

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

BMW of North America, LLC and Robert Bosch LLC,

Petitioners,

v.

Foras Technologies Ltd.,

Patent Owner.

Case IPR2023-01373

Patent 7,502,958

PATENT OWNER’S PRELIMINARY RESPONSE TO PETITION

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PATENT OWNER'S EXHIBIT LIST

Exhibit No.	Description
2001	First Amended Docket Control Order (Foras v. Kia - EDTX)
2002	Docket (Foras v. Kia - EDTX)
2003	Subject Matter Contentions (Foras v. Kia - EDTX)
2004	Invalidity Contentions Cover Pleading (Foras v. Kia – EDTX)
2005	Infringement Contentions Cover Pleading (Foras v. Kia – EDTX)

I. INTRODUCTION

Patent Owner Foras Technologies Ltd. (“Patent Owner”) submits this preliminary response to Petitioners BMW of North America, LLC and Robert Bosch LLC’s (“BMW” or “Petitioners”) Petition for *inter partes* review of U.S. Patent No. 7,502,958 (“the ’958 patent”).

The Board should exercise its discretion to deny the petition in light of an active district court case in the Eastern District of Texas involving the same patent, the same claims, and the same prior art. That case is set for trial on January 6, 2025. By the time the Board reaches an institution decision in this proceeding, Patent Owner and the district court will have already invested significant time and resources in the case—claim construction, fact discovery, and expert discovery will already be well underway. The district court trial is set to take place in January 2025—months ahead of the deadline for a final written decision. Moreover, because the *Fintiv* factors so strongly favor a discretionary denial, the Board need not consider the merits. Thus, five of the six *Fintiv* factors strongly favor a discretionary denial.

Accordingly, the Board should deny institution.

II. THE *FINTIV* FACTORS WEIGH AGAINST INSTITUTION

35 U.S.C. § 314(a) gives the Board discretion to deny institution of the requested *inter partes* review due to the advanced state of parallel district court litigation regarding the same issues. *See NHK Spring Co. v. Intri-Plex Techs., Inc.*,

IPR2018-00752, Paper 8 (PTAB Sept. 12, 2018) (precedential, designated May 7, 2019) (“*NHK Spring*”). The Board has set forth six factors for determining whether discretionary denial due to such parallel litigation is appropriate (the “*Fintiv* factors”):

whether the court granted a stay or evidence exists that one may be granted if a proceeding is instituted;

proximity of the court’s trial date to the Board’s projected statutory deadline for a final written decision;

investment in the parallel proceeding by the court and the parties;

overlap between issues raised in the petition and in the parallel proceeding;

whether the petitioner and the defendant in the parallel proceeding are the same party; and

other circumstances that impact the Board’s exercise of discretion, including the merits.

Apple Inc. v. Fintiv, Inc., IPR2020-00019, Paper 11 at 5-6 (PTAB Mar. 20, 2020) (precedential, designated May 5, 2020) (“*Fintiv I*”); *Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 15 at 7-8 (PTAB May 13, 2020) (decision denying institution of *inter partes* review) (“*Fintiv II*”). “These factors relate to whether efficiency, fairness, and the merits support the exercise of authority to deny institution in view of an earlier trial date in the parallel proceeding.” *Fintiv I* at 6. In evaluating the factors, “the Board takes a holistic view of whether efficiency and integrity of the system are best served by denying or instituting review.” *Id.*

As set forth below, five of the six *Fintiv* factors weigh against institution. The district court trial will precede any final written decision from the Board. To avoid duplication of efforts, wasting resources, and potentially inconsistent decisions, the Board should deny institution.

A. Factor 1: The Eastern District of Texas court has not granted a stay, nor is there any evidence that a stay will be granted.

