

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

MICROSOFT CORPORATION

Petitioner,

v.

THROUGHPUTER, INC.

Patent Owner.

Case No. IPR2023-00852

U.S. Patent No. 11,150,948

PATENT OWNER'S PRELIMINARY RESPONSE

TABLE OF CONTENTS

I. INTRODUCTION	1
II. ARGUMENT.....	2
A. The Board should deny institution because Petitioner has not established that Tuan is prior art.....	2
1. The Board should find that Petitioner failed to establish that Tuan is prior art for the same reasons articulated in the 1566 proceeding.	5
2. Even if the Board were inclined to look at the issue anew, Petitioner still has not carried its burden to demonstrate that Tuan is prior art.	9
i. Petitioner’s declaration evidence is directed to the public availability of a reference that is not Ex. 1005.....	10
ii. Even if the Board were to overlook the MARC record’s date discrepancy, Petitioner still fails to demonstrate public accessibility.	12
B. 35 U.S.C. §325(d) provides an alternative basis for denial.	15
1. The Office already considered Petitioner’s arguments/art during prosecution.	17
2. Petitioner failed to identify any material error in the Office’s consideration of Petitioner’s arguments during prosecution.....	22
III. CONCLUSION.....	23

TABLE OF EXHIBITS

Ex. 2001	Declaration of W. Cook Alciati in support of Motion for Admission <i>Pro Hac Vice</i> .
Ex. 2002	Decision Denying Institution of <i>Inter Partes Review</i> in IPR2022-01566.
Ex. 2003	Decision Denying Institution of <i>Inter Partes Review</i> in IPR2022-00757.
Ex. 2004	Declaration of Dr. Henry H. Houh in IPR2022-00757.
Ex. 2005	Petition for <i>Inter Partes Review</i> of U.S. Patent No. 11,036,556 (IPR2022-01566).
Ex. 2006	Declaration of June Ann Munford in IPR2022-01566.
Ex. 2007	Patent Owner's Preliminary Response in IPR2022-01566.
Ex. 2008	Notice of Allowance mailed in U.S. Patent No. 10,963,306.
Ex. 2009	Google Scholar Citation Results for Ex. 1005.
Ex. 2010	U.S. Patent No. 7,669,035 to Young et al.

TABLE OF AUTHORITIES

Page(s)

Cases

<i>Advanced Bionics, LLC v. Med-El Elektromedizinische Gerate Gmbh,</i> IPR2019-01469, Paper 6 (PTAB Feb. 13, 2020).....	16, 17, 22, 23
<i>Becton, Dickinson & Co. v. B. Braun Melsungen AG,</i> IPR2017-01586, Paper 8 (PTAB Dec. 15, 2017)	17
<i>Hulu, LLC v. Sound View Innovations, LLC,</i> IPR2018-01039, Paper 29 (PTAB Dec. 20, 2019)	12, 13
<i>Salesforce.com, Inc. v. WSOU Investments, LLC,</i> IPR2022-00428, 2022 WL 2719175 (PTAB Jul. 13, 2022).....	14, 15
<i>Samsung Elecs. Co. Ltd. v. Infobridge Pte., Ltd.,</i> 929 F.3d 1363 (Fed. Cir. 2019)	12

Statutes

35 U.S.C. §325(d)	<i>passim</i>
-------------------------	---------------

Patent Owner ThroughPuter, Inc. (“PO”) respectfully submits this Preliminary Response to the Petition. For the reasons that follow, the Board should deny institution of *inter partes* review of U.S. Patent No. 11,150,948 (the “’948 patent”).

I. INTRODUCTION

Institution should be denied here for the same reasons it was denied in IPR2022-01566 (the “1566 proceeding”), which is directed to a related patent in the ’948 patent’s family. In both the 1566 proceeding and here, the Tuan reference (Ex. 1005) was part of the sole asserted ground in the IPR. In the 1566 proceeding, the Board found that Petitioner had not demonstrated that Ex. 1005 (Tuan) qualifies as prior art. Specifically, the Board found Petitioner’s librarian declaration evidence insufficient to establish the public accessibility of Ex. 1005. Petitioner relies on the exact same librarian testimony here in an effort to demonstrate the public accessibility of Tuan. As the Board previously found, this evidence fails to demonstrate that Ex. 1005 is prior art and institution should be denied.

