

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

ALIVECOR, INC.,
Petitioner

v.

APPLE INC.,
Patent Owner

Case No. IPR2024-00095

U.S. Patent No. 10,568,533 B2

PETITIONER'S REQUEST FOR REHEARING

Mail Stop PATENT BOARD
Patent Trial and Appeal Board
US Patent and Trademark Office
PO Box 1450
Alexandria, Virginia 22313-1450

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LIST OF EXHIBITS

Exhibit	Short Name	Description
Ex. 1001	'533 Patent	U.S. Patent No. 10,568,533 B2
Ex. 1002	'533 File History	Prosecution History of U.S. Patent No. 10,568,533 B2
Ex. 1003	Rosenberg Declaration	Declaration of Dr. Craig Rosenberg
Ex. 1004	Rosenberg CV	Curriculum vitae of Dr. Craig Rosenberg
Ex. 1005		CN Patent Publication No. CN106901720
Ex. 1006	AHIT	English Translation of CN Patent Publication No. CN106901720 and Certificate of Translation
Ex. 1007	Hooper	U.S. Patent No. 7,111,157
Ex. 1008	Cho	U.S. Patent Appl. Publ. No. 2016/0196635
Ex. 1009	Petterson	U.S. Patent No. 10,685,090
Ex. 1010	Albert	U.S. Patent Appl. Publ. No. 2015/0073285
Ex. 1011	Nakada	U.S. Patent No. 7,313,435
Ex. 1012	Mayor	U.S. Patent Appl. Publ. No. 2014/0173521
Ex. 1013	Riley	U.S. Patent No. 7,771,320
Ex. 1014	Hoffman	U.S. Patent Appl. Publ. No. 2012/0116550
Ex. 1015	mHealth Devices	AARATHI PRASAD, JACOB SORBER, TIMOTHY STABLEIN, DENISE ANTHONY, AND DAVID KOTZ, <i>UNDERSTANDING SHARING PREFERENCES AND BEHAVIOR FOR MHEALTH DEVICES</i> , ASSOCIATION FOR COMPUTER MACHINERY (2012) (“mHealth Devices”)

Exhibit	Short Name	Description
Ex. 1016	mHealth Devices Publication Info.	Publication Information for mHealth Devices – https://dl.acm.org/doi/pdf/10.1145/2381966.2381983?accessTab=true
Ex. 1017	Srinivasan	U.S. Patent No. 8,152,694
Ex. 1018	DiBenedetto	U.S. Patent No. 8,200,323
Ex. 1019	Soni	U.S. Patent No. 10,437,962
Ex. 1020	Lee	U.S. Patent No. 11,073,942
Ex. 1021	Weast	U.S. Patent No. 9,011,292
Ex. 1022	Apple’s Complaint	Complaint, <i>Apple Inc. v. AliveCor, Inc.</i> , Case No. 4:22-cv-07608-HSG, Dkt. No. 1 (N.D. Cal., Dec. 12, 2022)
Ex. 1023	Apple’s Infringement Contentions	Exhibit D to Apple’s Infringement Contentions Served July 25, 2023 in <i>Apple Inc. v. AliveCor, Inc.</i> , Case No. 4:22-cv-07608-HSG
Ex. 1024	National Judicial Caseload Profile	U.S. District Courts – National Judicial Caseload Profile (accessed via https://www.uscourts.gov/sites/default/files/cms_na_distprofile0331.2022.pdf)
Ex. 1025	Hardwick	Tim Hardwick, <i>AliveCor ‘Kardia Band’ Medical Grade EKG Analyzer for Apple Watch Receives FDA Approval</i> , MacRumors (Nov. 30, 2017), https://www.macrumors.com/2017/11/30/alivecor-kardia-ekg-band-medical-fda-apple-watch/
Ex. 1026	Kardia Video	Kardia by AliveCor, <i>How to record a clean EKG with KardiaBand</i> , YouTube (Nov. 30, 2017),

Exhibit	Short Name	Description
		https://www.youtube.com/watch?v=_VIc9VE6VO4&t=2s
Ex. 1027	Kardia Video Publication Info	Publication Information for Kardia Video Kardia by AliveCor, <i>How to record a clean EKG with KardiaBand</i> , YouTube (Nov. 30, 2017), https://www.youtube.com/watch?v=_VIc9VE6VO4&t=2s

Pursuant to 37 C.F.R. §42.71(c) and (d), Petitioner AliveCor, Inc. respectfully requests rehearing of the Board’s denial of institution of *inter partes* review. *See* Paper 7 (the “ID”).