In addition to the district court case against Petitioner that is currently stayed, there is presently one active district court case involving the '958 patent pending in the Eastern District of Texas before Judge Gilstrap against defendants Kia Corporation and Kia America, Inc. ("Kia"): *Foras Technologies Ltd. v. Kia Corporation and Kia America, Inc.*, No. 2:23-cv-00219-JRG. The district court has issued a First Amended Docket Control Order (which did **not** change the trial date) with trial set for January 6, 2025. Ex. 2001 (First Amended Docket Control Order) at 1. There is no evidence that the case will be stayed. The district court has entered a protective order, and Kia has already filed invalidity contentions and subject matter eligibility contentions.

Kia has not filed a motion to stay, likely because Kia did not file an IPR petition for the '958 patent and motions to stay when the PTAB has not yet instituted post-grant proceedings are consistently denied in the Eastern District of Texas. *Trover Group, Inc. v. Dedicated Micros USA*, No. 2:13-cv-1047-WCB, 2015 WL

1069179, at *6 (E.D. Tex. Mar. 11, 2015) (Bryson, J.) (“This Court’s survey of cases from the Eastern District of Texas shows that when the PTAB has not yet acted on a petition for *inter partes* review, the courts have uniformly denied motions for a stay.”); *see also Samsung Elecs. Co. Ltd. v. Evolved Wireless LLC*, IPR2021-00950, Paper 10 at 10-11 (PTAB Nov. 29, 2021) (“*Evolved*”) (finding this factor weighed in favor of denial and denying institution where patent owner showed a stay was unlikely based on the advanced stage of the case and the court’s past decisions denying stays); *Samsung Elecs. Co. Ltd. v. Clear Imaging Research, LLC*, IPR2020-0152, Paper 12 at 12-13 (PTAB Mar. 3, 2021) (denying institution because, in part, Judge Gilstrap deemed unlikely to stay a case in similar circumstances).

As explained by the Board, a stay of the district court litigation pending resolution of the PTAB proceedings “allays concerns about inefficiency and duplication of efforts.” *Fintiv I* at 6; *Fintiv II* at 12. But here, the Eastern District of Texas court has not stayed the pending litigation, nor is there any evidence that a stay will be granted. Allowing this IPR to proceed simultaneously with the district court trial would be wasteful and inefficient. This factor weighs against institution.

B. Factor 2: The Eastern District of Texas trial will occur before the final written decision in this proceeding.

The statutory deadline for a final written decision in this proceeding is March 24, 2025, which can be extended to September 24, 2025 for good cause or in the

case of joinder. 37 C.F.R. § 42.100. Meanwhile, the Eastern District of Texas case is set for trial on January 6, 2025. Thus, trial in the Eastern District of Texas litigation will occur more than three months before the deadline for a final written decision, which weighs against institution. *See Fintiv I* at 9 (“If the court’s trial date is earlier than the projected statutory deadline, the Board generally has weighed this fact in favor of exercising authority to deny institution under *NHK*.”); *Fintiv II* at 13 (finding this factor weighed in favor of discretionary denial and denying institution where the district court trial was scheduled to occur two months before the deadline for the Board to reach a final written decision).

Because the district court trial will occur before the deadline for a final written decision in this matter, this factor weighs in favor of a discretionary denial. *Fintiv II* at 13.

C. Factor 3: By the time an institution decision is reached, the Patent Owner and the Eastern District of Texas court will have completed claim construction, fact discovery, expert discovery, and trial.

This factor relates to the “amount and type of work already completed in the parallel litigation by the court and the parties *at the time of the institution decision*.” *Fintiv I* at 9 (emphasis added). For example, “if, at the time of the institution decision, the district court has issued substantive orders related to the patent at issue in the petition,” this factor favors denial. *Id.* at 9-10.