Even if the Board were to overlook Petitioner’s failure to demonstrate that Tuan is prior art—which it should *not* do—denial of institution under 35 U.S.C. §325(d) would be appropriate. Petitioner’s cursory §325(d) discussion fails to acknowledge that the Office thoroughly considered Petitioner’s primary Nollet

reference during prosecution of the immediate parent application (which issued as U.S. Patent No. 10,963,306 (“the ’306 patent”)) to the ’948 patent. Specifically, during prosecution of the ’306 patent, the Examiner’s Notice of Allowance cited Nollet (and four other references) as among the “closest prior art of record” and found that even if the prior art individually taught the claim limitations, the claimed invention was not obvious in view of the claims as a whole. The Examiner expressly considered that Notice of Allowance during prosecution of the ’948 patent and issued the claims over the “closest prior art of record” discussed by the Examiner during prosecution of the ’948 patent’s parent. Petitioner fails to address this fact at all, much less attempt to explain how its arguments are not cumulative of the arguments already considered by the Office and/or identify a material error in the Office’s prior consideration of those arguments.

Institution should be denied.

II. ARGUMENT

A. The Board should deny institution because Petitioner has not established that Tuan is prior art.

The Petition includes a single ground: Nollet in view of Tuan and Seo. Petition at 16. In connection with that ground, Petitioner proposes first combining Nollet with Tuan. *Id.* at 30-34. Petitioner’s expert explains the combination as follows:

Combining the teachings of Nollet with Tuan would have merely involved combining prior art elements according to known methods to yield predictable results. Nollet and Tuan are directed to similar systems that assign reconfigurable tiles/cores of a hardware device to tasks of an application. *A POSITA would have been motivated to modify Nollet's platform with Tuan's explicit inclusion of FIFOs, a network manager, and memory to facilitate communications between hardware tasks, keep track of the locations of tiles where each application task is assigned, and managing distribution of tasks to hardware resources.* EX1005, 15-16, 27-29, 66, 72-73, 75, 101-111. The use of these components in Tuan would align with Nollet's teaching or suggestion that its platform supports each of these functions. EX1004, [0081] (discussing "manag[ing] the applications by distributing the different tasks on the available resources"), [0086] (discussing "keep[ing] track of which tile of an FPGA is being used to execute a task"), FIG. 1 (showing communication paths between tasks, suggesting multi-stage programs). A POSITA would have understood Nollet's teaching of communication paths between tasks as suggesting the inclusion of multi-stage programs and naturally looked to related references such as Tuan that describe how programs can be partitioned into multiple "tasks that can be executed in a pipelined manner," which "allows for parallelism and pipelined processing, which are suitable to be implemented on reconfigurable arrays," such as those taught in Nollet. EX1005, 66. Moreover, a POSITA would have understood Nollet's discussion of keeping track of which FGPA tile is being used to execute a task as requiring the use of a system for managing this information and thus naturally looked to related references such as Tuan that describe how "information about where tasks are located" for execution by FPGA tiles is stored and updated using switches for inter-task communication, a network manager, and memory. EX1005, 15-16, 27-29, 66, 72-73, 75, 101-111.

Ex. 1003, ¶80.¹

¹ Emphasis herein is added unless otherwise indicated.

Petitioner then relies on the combination of Nollet and Tuan for elements 1.0, 1.1, 1.2, 1.3, 1.4, 1.5, and 1.6. Petition at 37-52. For elements 1.7 and 1.8, Petitioner proposes combining Seo with the combined Nollet-Tuan system. *Id.* at 52-59. Thus, Petitioner relies heavily on the combined system of Nollet and Tuan throughout the Petition. Petitioner’s reliance on Tuan fails to demonstrate a reasonable likelihood of unpatentability because Petitioner has not demonstrated that Tuan is prior art, as the Board has previously found.²

² PO notes that in IPR2022-00757, the Board denied institution under §325(d) and found Petitioner’s reliance on Tuan to be alternative to Nollet. *See* Ex. 2003 at 19. Here, Petitioner did not rely on Tuan as an alternative to Nollet. Instead, in an apparent attempt to address the Board’s prior §325(d) finding, Petitioner drafted its Petition to rely on Tuan without conditions. For example, in the 757 proceeding, Petitioner’s expert asserted: “***To the extent that Nollet does not explicitly state that its movie decoder is a multi-stage program instance***, Tuan discloses this.” Ex. 2004, ¶105. Here, Petitioner’s declarant does not include the same conditional “to the extent” language and instead refers to teachings of Tuan “[b]eyond Nollet’s teachings regarding its movie decoder being a multi-stage program instance.” Ex. 1002, ¶93.

1. The Board should find that Petitioner failed to establish that Tuan is prior art for the same reasons articulated in the 1566 proceeding.