I. INTRODUCTION

To obtain its patent, Patent Owner overcame the cited references that taught “output[ting] a failure notice which indicates that the measurement has failed” during prosecution by arguing that its claims required not one but *two* “different types of events that can cause the measurement of the biometric information to fail prior to completion.” Ex. 1002, 588; Paper 1, 5. But Petitioner demonstrated throughout its Petition that it was well-known in the art to (1) reset an indication of progress and (2) rely on time periods of inactivity to terminate a process and cause a user interface to reset such that it reverted to its initial screen. *See generally* Paper 1. In some cases, this was done to save battery whereas in others it was done to reduce processor usage for inactive processes. *Id.* As outlined in the Petition, such well known processes for dealing with failure and inactivity were combined with the base references that disclosed interfaces for biometric processing and resulted in a combined device whereby the disclosed interfaces would restart/reset after a period of inactivity. *Id.* Neither Patent Owner nor the Board addressed these arguments and, thus, rehearing is necessary. *See* Paper 6, Paper 7.

It appears that the Board denied institution in the present proceeding based solely on arguments introduced by Patent Owner in Patent Owner's Preliminary Response ("POPR") that served to distract from the plain language of the Petition and the supporting arguments. Had the Board fully considered Petitioner's arguments, explanations, and evidence in support of how a POSITA would have understood the combination of references presented, instead of overlooking them, the Board would have found that Petitioner demonstrated a reasonable likelihood of success with respect to at least one of the challenged claims of the '533 Patent.

Moreover, Patent Owner argued a claim construction position for the first time in its POPR that contradicted Patent Owner's own claim construction in the Related Proceeding. Despite its earlier positions, neither Patent Owner nor the Board addressed this inconsistency. Further, Petitioner could not have foreseen that the Patent Owner would raise this claim construction argument and the Board should have permitted Petitioner its requested short reply. Regardless, the Petition demonstrated a reasonable likelihood of success with respect to at least one of the challenged claims of the '533 Patent even under Patent Owner's new construction.

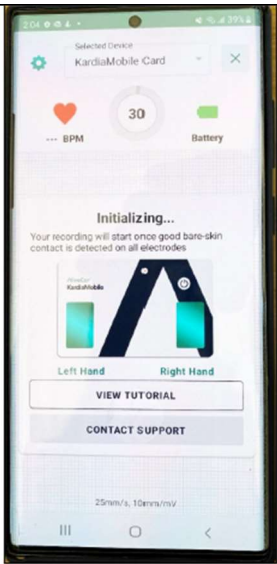
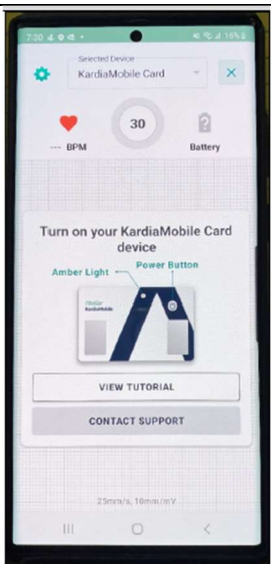
II. FACTUAL BACKGROUND

A. Overview of the Related Proceeding

On December 2, 2022, Patent Owner filed a complaint against Petitioner in the Northern District of California alleging infringement of the '533 Patent, amongst

others. On July 25, 2022, Patent Owner served its Disclosure of Asserted Claims and Infringement Contentions (“Contentions”), alleging that Petitioner infringes claims 20-22, 24, and 27 of the ’533 Patent. Patent Owner’s Contentions included an infringement chart purporting to map the asserted claims to Petitioner’s KardiaMobile Card devices in conjunction with the Kardia App. *See* Ex. 1023.

Without any explanation, Patent Owner, at best, contended that two different accused interfaces satisfied the “first user interface” limitation of [20.a] and the “first user interface” limitation of [20.f]. *See* Paper 1, 33, 52-53; Ex. 1023. For example, the table below compares the “first user interface” that Patent Owner identified for each element.

