

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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AMAZON.COM SERVICES LLC,

Petitioner,

v.

SMART SPEAKER LLC,

Patent Owner.

Patent No. 11,190,590  
Filing Date: May 30, 2018  
Issue Date: November 30, 2021

Inventors: Yehuda Binder and Benjamin Maytal  
Title: SYSTEM AND METHOD FOR SERVER BASED CONTROL

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**PATENT OWNER'S PRELIMINARY RESPONSE**

Case No. IPR2026-00148

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**LIST OF EXHIBITS**

<b>Exhibit No.</b>	<b>Description of Document</b>
2001	Plaintiff's Disclosure of Asserted Claims and Infringement Contentions in <i>Smart Speaker LLC v. Amazon.com Servs. LLC</i> , Case No. 2:25-cv-00707-JRG (E.D. Tex.), dated September 16, 2025
2002	Defendant's Invalidity and Subject Matter Eligibility Contentions in <i>Smart Speaker LLC v. Amazon.com Servs. LLC</i> , Case No. 2:25-cv-00707-JRG (E.D. Tex.), dated December 9, 2025
2003	Federal Register, Vol. 90, No. 199, dated Friday, October 17, 2025
2004	Second Amended Docket Control Order (Dkt. 33) in <i>Smart Speaker LLC v. Amazon.com Servs. LLC</i> , Case No. 2:25-cv-00707-JRG (E.D. Tex.), dated October 29, 2025
2005	Letter to Amazon.com, Inc. re May Patents Ltd. Patent Portfolio, dated July 23, 2024
2006	Appeal Statistics, Patent Trial and Appeal Board, dated October 31, 2025
2007	Patent Trial and Appeals Board (PTAB) data at a glance December 2025

## I. INTRODUCTION

On November 22, 2025, Amazon.com Services LLC (“Petitioner”) submitted a petition (Paper 2, “Petition” or “Pet.”) to institute *inter partes* review (“IPR”) of U.S. Patent No. 11,190,590 (EX1001, the “’590 Patent”), challenging Claims 1-36 and 38-63 (the “Challenged Claims”).

The ’590 Patent claims an appliance module with a current sensor for measuring AC current consumed by the appliance, a first sensor having an output that responds to a physical phenomenon, an antenna, a wireless transceiver, and—critically—“*a single enclosure housing the current sensor, the first sensor, the antenna, and the wireless transceiver.*” The Petition advances fifteen grounds across two primary references: Chan (Grounds 1–10) and a combination of Seo and Chan (Grounds 11–15). Both sets of grounds fail to establish the single-enclosure limitation, and the Chan-based grounds additionally fail to establish distinct “*current sensor*” and “*first sensor*” components.

Grounds 1–10 rely on Chan (EX1004) as the primary reference. Chan’s FIG. 4 is a block diagram showing functional connections among components—it does not depict, describe, or even mention a physical enclosure, housing, or casing. The Petition resorts to a separately submitted user manual (EX1043) in an attempt to establish the physical form factor of FIG. 4 of Chan, underscoring the deficiencies of Chan’s actual disclosures. Additionally, the Petition attempts to map Chan’s two

current transformers (CT 425a and CT 425b), which are sub-components of the same power measurement module 421, to satisfy both the “*current sensor*” and “*first sensor*” limitations. But these are not two independent sensors; they are inputs to a single measurement system for monitoring electrical current through conductors connected to the same AC socket. Claim 1, however, requires two distinct sensor components performing different functions, not two instances of the same type of component within one measurement module.

Separate, Grounds 11–15 rely on the combination of Seo (EX1005) and Chan. Seo’s purported disclosure of the claimed “*single enclosure*” fares no better. Seo states that its power consumption detection unit detects current through “a current detection unit (not shown)”—expressly acknowledging that the contemplated current detection is not located anywhere specifically. Given that the current detection unit is “not shown” anywhere in Seo, FIG. 4 cannot “expressly show” that it is enclosed within the control device 400, as the Petition asserts. Further, Seo’s sensors are physically distributed throughout the refrigerator—*e.g.*, internal temperature sensors installed inside compartments, an external temperature sensor located outside the refrigerator, and height sensors mounted on individual shelves—and cannot be co-located within a single enclosure with the communication unit.