In its decision denying institution in the 1566 proceeding, the Board held that “Petitioner fail[ed] to provide evidence sufficient to show that Tuan (a doctoral thesis) was publicly accessible before the critical date, and as a result, we determine that Petitioner fails to sufficiently establish that Tuan qualifies as a printed publication.” 1566 proceeding, Paper 13 (the “1566 ID”) at 10 (filed herewith as Ex. 2002).³ The same result is compelled here because Petitioner relies on the same evidence and arguments in its flawed attempt to establish the public accessibility of Tuan.

In the 1566 ID, the Board began its analysis by “observing that the Petition never squarely addresses whether Tuan was publicly accessible, and it also does not expressly contend that an ordinary artisan could have located Tuan with reasonable diligence.” Ex. 2002 at 10. Here, the Petition likewise suffers from the same flaws by not expressly contending that an ordinary artisan could have located Tuan with reasonable diligence.

Indeed, the Petition here includes even less discussion of Tuan and its alleged public availability than the Petition in the 1566 proceeding. Whereas the

³ Petitioner declined to seek rehearing of the 1566 ID.

1566 proceeding petition included a discussion of Tuan and its alleged public availability, the Petition here merely cites to the same testimony from Ms.

Munford, which the Board found insufficient to carry Petitioner's burden.

Compare Petition at 2, fn. 1 *with* Ex. 2005 at 10-11. If anything, the record was better for Petitioner in the 1566 proceeding where the Board already found Petitioner failed to carry its burden to demonstrate that Ex. 1005 is prior art.

The 1566 ID then turns to a discussion of Ms. Munford's declaration, which again is identical to the testimony Ms. Munford provides here. *Compare* 1566 proceeding, Ex. 1007, ¶¶9-11 (submitted herewith as Ex. 2006) *with* Ex. 1012, ¶¶9-11. In the 1566 ID, the Board found that Ms. Munford's testimony critically "does not indicate that an ordinary artisan could have located Tuan with reasonable diligence." *See* Ex. 2002 at 11; Ex. 2006, ¶¶9-11. Ms. Munford's identical testimony in this proceeding suffers from the same flaw.

In the 1566 ID, the Board also found that Ms. Munford's "conclusory assertion that Tuan 'was made available to the public' [] is insufficient." Ex. 2002 at 12. The same flaw is present in Ms. Munford's identical testimony in this proceeding. *See* Ex. 1012, ¶¶9-11. The 1566 ID also finds that "even assuming that Ms. Munford establishes Tuan was technically available to the public in October 2009, her testimony fails to support a finding that an ordinary artisan could have located Tuan with reasonable diligence." Ex. 2002 at 12. Again, Ms.

Munford’s identical testimony in this proceeding suffers from the same flaw. *See* Ex. 1012, ¶¶9-11.

In the 1566 proceeding, the Board also noted that Ms. Munford relied on a screenshot of a “library catalog [] dated December 2021 [], over eight years after the August 2013 critical date,” finding that “there is no evidence that this catalog (or a substantially similar one) existed on or before the critical date.” Ex. 2002 at 13 (citing 1566 proceeding, Ex. 1007 at 25-29). Here, Ms. Munford relies on the exact same screenshot, and Petitioner likewise failed to adduce any evidence that the 2021 catalog (or a substantially similar one) existed on or before the critical date. Ex. 1012 at 25-29. Accordingly, just as the Board found in the 1566 ID, it should find here that “the December 2021 screenshot [] is not probative of whether Tuan was publicly accessible before the critical date.” Ex. 2002 at 13.⁴

Similarly, in the 1566 proceeding, the Board noted that “Petitioner stops short of even providing attorney argument that Ex. 1005 could have been located through a keyword search in 2013.” Ex. 2002 at 14. The same is true in this

⁴ In the 1566 proceeding, the Board also found that “there is no evidence regarding *any* search functionality before the critical date, over eight years prior.” Ex. 2002 at 14. The same is true in this proceeding. Petitioner’s failure to present any such evidence should similarly doom its Petition here.

proceeding. Moreover, as was the case with the 1566 proceeding, here “Petitioner does not even propose a hypothetical keyword search that an ordinary artisan would have used.” *Id.* In addition, like the 1566 proceeding, the “record includes no evidence that a keyword search of the title filed could have been performed at the time.” *Id.*

Petitioner did submit additional testimony from Ms. Munford in this proceeding, which was not presented in the 1566 proceeding (*see* Exhibit 1015), but that testimony does not remedy any of the deficiencies discussed above with respect to Ms. Munford’s testimony. Instead, it appears (unsuccessfully) directed to PO’s argument in the 1566 proceeding (and restated here below) that Ms. Munford failed to establish that the MARC record and library screenshot on which she relied even referred to the document submitted by Petitioner as Ex. 1005. The 1566 ID did not address that argument, making Ms. Munford’s additional testimony incapable of curing the deficiencies identified by the Board in the 1566 ID.