[20.a] “...a first user interface indicating that the first electronic device is ready to detect biometric information.”	[20.f] “...replacing display of the second user interface with the first user interface. ”
 Screenshot of the Kardia App. <i>See</i> Ex. 1023, 13-14.	 Screenshot from the Kardia App. <i>See</i> Ex. 1023, p. 31-32.

The above excerpt shows that, for [20.a], as highlighted in the Petition, Patent Owner appears to allege that a “Screenshot of the Kardia App” stating “Initializing....” and “Your recording will start once good bare-skin contact is detected on all electrodes” satisfies the “first user interface” limitation. *See* Paper 1, 52-53. The excerpt also shows that, for [20.f], Patent Owner appears to allege that a **different** “Screenshot from the Kardia App” that displays when “the KardiaMobile Card automatically shuts off after ten seconds,” stating “Turn on your KardiaMobile Card device” satisfies the “first user interface” limitation. *See* Paper 1, 33.

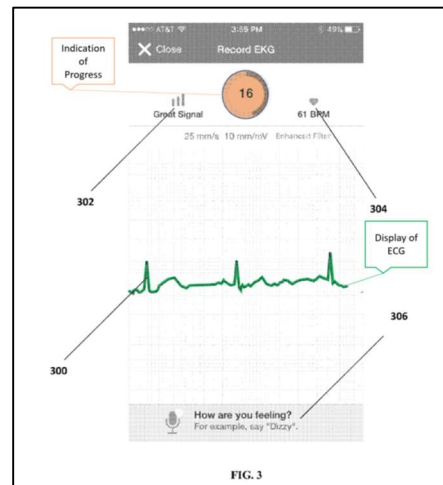
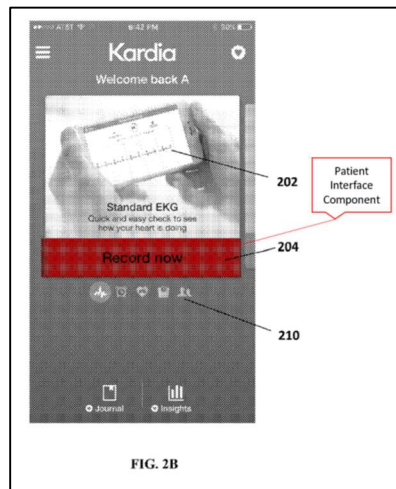
B. Overview of the IPR Proceeding

Petitioner alleged that the challenged claims of the ’533 Patent were invalid as obvious under 35 U.S.C. §103 according to four grounds. Specifically, and in Ground 3, Petitioner alleged that claim 20 was obvious in view of Petterson, Albert, Nakada, and Mayor. *See generally* Paper 1.

Petitioner explained that, for claim [20.a], Petterson discloses “a first user interface indicating that the first electronic device is ready to detect biometric information,” with reference to FIG. 2B (*see* Paper 1, 51-55; Ex. 1009, FIG. 2B), and, for claim [20.c2], Petterson discloses “a second user interface that is different from the first user interface” that “includes an indication of progress in recording the biometric information,” with reference to FIG. 3. *See* Paper 1, 61-64; Ex. 1009, FIG.

3. Patent Owner does not dispute Petitioner’s mappings with regard to [20.a] and [20.c2]. *See generally* Paper 6.

Ex. 1009, FIGs. 2B, 3 (annotated); *see also* Paper 1, 53, 62



Regarding claim [20.f], Petitioner explained that Petterson renders obvious “in response to detecting that the first criteria are no longer met for a second period of time that is longer than the first period of time, replacing display of the second user interface with the first user interface,” because, in view of Petterson, the POSITA would have understood that a device would not remain in a recording mode indefinitely if the first criteria were no longer met for a period of time after which it would not make sense to continue attempting to record, and that in user interface design it would have been preferred to return from FIG. 3 back to FIG. 2B. *See* Paper 1, 68-69 (citing Ex. 1003, ¶¶379-382). As was established and supported by the declaration, such a process was well known in user interface design. *See* Paper 1, 48-49 (citing Ex. 1003, ¶307); *see also* Ex. 1003, ¶¶65-76.