For the reason stated herein, the Board should deny institution of the Petition in its entirety.

## **II. CLAIM CONSTRUCTION**

For the purposes of this Preliminary Response only, Patent Owner agrees with Petitioner that the Board need not construe any claims. Pet. at 6.

## **III. LEVEL OF ORDINARY SKILL IN THE ART**

For the purposes of this Preliminary Response only, Patent Owner applies Petitioner's definition of a POSITA. Pet. at 5-6.

## **IV. PETITIONER HAS NOT DEMONSTRATED A REASONABLE LIKELIHOOD OF SUCCESS FOR THE GROUNDS ADVANCED IN THE PETITION, AND THE PETITION SHOULD BE DENIED**

The question of obviousness is resolved on the basis of underlying factual determinations, including: (1) the scope and content of the prior art, (2) any differences between the claimed subject matter and the prior art, (3) the level of skill in the art, and (4) so-called secondary considerations where in evidence. *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 17-18 (1966); *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). The question is not whether the differences themselves would have been obvious, but whether the claimed invention as a whole would have been obvious. *Stratoflex, Inc. v. Aeroquip Corp.*, 713 F.2d 1530, 1537 (Fed. Cir. 1983).

The Board has held that a failure to identify the differences between the claimed subject matter and the prior art is fatal to an obviousness challenge. *See, Apple, Inc. v. Contentguard Holdings, Inc.*, IPR2015-00355, Decision Denying

Institution of *Inter Partes* Review, Paper 9 at 9-10 (P.T.A.B. June 26, 2015) (denying institution for failure to identify the differences between the claimed subject matter and the prior art).

In arriving at an obviousness determination, the Board must sufficiently explain and support the conclusions that the prior-art references disclose all the elements recited in the Challenged Claims and a relevant, skilled artisan not only could have made, but would have been motivated to combine all the prior art references in the way the patent claims and reasonably expected success. *Pers. Web Techs., LLC v. Apple, Inc.*, 848 F.3d 987, 994 (Fed. Cir. 2017). That is, even if all the claim elements are found across a number of references, an obviousness determination must consider whether a person of ordinary skill in the art would have the motivation to combine those references. *Intelligent Bio-Sys., Inc. v. Illumina Cambridge Ltd.*, 821 F.3d 1359, 1368 (Fed. Cir. 2016); *Los Angeles Biomedical Rsch. Inst. at Harbor-UCLA Med. Ctr. v. Eli Lilly & Co.*, 849 F.3d 1049, 1067 (Fed. Cir. 2017) (vacating and remanding an obviousness determination, in part, because the Board did not make factual finding as to whether there was an apparent reason to combine all three prior art references to achieve the claimed invention and whether a person of skill in the art would have had a reasonable expectation of success from such a combination). This combinability determination, as supported by an articulated motivation to combine, requires a plausible rationale as to why those

prior art references would have worked together. *Broadcom Corp. v. Emulex Corp.*, 732 F.3d 1325, 1335 (Fed. Cir. 2013). Absent some articulated rationale, a “common sense” finding is no different than the conclusory statement “would have been obvious.” *In re Van Os*, 844 F.3d 1359, 1361 (Fed. Cir. 2017). Of additional importance, “knowledge of a problem and motivation to solve it are entirely different from motivation to combine particular references . . . .” *Innogenetics, N.V. v. Abbott Lab’ys*, 512 F.3d 1363, 1373 (Fed. Cir. 2008).