Notably, Petitioner obtained a new declaration from Ms. Munford *after* receiving the POPR in the 1566 proceeding in which PO challenged the sufficiency

of Ms. Munford's testimony to demonstrate the public availability of Tuan.⁵ *See* Ex. 2007 (1566 proceeding POPR dated March 9, 2023). Even with the benefit of knowing PO's arguments concerning Tuan, Petitioner did not cure the deficiencies in Ms. Munford's testimony. Instead, Petitioner chose to rely on identical testimony for the key issue of public availability. Petitioner made that choice knowing PO's argument concerning Tuan and should not be permitted a chance to further supplement the record here. The Board should follow its 1566 ID and deny *inter partes* review.

2. Even if the Board were inclined to look at the issue anew, Petitioner still has not carried its burden to demonstrate that Tuan is prior art.

As explained above, PO respectfully submits that the Board should follow its prior decision finding that Tuan is not prior art and decline institution. Nonetheless, if the Board is still inclined to consider the issue, the Board should find that Tuan is not prior art. Below, PO restates the arguments it presented to the Board in connection with the 1566 proceeding while addressing Petitioner's new

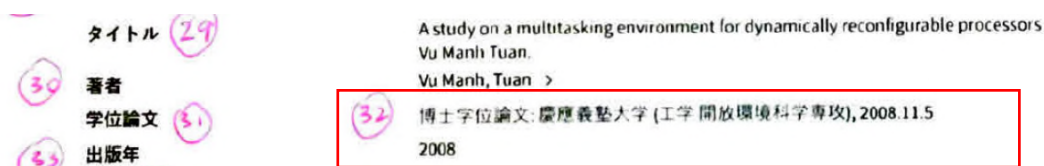
⁵ Ms. Munford's new declaration is dated April 14, 2022. *See* Ex. 1015. In context, it appears that the 2022 year was a typographical error. For example, the Petition was filed on April 17, 2023, and Petitioner's expert signed his declaration of April 17, 2023. *See* Petition at 71; Ex. 1003, ¶117.

declaration, which does not impact the Board’s prior findings concerning
Petitioner’s failure to demonstrate that Tuan is prior art.

i. Petitioner’s declaration evidence is directed to the public availability of a reference that is not Ex. 1005.

Tuan bears a date of 2009 on its face, and Ms. Munford testifies that the Keio University library first acquired Tuan’s dissertation as of October 1, 2009. Ex. 1005 at 1; Ex. 1012, ¶11. In an attempt to substantiate her conclusion that Ex. 1005 became publicly available in 2009, Ms. Munford relies on a translation of a “MARC” record. Ex. 1012 at 23, field 502. On its face, the MARC record refers to a Tuan reference dated November 5, 2008. Exhibit 1005, however, is dated 2009. Thus, there is no evidence that the 2008 document identified in the MARC record is Ex. 1005, which is dated one year later.

Appendix TUAN01 of Ex. 1012 clearly indicates that the paper identified in the MARC record is dated 2008.



Ex. 1012 at 26 (annotated).

The translation of field 32 clearly indicates that the paper that is the subject of the MARC record was dated November 5, 2008.

32	博士学位論文：慶應義塾大学（工学 開放環境科学 専攻），2008.11.5	Doctoral Dissertation: Keio University (School of Science for Open and Environmental Systems, Graduate School of Science and Technology), November 5, 2008
----	---------------------------------------	--

Id. at 28 (annotated).

In contrast, Ex. 1005 was plainly created in 2009. The cover page of Ex. 1005 bears a date of 2009 and the **dissertation cites references that were created in 2009**. Ex. 1005, *e.g.*, at 127-128. The November 5, 2008, document identified by Ms. Munford appears to be a different reference that is not Ex. 1005. Neither Petitioner nor Ms. Munford addresses these obvious discrepancies, even in Ms. Mumford’s declaration submitted after PO filed its POPR in the 1566 proceeding. *See* Ex. 1015, ¶9. That subsequent declaration simply provides further testimony concerning MARC fields, but never attempts to reconcile the fact that the MARC record and library catalog identify a document dated November 5, 2008, while the cover page of Ex. 1005 is dated 2009. *Id.* Rather, Ms. Munford stood by her earlier testimony in which she simply asserted that “Exhibit 1005 is the same document that is referred to in this library record [Appendix TUAN01]” without addressing the clear date discrepancy. Ex. 1012, ¶10; Ex. 1015, ¶9.