Also regarding claim [20.f], Petitioner further explained that, to the extent the POSITA sought additional details regarding replacing display of the second user interface with the first user interface, the POSITA would have turned to Nakada. *See* Paper 1, 69-71. Petitioner explained that Nakada explicitly discloses a second condition where, if its device determines that an accurate measurement could not be made after a lapse of 30 seconds, the device displays an error and returns to its beginning state (e.g., in the case of Nakada, this is the off position). *See* Paper 1, 69-70; Ex. 1011, 9:45-57, FIG. 4; Ex. 1003, ¶¶380-382). There is no dispute with respect to the teachings of Nakada and there is no dispute that Nakada teaches returning to a beginning state of a routine.

Petitioner specifically stated that Nakada confirms that after 30 seconds have elapsed an error is displayed and then the system is returned to the beginning state of the routine, which in the case of the combined system that relied on the Petterson routine would be FIG. 2B.¹ *See* Paper 1, 69-71 (citing 1003, ¶382); *see also* Paper 1, 49-50 (“Motivation to Combine”); *see also* Ex. 1003, ¶¶65-76). Providing rationale for the modification, Petitioner stated that the POSITA would have understood that Petterson would have been modified in view of Nakada to return to its beginning state to maintain battery life of the device as well as keep the user informed as to

¹ There is no dispute that the beginning state in Petterson is Figure 2B.

device and/or recording status. Paper 1, 49-50 (citing to Ex. 1003, ¶307); *see also* Ex. 1003, ¶¶65-76. That is, Petitioner argued that Petterson could have been modified to return to the beginning state of its routine, in view of Nakada's teachings related to its second condition. *Id.* And in Petterson, ***returning to the beginning state of its routine would be FIG. 2B.*** *See* Paper 1, 71 (citing 1003, ¶382).

The Board Issued the Institution Decision ("ID"), denying institution and found that Petitioner failed to show a reasonable likelihood of prevailing in its challenge to claim 20, reasoning that "Petitioner does not cite to any portion of Petterson that indicates the interface shown in Figure 3 is replaced by the interface shown in Figure 2B," "[t]he cited portions of Nakada do not describe replacing one user interface with another and, instead, describes displaying an error on a display section," "Petitioner does not explain why Nakada's displaying of an error would have been understood to be a 'first user interface,'" and "Petitioner does not explain adequately why or how one of ordinary skill in the art would have understood Nakada to be replacing a user interface when it describes displaying an error and then turning off the display." ID (Paper 7), 38-40. The Board's analysis of Nakada individually and its interpretation of Nakada simply displaying an error (and not considering or addressing the return to the beginning state) are in and of themselves an abuse of discretion, especially in view of the combination as a whole and the understanding of a POSITA.

III. LEGAL STANDARD

A party may request rehearing of a decision by the Board whether to institute a trial. 37 C.F.R. § 42.71(d). The request “must specifically identify all matters the party believes the Board misapprehended or overlooked, and the place where each matter was previously addressed in [the papers].” *Id.* The Board reviews its previous decisions for an abuse of discretion. 37 C.F.R. § 42.71(c). “An abuse of discretion may be indicated if a decision is based on an erroneous interpretation of law, if a factual finding is not supported by substantial evidence, or if the decision represents an unreasonable judgment in weighing relevant factors.” *Huawei Device Co., Ltd. v. Optis Cellular Tech., LLC*, No. IPR2018-00816, Paper 19, at 2-3 (PTAB Jan. 8, 2019) (precedential).

IV. REHEARING IS APPROPRIATE

A. The Board Overlooked Petitioner’s Arguments

In denying institution, the Board found that Petitioner failed to show a reasonable likelihood of prevailing in its challenge to claim 20 with respect to Ground 3. *See* ID (Paper 7). In so ruling, the Board overlooked the totality of the combination and Petitioner’s arguments and supporting evidence regarding the modification of Petterson that would have been obvious to the POSITA in view of Nakada.

Patent Owner's argument mischaracterized the Petitioner's proposed combination. For example, Patent Owner argued that "[n]owhere does Nakada disclose, teach, or suggest replacing a second user interface that includes an indication of progress with a first user interface indicating that the device is ready to detect biometric information," and that "Pettersen already describes user interface displays that AliveCor argues a POSITA would have looked to find in Nakada." Paper 6, 16-17.