35 U.S.C. § 312(a)(3) requires that an IPR petition must identify, “in writing and with particularity, each claim challenged, the grounds on which the challenge to each claim is based, and the evidence that supports the grounds for the challenge to each claim.” 35 U.S.C. § 312(a)(4) requires that a “petition filed under section 311 may be considered only if . . . the petition provides such other information as the Director may require by regulation.” 37 C.F.R. § 42.104(b)(4) requires that a petition for *inter partes* review “must specify where each element of the claim is found in the prior art patents or printed publications relied upon.” General knowledge, such as applicant admitted prior art, expert testimony, common sense, and other evidence, that is not prior art consisting of patents or printed publications may not be used to supply a missing claim limitation. *See* July 31, 2025 Memorandum from Acting Director Stewart Regarding Enforcement and Non-Waiver of 37 C.F.R. § 42.104(b)(4). The Board may deny an IPR petition that fails to comply with Rule

104(b)(4). *Id.*

**A. The Petition Does Not Show That Chan Discloses “*a single enclosure housing the current sensor, the first sensor, the antenna, and the wireless transceiver,*” as Required by Claim Element 1[F]**

Claim 1 requires “*a single enclosure housing the current sensor, the first sensor, the antenna, and the wireless transceiver.*” The Petition maps this limitation to Chan’s appliance module 400 as depicted in FIG. 4 of Chan. Pet. at 30–32; EX1002, ¶¶ 128–133. But Chan’s FIG. 4 is a block diagram—an abstract, functional schematic depicting the logical connections among components such as CPU 401, powerline chipset 403, ZigBee wireless chipset 405, current transformers 425a and 425b, relay switch 423, and temperature/humidity sensor 409. EX1004, FIG. 4, [0070]. Nowhere in FIG. 4 or anywhere else in the Chan specification does the reference depict, describe, or even mention a physical enclosure, housing, or casing of any kind. That is a fatal gap in the prior art.

The Petition’s assertion that Chan’s appliance module constitutes a “*single enclosure*” rests on two inferential leaps, neither of which is supported by the four corners of the reference. Pet. at 31–32; EX1002, ¶¶ 129–130.

*First*, the Petition infers that because Chan describes the appliance module as “a device which may be plugged into an electrical outlet,” it must have a single device housing enclosing all its parts. Pet. at 31; EX1002, ¶ 129. But that inference

does not follow. Chan’s description that the module “may be plugged into an electrical outlet” merely indicates how the module physically connects to a power source—it says nothing about whether *all* of the module’s components are contained within a *single* enclosure. EX1004, [0071]. A system that plugs into a wall outlet could consist of multiple interconnected housings, a bare circuit board mounted to a chassis, a board-level subassembly installed within the appliance itself, or any number of physical configurations. The fact that a system connects to an outlet simply does not establish that every functional component shown in a logical block diagram resides in one enclosure. For the Board to accept the Petition’s mapping, the Board would have to assume a structural fact—that all of the components shown in FIG. 4 are in one housing—that Chan never discloses.

*Second*, the Petition points to a user manual for a commercial product manufactured by Jetlun Corporation under the part number RD75613 (EX1043), which the Petition characterizes as showing the hypothetical physical form factor of Chan’s appliance module. Pet. at 31; EX1002, ¶ 130. This reliance on extrinsic evidence underscores the deficiency in Chan itself: if Chan’s own disclosure were sufficient to establish a “*single enclosure*,” the Petition would not need to resort to a separately submitted user manual. Moreover, there is no evidence that the Jetlun RD75613 product actually embodies the *specific* combination of components depicted in Chan’s FIG. 4. Chan’s specification is a patent application directed to a

broad system architecture and it mentions the RD75613 only in passing. EX1004, [0047]. The specification does not state that the RD75613 product includes all of the components shown in FIG. 4—including two current transformers, a wireless chipset, a CPU, a relay switch, a powerline chipset, and a temperature/humidity sensor— all within a single housing. There is no disclosure linking the physical enclosure shown in EX1043 to the functional block diagram of FIG. 4. The Petition asks the Board to assume that a user manual photograph of one commercial product establishes a structural fact about the Chan’s block-diagram architecture of FIG. 4, which is an unsupported assumption.