Because the evidence relied upon in the Petition to demonstrate public availability of Ex. 1005 refers to a different document created and published the

year prior, there is no record evidence that could meet Petitioner’s burden at institution to “identify, with particularity, evidence sufficient to establish a reasonable likelihood that the reference [Ex. 1005] was publicly accessible.” *Hulu, LLC v. Sound View Innovations, LLC*, IPR2018-01039, Paper 29 at 13 (PTAB Dec. 20, 2019) (precedential) (hereafter “*Hulu*”).

ii. Even if the Board were to overlook the MARC record’s date discrepancy, Petitioner still fails to demonstrate public accessibility.

Even if the Board were to overlook the fact that the library records refer to a document authored and published one year earlier than Ex. 1005, the Petition still falls far short of meeting the institution-stage standard set by *Hulu* for establishing public accessibility.

“[A]t the institution stage, the petition must identify, with particularity, evidence sufficient to establish a reasonable likelihood that the reference was publicly accessible before the critical date of the challenged patent and therefore that there is a reasonable likelihood that it qualifies as a printed publication.” *Hulu* at 13. In *Hulu*, the Board held that “[p]ublic accessibility requires more than technical accessibility.” *Id.* at 10. “[A] work is not publicly accessible if the only people who know how to find it are the ones who created it.” *Samsung Elecs. Co. Ltd. v. Infobridge Pte., Ltd.*, 929 F.3d 1363, 1369, 1372 (Fed. Cir. 2019). Under *Hulu*, a reference is deemed “publicly accessible” upon a satisfactory showing that the

document was made available to the extent that “persons interested and ordinarily skilled in the subject matter” who are “exercising reasonable diligence” could locate it at the relevant time. *Hulu* at 10-11.

As to this issue, Ms. Munford makes only a conclusory assertion that the Tuan thesis “was made available to the public shortly after” the university acquired the Tuan thesis in 2009 and that library records demonstrate Keio University library’s acquisition of Tuan in October 2009, and is consistent with the year (2009) printed on Tuan’s title page. Ex. 1012, ¶11. Critically, Ms. Munford does not explain how a POSITA would have accessed Ex. 1005 prior to the relevant date.

For example, she does not testify that a POSITA could have found Ex. 1005 by searching the library’s website prior to the critical date, much less *how*. Nor does Ms. Munford make even make a conclusory assertion that the Keio University library maintained a publicly accessible database prior to the critical date. Indeed, Ms. Munford’s declaration is bereft of any suggestion that a POSITA could have found the dissertation with the exercise of reasonable diligence. Ms. Munford simply avers that Ex. 1005 was publicly available in 2009. *Id.* But that is a classic example of an attempt to show technical accessibility, which is insufficient to meet *Hulu*’s public accessibility requirement. *Hulu* at 10. To that end, it is notable that while Ex. 1005 appears in the Google Scholar database, no “cited by” link or information is provided. *See* Ex. 2009. This suggests that Tuan has not, in fact,

been cited by any other publication, further highlighting its lack of public accessibility at the critical date.

The Board's decision in *Salesforce.com, Inc. v. WSOU Investments, LLC*, IPR2022-00428, 2022 WL 2719175, at *5 (PTAB Jul. 13, 2022) is instructive here. In *Salesforce.com*, the Petitioner submitted a declaration that at least averred that a POSITA could have found the reference at issue through reasonable diligence. The declaration asserted, in relevant part, as follows:

Given that the Code Project website was accessible to the public prior to March 31, 2008, I understand that **persons interested and ordinarily skilled in the subject matter or art exercising reasonable diligence could have located the Erdogan article from the website using the common search terms** discussed above and/or reasonable diligence. Indeed, upon accessing the Code Project website, **such an interested researcher would have found the Erdogan article by simply clicking on the "articles" link followed by the topic and applying reasonable diligence.**

Salesforce, 2022 WL 2719175, at 4.

But this assertion—which is conspicuously lacking from Ms. Munford's declaration—was found to be insufficient in *Salesforce*. Instead, the Board found that the declarant did “not explain from where she derived that understanding, and she does not identify any evidence to support her understanding as to how the Code Project website would have been searched before the critical date.” *Id.* at *5. For example, the declarant did “not identify any evidence about the specific search

capabilities” of the website used to find the reference at issue as of the critical date.
Id.