Here, the district court has entered a scheduling order that includes all the deadlines leading up to trial. The parties have already begun fact discovery, Kia has already submitted its invalidity and subject matter eligibility contentions, and Foras has already submitted preliminary infringement contentions. The parties and the court have invested substantial resources in the parallel litigation as shown by the current docket. *See* Ex. 2002. The claim construction process will begin on March 14, 2024, which is prior to the deadline for the Board to issue its decision on institution here. Thus, Patent Owner and the court will have invested significant time and resources in the litigation by the time the Board reaches an institution decision in this matter. This favors discretionary denial. *Fintiv I* at 10; *Fintiv II* at 13-14 (finding that “the level of investment and effort already expended on claim construction and invalidity contentions” favored denial).

D. Factor 4: There is substantial overlap between this IPR and the Eastern District of Texas court proceedings.

This factor looks at “whether all or some of the claims challenged in the petition are also at issue in district court,” and whether the “petition includes the same or substantially the same claims, grounds, arguments, and evidence” as the parallel district court case. *Fintiv I* at 12-13.

Here, Petitioner has challenged claims 1-8 and 13-22 of the ’958 patent, of which claims 1, 13, and 19 are independent. In the district court, Foras has alleged

infringement of claims 1, 2, 3, 6, 8, 19, and 20 against Kia. Ex. 2005 at 2. Thus, the district court case involves a substantial number of the challenged claims and two of the three independent claims addressed in the Petition.

Further, there is substantial overlap in the invalidity arguments made in the Petition and in the district court litigation. The Petition is based on two references: US 2003/0126498A1 (“Bigbee”) and US 2004/0123201 A1 (“Nguyen”). Both references are relied upon in Kia’s invalidity and/or subject matter contentions in district court. Ex. 2004 at 9, 12 (citing to Bigbee); Ex. 2003 at 3 (citing to Nguyen). Indeed, BMW and Kia make arguments that are substantially similar, and in many instances, *identical*. For example, both parties allege that “lockstep processors or FRC processors were known” (Ex. 2003 at 6; Pet. at 2), “determining whether lockstep is recoverable was known” (Ex. 2003 at 9; Pet. at 5), “handling recoverable or non-recoverable errors differently was known” (Ex. 2003 at 11; Pet. at 9), and that “using firmware to detect and handle processor errors was known” (Pet. at 11; *see* Ex. 2003 at 13). And, not only do Kia and BMW present the same allegations regarding what was known in the art, in many instances, they support those allegations with identical arguments and evidence, as shown below.

Kia’s Litigation Argument	BMW’s IPR Argument
“Because lockstep processors execute redundant instructions in parallel,	Because lockstep processors execute redundant instructions in parallel,

lockstep systems are said to perform a ‘functional redundancy check.’ Safford, 1:51-55. Thus, processors operating in lockstep were also referred to as processors operating in functional redundancy check mode or FRC mode. A POSITA would have understood that both the terms FRC processor or a lockstep processor refer to a processor including two or more processor cores operating in FRC mode or in lockstep.” Ex. 2003 at 7.	lockstep systems are said to perform a ‘functional redundancy check.’ Safford-181, 1:67-2:3. Thus, processors operating in lockstep were also referred to as processors operating in functional redundancy check mode or FRC mode. A POSITA would have understood that both the terms FRC processor or a lockstep processor refer to a processor including two or more processor cores operating in FRC mode or in lockstep.” Pet. at 3.
“If comparing the outputs of the pair of processors indicates that they have produced the same outputs, it is assumed that there is no error in processing. If the comparison indicates a difference or mismatch, it is assumed that at least one processor has an error. Safford, 3:10-20. An example of such an error is a data cache error or a soft error. <i>Id.</i>, 1:46-50; Nguyen, [0008]. A loss of lockstep, if not promptly corrected, may cause the computer system to crash. That is, a failure of	“If comparing the outputs of the pair of processors indicates that they have produced the same outputs, it is assumed that there is no error in processing. If the comparison indicates a difference or mismatch, it is assumed that at least one processor has an error. Safford, 3:10-20. An example of such an error is a data cache error or a soft error.¹ <i>Id.</i>, 1:46-50; Nguyen, [0008]. A loss of lockstep, if not promptly corrected, may cause the computer system to crash. That is, a failure of