The distinction between a block diagram and a physical enclosure is not a technicality—it goes to the heart of the claim limitation. Claim 1 requires a “*single enclosure housing the current sensor, the first sensor, the antenna, and the wireless transceiver.*” The word “*housing*” denotes a physical containment relationship: the enclosure must physically contain all four identified components together within one structure. A block diagram that shows functional connections between components—as FIG. 4 does—does not establish that those components share a single physical “*housing.*” Block diagrams are commonly used in the art to represent logical relationships among system elements without depicting their physical arrangement.

Indeed, Chan’s own disclosure suggests that the appliance module’s components do *not* necessarily reside in a single physical housing. Chan discloses that the appliance module integrates with the broader energy monitoring network and that it may include a wide range of sensors—including “one or more sensors” such as a “temperature/fog/brightness/infrared sensor 1107, a switch/relay/alarm sensor 1109,” “one or more pressure sensors,” “one or more microphones,” “one or more vibration sensors,” and “biological sensors,” among others. EX1004, [0070], [0109], Claims 3–16. FIG. 1 of Chan further shows that sensors may be *external* to the appliance module 111, rather than housed within it. The range and nature of these sensor types—biological sensors, infrared sensors, pressure sensors, and so on—forecloses the conclusion that every component shown in a block diagram is necessarily housed within one small plug-in enclosure.

Moreover, the Petition’s declarant, Dr. Houh, merely asserts that “[a] POSITA would have understood (and found it obvious) that appliance module, as a device, would have a device housing enclosing its parts.” EX1002, ¶ 129. This conclusory statement does not supply the factual disclosure or supported testimony evidence that Chan’s specification lacks. An expert cannot fill a gap in a prior art reference by blanketly testifying that a POSITA would have found a missing structural feature “obvious.” The question is not whether a POSITA could design a single-enclosure module; the question is whether Chan discloses one. It does not. 35 U.S.C.

§ 312(a)(3) requires the Petition to identify the evidence “that supports the grounds for the challenge to each claim” with “particularity.” Where the only evidence for a claim limitation is an expert’s speculation that a POSITA would have inferred a structural arrangement from an abstract block diagram, the Petition has not met its burden.

**B. The Petition Does Not Show That Chan’s Two Current Transformers Satisfy Both the “*current sensor*” and the “*first sensor*,” as Required by Claim Elements 1[B] and 1[C]**

Claim 1 separately recites two distinct sensor elements: (1) “*a current sensor coupled to the AC connector for measuring an AC current consumed by the appliance*” (limitation 1[B]) and (2) “*a first sensor having an output that responds to a physical phenomenon*” (limitation 1[C]). These are independently recited claim elements with different functional descriptions. The “*current sensor*” of limitation 1[B] is defined by its specific function: it measures the AC current consumed by the appliance. The “*first sensor*” of limitation 1[C] is defined by a broader, different function: it has an output that responds to a physical phenomenon. These distinct functional recitations confirm that the claim requires two separate sensor components, each performing its own described role.

The Petition’s primary mapping for Ground 1 relies on Chan’s two current transformers to satisfy these two independently recited limitations. Specifically, the Petition maps current transformer CT 425a to the “*current sensor*” of limitation

1[B], and current transformer CT 425b to the “*first sensor*” of limitation 1[C]. Pet. at 23–25; EX1002, ¶¶ 108–113. This mapping is deficient for multiple reasons.

*First*, a current transformer does not independently “measure” anything. A current transformer is a passive electromagnetic coupling device that produces a proportional secondary current in response to current flowing through a primary conductor. It has no processing capability, no output interface, and no ability to generate measurement data on its own. In Chan, both CT 425a and CT 425b are sub-components of the power measure module 421—they are inputs to that module, which performs the actual signal processing and generates the measurement data. EX1004, [0070] (“The power measure module 421 is connected to a power supply 437 and two (2) current transformers (CT) 425a and 425b that are connected to a standard AC socket 427.”). The CTs are thus component parts of a single measurement subsystem, not two independent sensors performing distinct functions.