The Board continued in *Salesforce* by noting that, at best, the declarant established technical accessibility. *Id.* The Board found that the petitioner “fail[ed] to identify evidence showing that an ordinarily skilled artisan exercising reasonable diligence” could have located the reference through the use of “common search terms.” *Id.* at *6. Here, Ms. Munford does not even allege that a POSITA could have found Ex. 1005 with the exercise of reasonable diligence before the critical date. At best—and assuming the Board overlooks the date discrepancy discussed *supra*—Ms. Munford’s declaration establishes only that Ex. 1005 was “technically accessible” in 2009 at the Keio University library. That the reference was theoretically available to those who knew where to find it before the critical date is insufficient to demonstrate that Ex. 1005 is a printed publication that is appropriately relied on in an IPR.

B. 35 U.S.C. §325(d) provides an alternative basis for denial.

As explained *supra*, Petitioner’s heavy reliance on Tuan fails because Petitioner has not demonstrated that Tuan qualifies as prior art in this proceeding. However, even if the Board were to allow Petitioner to rewrite its Petition to remove its reliance on Tuan such that the combination was Nollet + Seo—which would not be proper under settled law—the Petition would still fail under §325(d).

The '948 patent is the direct child of the application that matured into the '306 patent. During prosecution of the '306 patent, the Examiner's Notice of Allowance cited Petitioner's primary Nollet reference and four other references as among the "closest prior art of record." Ex. 2008 at 16. The Examiner found that even if the "closest prior art of record" taught the individual limitations of what issued as claim 1 of the '306 patent independently, the prior art did not "anticipate or render obvious the overall combined structure and features set forth in the independent claim[s] ... when viewed as an order whole of the different portions of the limitations contained therein." *Id.* at 17. During prosecution of the '948 patent, the Examiner considered the '306 patent's Notice of Allowance, demonstrating that the "closest prior art of record"—and the prior Examiner's thorough discussion of it— was considered during prosecution of the '948 patent. Ex. 1002 at 365 ("Notice of Allowance issued in Application No. 17/034,404 dated January 19, 2021").

Petitioner relies on the same Nollet reference here. Moreover, the teachings relied on from Seo are also substantially the same as the teachings considered by the Examiner in U.S. Patent No. 7,669,035 to Young ("Young") during prosecution. Consequently, even if the Board were to ignore Tuan, institution should still be denied under §325(d). A discussion of the *Advanced Bionics* factors follows.

1. The Office already considered Petitioner’s arguments/art during prosecution.

Advanced Bionics Factor 1 considers “whether the same or substantially the same art previously was presented to the Office or whether the same or substantially the same arguments previously were presented to the Office.”

Advanced Bionics, LLC v. Med-El Elektromedizinische Gerate Gmbh, IPR2019-01469, Paper 6 at 8 (PTAB Feb. 13, 2020) (precedential). Here, the Office considered Petitioner’s primary Nollet reference in detail during prosecution of the parent ’306 patent, including in combination with secondary references that are cumulative of Seo’s teachings on which Petitioner relies here. *See* Ex. 2008 at 16-17.

Petitioner fails to address the detailed ’306 patent Notice of Allowance (Ex. 2008) at all in its cursory discussion of §325(d). *See* Petition at 5-9. This failure is critical as Petitioner needed to address the “similarities and material differences between the asserted art and the prior art involved during examination,” including during the prosecution of the parent application, under *Becton* factor (a). *Becton, Dickinson & Co. v. B. Braun Melsungen AG*, IPR2017-01586, Paper 8 at 17, 23 (PTAB Dec. 15, 2017) (denying institution under § 325(d) where Petitioner “advanc[ed] essentially the same positions raised by the Examiner during prosecution of the parent application”). PO respectfully submits that this is

especially true where the child application does not include a substantive office action as was the case here.

As shown below, the teachings Petitioner relies on for each element in claim 1 (1.1 to 1.8) were before the Examiner during prosecution of both the '306 and '948 patents and found to be insufficient to meet the claims. Petitioner's arguments as to the other independent claims (claims 6 and 11) rely on these same teachings from claim 1 and have thus been considered and rejected for the same reasons. *See* Petition at 62-67.

Element 1.0 recites: "A method on a parallel data processing platform comprising a plurality of programmable logic-based processing units for accelerating a service comprising at least a first program and a second program, different than the first program." For this element, Petitioner cites Nollet as disclosing "multitasking computing systems and methods adapted for reconfigurable computing platforms" while arguing that "Nollet also discloses a first program (3D game) and a second program (movie player)." Petition at 36-38. But the Examiner already considered whether Nollet discloses "a plurality of FPGAs/reconfigurable devices being connected together in different topologies and communicate to one another through the buses of the topologies; the FPGAs are used to execute tasks of applications, that have a plurality of tasks that are linked together." Ex. 2008 at 16.

