of Patent Owner and Petitioner are relevant to discretionary denial).

No Stay. No motion to stay has been filed in the parallel district court case in Delaware, and the Court has given no indication that it would entertain a stay if one were presented. Even if requested, courts seldom grant *pre-institution* stays—which is the current state of the proceedings here. *E.g., MYW Semitech, LLC v. Apple Inc.*, 1:25-cv-00504, D.I. 68 (Jan. 21, 2026) (Andrews, J.) (denying stay where IPR had not been instituted; “There is no reason to interrupt the schedule based on speculation about what might happen in April or June 2026” in the pending IPR). Thus, the litigation is likely to progress in parallel with these proceedings, risking significant duplication of effort and inconsistent outcomes.

Trial Date. The trial date is weighed as part of a balanced assessment of relevant factors. The fact that a trial date has not been set does not mean discretionary denial is improper. *Hisense USA Corp. v. VideoLabs, Inc.*, IPR2025-00880, Paper 11, 2-3 (Dir. Oct. 10, 2025) (discretionarily denying IPR despite lack of a trial date that “reduce[d] the concern” of duplication of effort).

Here, as noted above, the lack of any stipulation means there likely will be substantial duplication of effort between the IPR and the district court case during the time frame of any IPR trial.

Same parties. This favors denial because the parties in the parallel litigation overlap. *See* Pet., 5; *Fintiv*, Paper 15, 15.

Merits. As will be explained in the forthcoming preliminary response, the Petition’s grounds are weak.

Settled Expectations. While settled expectations generally increase the longer a patent has been in force, “there is no bright-line rule on when expectations become settled.” *Dabico Airport Sols. Inc. v. AXA Power ApS*, IPR2025-00408, Paper 21, 2-3 (Dir. June 18, 2025). Recently-issued patents can present settled expectations warranting discretionary denial of institution under the right circumstances. *E.g., All. Laundry Sys., LLC v. PayRange LLC*, IPR2025-00950, Paper 11, 3 (Dir. Sept. 19, 2025) (2021 patent that had been licensed had “some settled expectations favoring Patent Owner”).

Here, the United States patent publication leading to the ’320 patent was published by the USPTO on January 12, 2023—more than 3 years before Petitioners filed their petition. EX2005. Petitioners have been competitors of Maybell for several years in the dilution refrigerator space, and Petitioners plainly follow developments in the space—including Maybell’s patent activity—closely.

Indeed, less than a month after Maybell filed suit, Petitioners identified 50 alleged prior art products and publications. EX2003. Thus, Petitioners likely were aware of the application for the '320 patent since at least January 2023—a fact that favors discretionary denial. *Murata Mfg. Co. v. Georgia Tech. Research Corp.*, IPR2025-00383, Paper 14, 2-3 (Dir. July 29, 2025) (denying institution where “Petitioner was aware that Patent Owner was involved in the same technology space for a significant amount of time before filing its Petition challenging Patent Owner’s patent.”); *Dabico Airport Sol. Inc., v. Axa Power APS*, IPR2025-00408, Paper 21, 3 (Dir. June 18, 2025) (informative) (explaining that “actual notice of a patent or of possible infringement is not necessary to create settled expectations” favoring discretionary denial).

III. CONCLUSION

Maybell respectfully requests that institution of this IPR be discretionarily denied.

Respectfully submitted,

Date: May 19, 2026

/Michael N. Rader/

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CERTIFICATE OF SERVICE UNDER 37 C.F.R. § 42.6(e)(4)

I certify that on May 19, 2026 a copy of the foregoing document, including any exhibits filed therewith, is being served via electronic mail, as previously consented to by Petitioner, upon the following:

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