Patent Owner's focus on whether Nakada explicitly discloses "replacing a second user interface" "with a first user interface indicating that the device is ready to detect biometric information," as well as its assertion that Petitioner directly relies on Nakada for user interface displays mischaracterizes Petitioner's argument. That is, Patent Owner mischaracterized Petitioner's argument to be an assertion that Nakada simply teaches the POSITA to turn off a device. *See* Paper 6, 26. Instead, Petitioner argued that Nakada confirms that after 30 seconds have elapsed an error is displayed and then the system is returned to the beginning state of the routine, "***which in the case of Pettersen would be FIG. 2B.***" Paper 1, 70-71 (emphasis added). Therefore, Petitioner's argument was that, in view of Nakada's disclosure of an error and powering down, thus resetting its routine, the POSITA would have known the system is returned to a beginning state of the routine (in which the device is off, in S15 and S1), and that with such knowledge, the POSITA would have found

it obvious to modify Petterson to return from FIG. 3 to its beginning state of the routine – FIG. 2B. *See* Paper 1, 70-71.

As a result of Patent Owner’s distractions and mischaracterizations, the Board overlooked Petitioner’s statement regarding returning to the beginning state of Petterson’s routine (from FIG. 3 to FIG. 2B) in view of Nakada’s return to the beginning state of its routine, and the evidence in support of Petitioner’s arguments, including Petitioner’s Motivation to Combine section, Dr. Rosenberg’s testimony, and Dr. Rosenberg’s Technical Background section – all of which were properly cited and referenced in the relevant portions of the Petition.

Indeed, clearly overlooked by the Board and contrary to the Board’s statements regarding Petitioner’s failures to adequately explain, Petitioner cited to and explained in detail in its Motivation to Combine Section (*see* Paper 1, 49-50), that the POSITA would have understood, in view of Nakada’s error condition, that Petterson would have been modified to return to its routine’s beginning state (i.e., FIG. 2B), so as to maintain battery life of the device as well as keep the user informed as to device and/or recording status. *See* Paper 1, 49 (citing Ex. 1003, ¶307), 70-71. Further overlooked by the Board, Dr. Rosenberg, in ¶307 of Ex. 1003, with citation to section VI of Ex. 1003 (¶¶65-76, “Technical Background”), explained that a POSITA would have understood the importance of a standby or inactive state to save battery. *Id.*

Contrary to the Board's assertion that Petitioner's references to testimonial evidence are devoid of citation to the record for support, in section VI of Ex. 1003, Dr. Rosenberg explained in detail what the POSITA would have understood with respect to user interface timeouts. Ex. 1003, ¶¶65-76. Specifically, Dr. Rosenberg explained, with detailed references to supporting evidence such as Lee (Ex. 1020) and Weast (Ex. 1021), that the POSITA would have known that various timeout durations and display modes could be used in conjunction with user interfaces "to save battery," where "user interface timeouts may result in a new screen and/or reduced functionality" or "the device may enter a standby or sleep state." Ex. 1003, ¶65 (*see also* ¶¶66-76).

Had the Board considered Petitioner's arguments and evidence as opposed to Patent Owner's mischaracterizations of Petitioner's arguments and evidence, the Board would have found that Petitioner had fully and adequately explained, with evidentiary support, why a POSITA would have found it obvious for Petterson to replace the user interface shown in FIG. 3 with the user interface shown in FIG. 2B in absence of the first criteria being met. The Board would have understood that Petitioner had provided adequate explanation that the POSITA would have understood, in view of Nakada's return to the beginning state of its routine, that Petterson would have been modified to return to the beginning state of its routine (e.g., from FIG. 3 to FIG. 2B) so as to maintain battery life of the device as well as

keep the user informed as to device and/or recording status. The Board, therefore, would have found that Petitioner demonstrated a reasonable likelihood of prevailing in its challenge to claim 20.

B. The Board Abused Its Discretion by Failing to Consider the Patent Owner's Infringement Contentions

After Patent Owner advanced in its Preliminary Response a position contradictory to its position in the Related Proceeding, Petitioner sought the Board's authorization to file a reply to address Patent Owner's unforeseeable argument. The Board denied Petitioner's request for a conference and refused to authorize additional briefing. Regardless, the Decision failed to address the inconsistency between Patent Owner's arguments in District Court and in the IPR. *See generally* Paper 7.