As to elements 1.1 and 1.2, Petitioner relies on the same Nollet teachings that the Examiner cited during prosecution of the '306 patent. The chart below compares the first limitation of claim 1 of the '306 patent with the first limitation of claim 1 of the '948 patent.

'306 patent	'948 patent, elements 1.1 and 1.2
linking, through a first set of inter-task communication paths of the multi-user parallel processing hardware architecture, a first set of reconfigurable logic-based processing units of the plurality of reconfigurable logic-based processing units into a first multi-stage program instance configured to execute a corresponding set of interdependent processing stages of a first program, wherein each of the first set of reconfigurable logic-based processing units is programmed to perform a respective task of a plurality of first tasks of the first program corresponding to a respective processing stage of the first multi-stage program instance;	forming a first set of inter-task communication paths connecting a first set of programmable logic-based processing units of the plurality of programmable logic-based processing units into a first multi-stage program instance, wherein the first multi-stage program instance is configured to accelerate the first program,

Both limitations are directed to connecting programmable/reconfigurable processing units into a multi-stage program instance, which program instance performs tasks of a multi-stage program. During prosecution of the parent '306 patent, the Examiner stated that Nollet “teaches a plurality of FPGAs/reconfigurable devices being connected together in different topologies

and communicate to one another through the buses of the topologies; the FPGAs are used to execute tasks of applications, that have a plurality of tasks that are linked together.” Ex. 2008 at 16. Here, Petitioner relies on Nollet for the same teachings. Petition at 41-45. Thus, the Office already considered Petitioner’s argument concerning elements 1.1 and 1.2, which arguments mirror Petitioner’s arguments concerning elements 1.4 and 1.5 (*see* Petition at 50-52).

The Office also already considered Petitioner’s arguments concerning element 1.3 (*see* Petition at 46-47), which mirror Petitioner’s arguments concerning element 1.6 (*see* Petition at 52). Element 1.3 recites “wherein the first set of programmable logic-based processing units are interconnected using reconfigurable cross-connects.” For this element, Petitioner cites to paragraph 57 of Nollet as disclosing a “reconfigurable hardware device, compris[ing] typically a plurality of small configurable logic blocks and an interconnect structure for interconnecting the configurable logic blocks,” and further as disclosing that “[r]econfiguring the hardware device means changing the configuration or function of the logic blocks and/or the interconnection between the configurable logic blocks.” Petition at 47. During prosecution of the ’306 patent, the Examiner cited to this very same paragraph of Nollet. Similarly, Petitioner cites to Fig. 6 of Nollet, which the Examiner also cited. Petition at 48-49; Ex. 2008 at 16. Consequently, here again, the ’306 patent Examiner cited to these same passages

on which Petitioner now relies, but allowed the claims over these teachings during prosecution of the child '948 patent.

During prosecution of the '306 patent and the '948 patent, the Examiner also considered art the same and substantially the same as Petitioner's art relied on for elements 1.7 and 1.8. For element 1.7, Petitioner argues that Nollet discloses that “in response to the detected increase in demand determined by monitoring the load on the processing units, at least one or more programmable logic-based processing units is allocated or added to the first program instance (3D game)” citing to paragraphs 107 and 160 of Nollet. Petition at 54. During prosecution of the '306 patent, the Examiner cited to paragraph 160 as support for the assertion that Nollet discloses that “the tasks can be *relocated* on different FPGAs based on *monitored* execution status of the tasks.” Ex. 2008 at 16 (original emphasis).

With respect to elements 1.7 and 1.8, Petitioner also relies on Seo in combination with Nollet (and Tuan)—arguing that Seo's “scheduling algorithm, called dynamic core scaling, ‘decides on the optimal number of cores for the current performance demand and tries to meet this criterion as far as all deadlines are guaranteed.’” Petition at 55. During prosecution of the '306 patent, the Examiner stated that Young (which was among the “closest prior art of record”) discloses that “allocation of FPGAs involves creating different groupings of FPGAs based on task demands.” Ex. 2008 at 17 (citing, *e.g.*, Young (filed

herewith as Ex. 2010) at col. 10, ll. 19-63). This teaching is substantially the same as Petitioner's argument that Seo teaches demand-based allocation through scaling.

Petitioner's failure to address Nollet and the Examiner's thorough discussion of it during prosecution of the '306 patent is particularly glaring in view of the Board's decision denying institution in IPR2022-00757 (the "757 proceeding"), which was directed to the '306 patent. *See* Ex. 2003. There, Petitioner relied on the same Nollet reference as its primary reference. *Id.* at, *e.g.*, 9. The Board denied institution under §325(d) due to the Examiner's thorough consideration of Nollet. *Id.* at 18-22. Similarly here, institution should be denied—even if the Board were to look past Petitioner's reliance on Tuan.