*Second*, both current transformers serve the same overarching function—the power measurement function of module 421—and both are connected to the same AC socket 427. CT 425a “measures current on the live wire 429,” while CT 425b “measures current leakage on the neutral wire 431.” EX1004, [0070]. The Petition characterizes CT 425b’s leakage current detection as responding to a “physical phenomenon,” but both CTs are responding to the same type of physical phenomenon—electrical current flowing through a conductor. The difference is

merely which wire each CT monitors, not what phenomenon each CT detects. Mapping Chan's two sub-components of the same power measurement module as two different "*sensors*" under the claim improperly conflates what are functionally components of one measurement subsystem into two independently operating sensor elements.

*Third*, the claim language itself presupposes that the "*current sensor*" and the "*first sensor*" are distinct components because each carries different downstream requirements. Limitation 1[G] requires that "*the first sensor is coupled to the wireless transceiver for transmitting digital data in response to the physical phenomenon to the wireless network.*" Limitation 1[I] separately requires that "*the current sensor is further coupled to the wireless transceiver for transmitting digital data in response to the measured AC current to the wireless network.*" These parallel but distinct limitations confirm that the claim contemplates two different sensor components, each independently generating data that is transmitted over the wireless network. If both claimed "*sensors*" are merely sub-components of the same power measure module 421, then the data transmitted is not independently generated by each sensor but is rather a single data output from module 421, undermining the Petition's claim that the two limitations are separately satisfied.

The Petition alternatively identifies Chan's temperature and humidity sensor 409 as another purported "*first sensor.*" Pet. at 25; EX1002, ¶¶ 114–116. While

sensor 409 does respond to a physical phenomenon (*i.e.*, temperature and humidity), this alternative mapping introduces its own deficiency. Chan's FIG. 4 shows sensor 409 as a component connected to CPU 401 through I/O ports 411. EX1004, [0070], FIG. 4. As discussed above in connection with limitation 1[F], Chan's FIG. 4 is a block diagram showing functional connections, not physical co-location. There is no disclosure that sensor 409 is physically housed within the same single enclosure as the current transformers, the antenna, and the wireless transceiver. Indeed, Chan's FIG. 1 shows sensors as separate from—and *external to*—appliance module 111, undermining the inference that sensor 409 resides inside the module's housing. The Petition does not address this discrepancy.

Dr. Houh's Declaration does not cure these deficiencies. Dr. Houh asserts that "CT 425b function[s] as the first sensor having an output that responds to a physical phenomenon" and that "Chan's appliance module 400 integrates all four claimed components within a single housing." EX1002, ¶ 131. But these conclusory assertions do not explain how two sub-components of the same power measurement module constitute two independent sensors as the claim requires, nor do they identify any disclosure in Chan establishing that sensor 409 is housed within the appliance module enclosure. Expert testimony cannot bridge a gap in the prior art's disclosure by simply restating the Petition's mapping in conclusory terms.

**C. All Other Grounds Relying on Chan Fail for the Same Reasons**

Ground 1 challenges Claims 1–7, 13, 15, 16, 19–27, 29, 30, 32, 38, 41, 44–46, and 53. Because the Petition’s Ground 1 mapping fails to establish that Chan discloses “*a single enclosure housing the current sensor, the first sensor, the antenna, and the wireless transceiver*” as required by Claim 1, the Petition necessarily fails to establish a reasonable likelihood of prevailing on any claim dependent on Claim 1 in Ground 1. The limitation 1[F] deficiency identified above is a threshold failure—the Petition cannot show that Chan, whether alone or in combination with any of the secondary references asserted in Grounds 2–10, satisfies the single-enclosure limitation because none of the secondary references in those Grounds is asserted to remedy this deficiency. Pet. at 37–100.

Further, the Petition’s Ground 1 mapping fails to establish that Chan discloses a “*first sensor having an output that responds to a physical phenomenon*” as a component distinct from the “*current sensor*,” and this deficiency applies to every Ground that depends on the same CT-based mapping. None of the secondary references in Grounds 2–10 is asserted to provide an alternative mapping for the “*first sensor*” limitation independent of Chan’s current transformers. Pet. at 37–100. The Board should therefore deny institution on this additional, independent basis.