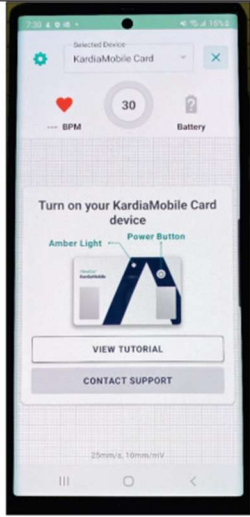
Patent Owner took the position in its Preliminary Response that "the 'replacing' requirement" of [20.f] "specifically requires replacing a user interface containing the 'indication of progress' with a different user interface that 'indicat[es] that [a] first electronic device is ready to detect biometric information.'" Paper 6, pp. 5, 16-17. However, in the Related Proceeding, Patent Owner pointed to a user interface that *does not indicate* the device is ready to detect biometric information as satisfying this element. *See* Section II.A *supra* (citing Ex. 1023, 31-32). In particular, Patent Owner points to turning off and turning on as satisfying [20.f]. *See*

Ex. 1023. 31-32²; *see also* Paper 1 at 33 (“Apple indicates ‘the KardiaMobile Card automatically shuts off after ten seconds if no contact from the user’s skin is sensed by the KardiaMobile Card.’”). Indeed, as outlined in Section II.A *supra*, even the interface identified is different than the alleged “first interface.”

² The language of 20.f in the Petition is referred to by Patent Owner in its Contentions as 20.g. Ex. 1023, 31-32.

Ex. 1023, 31-32

Claim 20	AliveCor Products
[20.g] in response to detecting that the first criteria are no longer met for a second period of time that is longer than the first period of time, replacing display of the second user interface with the first user interface.	The AliveCor Products comprise “one or more programs including instructions for ... in response to detecting that the first criteria are no longer met for a second period of time that is longer than the first period of time, replacing display of the second user interface with the first user interface.” For example, the KardiaMobile Card automatically shuts off after ten seconds if no contact from the user’s skin is sensed by the KardiaMobile Card. When the KardiaMobile Card automatically shuts off, the Kardia App on the first electronic device displays the first user interface. See, e.g.: How do I turn off the KardiaMobile Card? Updated · 8 months ago The KardiaMobile Card will turn off automatically after 10 seconds if no contact is sensed. This means that you will only have to turn on your device by pressing the power button on the card in order to record your EKG. After you have finished recording an EKG, the device will automatically shut off. The power button does not need to be pressed after recording in order to turn the card off. How do I turn off the KardiaMobile Card? (APL-ALV00010879).

Claim 20	AliveCor Products
	 Screenshot from the Kardia App.

Patent Owner’s contrary positions are not surprising because Petitioner’s products do not “replac[e] display of [a] second user interface with the first user interface” “in response to detecting that the first criteria are no longer met for a second period of time longer than the first period of time,” where “the first user interface” “indicat[es] that the first electronic device is ready to detect biometric information.” However, despite the shortcomings on infringement, Patent Owner

plainly and improperly seeks to twist the patent one way to find infringement and another to avoid invalidity. *CommScope Techs. LLC v. Dali Wireless Inc.*, 10 F.4th 1289, 1299 (Fed. Cir. 2021). Neither Patent Owner nor the Board addressed this inapposite position, which, in and of itself, is an abuse of discretion. *See generally* Paper 6, Paper 7.

Patent Owner’s apparent position in the Related Proceeding does not reconcile with Patent Owner’s view in the POPR – that the second user interface be replaced with **the** first user interface. Under Patent Owner’s interpretation advanced in the Related Proceeding, the Board did not need to find that the “second user interface” had to be replaced with “**the** first user interface.” In such a case, there is no dispute that the references in each of the grounds teach or suggest the claims. Regardless, Petitioner’s prior art addresses this unforeseen position as was described above. *See* Section IV.A *supra*.

V. **CONCLUSION**

Petitioner respectfully requests that the Board rehear this case and grant institution.

Date: June 10, 2024

By: /Christopher TL Douglas/
Christopher TL Douglas
Reg. No. 56,950

CERTIFICATE OF SERVICE

Pursuant to 37 C.F.R. §§42.6(e), 42.105, the undersigned hereby certifies that true and correct copies of the above-captioned PETITIONER’S REQUEST FOR REHEARING was served in its entirety on June 10, 2024, upon the following attorneys of record for Patent Owner:

W. Karl Renner
Jeremy Monaldo
IPR50095-0189IP1@fr.com

Date: June 10, 2024

By: /Christopher TL Douglas/
Christopher TL Douglas