2. Petitioner failed to identify any material error in the Office's consideration of Petitioner's arguments during prosecution.

Because the first factor is satisfied, the next step is to consider the second *Advanced Bionics* factor, which asks whether "the petitioner has demonstrated that the Office erred in a manner material to the patentability of challenged claims." *Advanced Bionics* at 8. For its alleged "error," Petitioner argues that "[b]y not considering Seo, Tuan or combinations based on them, the Office erred in its evaluation of the prior art, thus warranting reconsideration." Petition at 8. But it is not error for the Office to fail to consider references that were not of record. Indeed, while Petitioner attempts to paint the Board's §325(d) denial in the 757

proceeding as “irrelevant” (*see* Petition at 7, n. 4), the Board rejected a similar argument made by Petitioner. Specifically, the Board found that Petitioner’s argument that “the Examiner erred simply by not considering Tuan [and other secondary references] is not persuasive because, under the first part of the *Advanced Bionics* framework, discretionary denial under § 325(d) may be based on presentation of art that is substantially the same as that previously presented to the Office, and is not limited to the same art previously presented.” Ex. 2003 at 21. That same finding is relevant—and should apply—here.

Petitioner has not identified any error in the Office’s previous consideration of Petitioner’s Nollet-based arguments, which means Petitioner cannot possibly carry its burden under *Advanced Bionics* factor 2. Accordingly, even if the Board were to look past the fact that Tuan is not prior art and consider the Petition anyway, denial of institution is still appropriate under §325(d).

III. CONCLUSION

For the foregoing reasons, Patent Owner respectfully submits that the Board should deny institution of *inter partes* review.

Dated: August 30, 2023

Respectfully submitted,

GARDELLA GRACE P.A.

By: /s/ W. Cook Alciati
James L. Davis, Jr. (Lead Counsel)
Reg. No. 57,325
ROPES & GRAY LLP
1900 University Avenue, 6th Floor
East Palo Alto, CA 94303
Phone: 650 617 4794
Fax: 650 566 4147
James.L.Davis@ropesgray.com

W. Cook Alciati
(admitted *pro hac vice*)
GARDELLA GRACE P.A.
80 M Street SE, 1st Floor
Washington, D.C. 20003
Phone: 703-721-8379
Fax: 703-740-4541
calciati@gardellagrace.com

Michael A. Dorfman
Reg. No. 46,669
GARDELLA GRACE P.A.
2502 North Clark Street, Suite 222
Chicago, IL 60614
Phone: 703-415-9344
Fax: 703-740-4541
mdorfman@gardellagrace.com

*Attorneys for Patent Owner
THROUGHPUTER, INC.*

WORD COUNT CERTIFICATE OF COMPLIANCE

Pursuant to 37 C.F.R. § 42.24 (d), I hereby certify that the foregoing PATENT OWNER'S PRELIMINARY RESPONSE contains 5,233 words as measured by the word processing software used to prepare the document. This total does not include the caption page, table of contents, table of exhibits, any signature blocks, the certificate of service, or this certificate of word count.

Respectfully submitted,

Dated: August 30, 2023

By: /s/ W. Cook Alciati
Name: W. Cook Alciati
GARDELLA GRACE P.A.

CERTIFICATE OF SERVICE

The undersigned certifies that the foregoing PATENT OWNER'S PRELIMINARY RESPONSE and Exhibits 2002-2010 were served in their entireties by filing the documents through the Patent Trial and Appeal Case Tracking System (P-TACTS) as well as providing courtesy copies via e-mail to the following attorneys of record for the Petitioner listed below:

Lead Counsel: W. Karl Renner (Reg. No. 41,265)
IPR42342-0120IP1@fr.com
Fish & Richardson P.C.
60 South Sixth Street, Suite 3200
Minneapolis, MN 55402
Phone: 202-783-5070
Fax: 877-769-7945
PTABInbound@fr.com
axf-ptab@fr.com

Back-up Counsel: David L. Holt (Reg. No. 65,161)
Jennifer Huang (Reg. No. 64,297)
Nicholas Stephens (Reg. No. 74,320)
PTABInbound@fr.com
holt2@fr.com
jjh@fr.com
nstephens@fr.com

Dated: August 30, 2023

By: /s/ W. Cook Alciati
Name: W. Cook Alciati
GARDELLA GRACE P.A.