one of the pair of processors may halt the entire computer system, even if the other processor does not encounter an error. <i>Id.</i>, 1:46-50.” Ex. 2003 at 8.	one of the pair of processors may halt the entire computer system, even if the other processor does not encounter an error. <i>Id.</i>, 1:46-50.” Pet. at 4.
“It was conventional and well known to a POSITA that a pair of lockstep processors are often differentiated by designating one as a master processor and the other as the slave processor, that these roles may change over time, and that processors have status registers for recording such designations. Goodrum, 1:32-41; Marshall, 1:11-16; Kondo, [0086]; Tu, [0031].” Ex. 2003 at 8.	“It was conventional and well known to a POSITA that a pair of lockstep processors are often differentiated by designating one as a master processor and the other as the slave processor, and that these roles may change over time, and that processors have status registers for recording such designations. Marshall, 1:11-16; Kondo, [0086]; Tu, [0031].” Pet. at 4-5.
“It was known that lockstep is recoverable from some errors in a lockstep processor, such as soft errors, but not recoverable from some other errors, such as some lockstep mismatch errors. For example, lockstep is recoverable from an error detected in an individual processor before a mismatch error is detected and	“It was known that lockstep is recoverable from some errors in a lockstep processor, such as soft errors, but not recoverable from some other errors, such as some lockstep mismatch errors. For example, lockstep is recoverable from an error detected in an individual processor before a mismatch error is detected and

signaled. A pair of lockstep processors can include error detection and signaling logic 112 and 114, respectively, to signal an impending loss of lockstep. Safford, 3:21-51.” Ex. 2003 at 9.	signaled. As shown below, a pair of lockstep processors 111 and 113 can include error detection and signaling logic 112 and 114, respectively, to signal an impending loss of lockstep. Safford, 3:21-51.” Pet. at 5-6.
“With respect to non-recoverable errors, for example, it was known that when a nonrecoverable error occurs, there is risk of corrupt data or results propagating through the system. An appropriate action for handling a nonrecoverable error would have been immediately resetting or rebooting the system to return the system to a safe state or shut down the processor. Nguyen, [0007] (FRC errors are detectable but not recoverable; the FRC error handling routine typically resets the system, which is time consuming and reduces system availability)” Ex. 2003 at 11.	“With respect to non-recoverable errors, for example, it was known that when a non-recoverable error occurs, there is risk of corrupt data or results propagating through the system. An appropriate action for handling a non-recoverable error would have been immediately resetting or rebooting the system to return the system to a safe state or shut down the processor. Nguyen, [0007] (FRC errors are detectable but not recoverable; the FRC error handling routine typically resets the system, which is time consuming and reduces system availability).” Pet. at 9.
“It was known that firmware can be used for detecting lockstep errors and to cause operating system to virtually	“It was known that firmware can be used for detecting lockstep errors.

eject the lockstep pair of processors when lockstep error is detected and then virtually insert the lockstep pair when it is recovered. Bigbee, [0025], [0034]-[0037].” Ex. 2003 at 13.	Bigbee, [0034] (FRC logic 308 may be implemented as executable firmware); Safford-181, 15:60-64 (lockstep logic may be implemented in firmware).” Pet. at 11; <i>see also id.</i> at 39.
“It was also common and known that firmware can be used for handling processors errors. Nguyen, [0045] (using PAL or SAL layers of BIOS—firmware—for implementing error recovery mechanisms in Itanium® family processors); Marisetty, FIGS. 1-2, 5:48-8:64 (teaching using firmware including PAL and SAL to execute error handling routines); Schultz, FIGS. 1-3, [0017]- [0018] (teaching using firmware including PAL and SAL for correcting an error that is not correctable directly by hardware).” Ex. 2003 at 13-14.	“It was also common and known that firmware can be used for handling processors errors. Nguyen, [0045] (using PAL or SAL layers of BIOS—firmware—for implementing error recovery mechanisms in Itanium® family processors); Marisetty, FIGS. 1-2, 5:48-8:64 (teaching using firmware including PAL and SAL to execute error handling routines); Schultz, FIGS. 1-3, [0017]- [0018] (teaching using firmware including PAL and SAL for correcting an error that is not correctable directly by hardware).” Pet. at 11-12; <i>see also id.</i> at 34-35.

Thus, there is also substantial overlap between Petitioner’s invalidity arguments and the evidence and arguments that will be addressed during the forthcoming trial between Patent Owner and Kia. That the district court case involves additional prior

art references not asserted in this IPR is “not relevant to the question of the degree of overlap for this factor.” *Fintiv II* at 15.

In sum, this IPR and the Eastern District of Texas case involve the substantially the same claims, the same prior art, and the same arguments, which raises substantial “concerns of inefficiency and the possibility of conflicting decisions.” *Fintiv I* at 12. This factor thus weighs strongly in favor of a discretionary denial. *See Fintiv II* at 15; *NHK Spring* at 19–20; *see also, Next Caller*, IPR2019-00961, Paper 10 at 14 (denying institution where the district court case involved only a subset of the challenged claims).

E. Factor 5: Even though Petitioner is not a defendant in the Eastern District of Texas litigation, this IPR would be highly duplicative.

“Even when a petitioner is unrelated to a defendant ... the Board may, nonetheless, exercise the authority to deny institution.” *Fintiv I* at 14. In fact, the Board routinely denies institution under *Fintiv*, even where the petitioner is not involved in the district court litigation. *See, e.g., Fitbit, Inc. v. Philips North America, LLC*, IPR2020-00828, Paper 13 (Nov. 13, 2020); *Mylan Labs. Ltd. v. Janssen Pharmaceutica N.V.*, IPR2020-00440, Paper 17, 22-23 (Sept. 16, 2020); *Neptune Generics LLC v. Aventis Pharma S.A.*, IPR2019-00136, Paper 15, 35-37 (May 6, 2019). Therefore, this factor is neutral.

F. Factor 6: The petition is without merit and unlikely to succeed.

The Board may consider other circumstances in the exercise of its discretion, including the merits of the case. *Fintiv I* at 14. However, “a full analysis of the merits is not necessary to evaluate this factor.” *Fintiv II* at 17. Nevertheless, it is important to note that the Petition only raises one ground for unpatentability, which is based entirely on alleged obviousness (Petition at 1), and which relies on a reference (Exhibit 1005) that was already cited during the prosecution history of the '958 patent. Ex. 1004 at 41. Under these circumstances, it cannot be said that the Petition presents a compelling unpatentability challenge. When considered together with the five other *Fintiv* factors discussed above, this factor also favors discretionary denial.

III. CONCLUSION

The Petition should be denied because Petitioner has not established a reasonable likelihood of invalidity under any ground or challenged claim. As set forth above, five of the six *Fintiv* factors strongly favor discretionary denial, and the Petition should be denied for this reason alone.

Date: December 22, 2023

Respectfully submitted,

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CERTIFICATE OF WORD COUNT (37 C.F.R. § 42.24(d))

The undersigned hereby certifies that the word count in this Patent Owner Preliminary Response is no more than 3,223 words, as counted by the word-processing program Microsoft Word that was used to generate this Patent Owner Preliminary Response, where such word count excludes the table of contents, table of authorities, mandatory notices, certificate of service, appendix of exhibits, claim listing, and this certificate of word count. This Patent Owner Preliminary Response is in compliance with the 14,000-word limit set forth in 37 C.F.R. § 42.24(b)(1).

Date: December 22, 2023

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

The undersigned hereby certifies that the above document was served on December 22, 2023, by filing this document through the Patent Trial and Appeal Case Tracking System as well as delivering a copy via electronic mail upon the following attorneys of record for the Petitioner:

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