The Board should deny institution of Ground 1 and all related Grounds on these bases.

**D. The Petition Does Not Show That Seo Discloses a “single enclosure housing the current sensor, the first sensor, the antenna, and the wireless transceiver,” as Required by Claim Element 1[F]**

As discussed, Claim 1 requires “a single enclosure housing the current sensor, the first sensor, the antenna, and the wireless transceiver.” ’590 Patent, 171:30-31. This limitation requires all four components—the current sensor, the first sensor, the antenna, and the wireless transceiver—to be physically co-located within a single housing. The Petition’s Ground 11 mapping of this limitation to Seo is deficient for multiple independent reasons.

The Petition asserts that “FIG. 4 of Seo expressly shows that the control device 400 encloses the power consumption detection unit 450 (including ‘current detection unit’), the various first sensors, and the communication unit 440 (including the wireless transceiver and antenna).” Pet. at 82; EX1002, ¶ 491. But Seo directly contradicts this assertion. Seo states that the power consumption detection unit 450 “can detect power consumption in various ways; for example, it may detect the current and voltage applied to the refrigerator main body 100 through a current detection unit (**not shown**) and a voltage detection unit (**not shown**).” EX1005, [0055] (emphasis added). The parenthetical “(not shown)” is Seo’s express

acknowledgment that the current detection unit does not appear in any Figure or at any specific location within Seo's system—including FIG. 4. If the current detection unit is “not shown” anywhere in Seo, FIG. 4 cannot “expressly show” that it is specifically enclosed within the control device 400.

Seo provides no disclosure of the physical location, form factor, or structural arrangement of the current detection unit. Seo's description addresses only function—what the current detection unit does—not where it is located or how it is physically situated and/or configured. Seo never describes whether the current detection unit is in the AC wiring path, how it is physically connected to the refrigerator's power input, or how its output reaches the communication unit 440. *Id.*, [0055]. Without any disclosure of the current detection unit's physical location, the Petition cannot establish that it is specifically “*housed*” within any particular enclosure, much less within the same enclosure as the first sensor, the antenna, and the wireless transceiver, as required by Claim 1.

Seo's own disclosures further demonstrate that the components of the “state detection unit 430”—the sensors the Petition maps to the “*first sensor*”—are physically distributed throughout the refrigerator, not co-located within a single housing. The internal temperature detection units 431 must be installed inside the refrigerator compartment 200 and freezer compartment 300 to detect temperatures within those spaces. *Id.*, [0057]. The external temperature detection unit 433 “detects

the temperature outside the refrigerator, that is, the room temperature”—and must therefore be physically located outside the refrigerator to measure ambient conditions. *Id.*, [0058]. The height detection units 435 “may be installed in the refrigerator compartment 200 or the freezer compartment 300,” and when compartments include multiple shelves, “a plurality of height detection units may likewise be installed in each shelf.” *Id.*, [0060]. These sensors cannot perform their disclosed functions unless they are physically situated in the specific areas they are designed to monitor. A temperature sensor that must detect the temperature inside a freezer compartment, for example, cannot be housed in the same single enclosure as a communication unit located elsewhere in the refrigerator.

Further, FIG. 4 of Seo is a block diagram that depicts functional relationships among system components, not their physical arrangement. FIG. 4 shows boxes labeled with unit names connected by lines, but these lines represent data flow and logical connections—not physical co-location within a single housing. The Petition’s assertion that FIG. 4 “expressly shows” that control device 400 “encloses” all of these components conflates a functional logic block diagram with a structural or spatial diagram. Block diagrams are routinely used to show how components interact logically, not where they are physically situated. Indeed, while FIG. 4 uses a dashed boundary labeled “400” to group functional units together, this grouping merely reflects a system-architecture hierarchy, it does not depict, describe, or even

suggest a physical housing or enclosure.

The Petition alternatively asserts that “the refrigerator itself is also a single enclosure” housing all claimed elements. Pet. at 83; EX1002, ¶ 492. But Claim 1 recites “*a single enclosure housing the current sensor, the first sensor, the antenna, and the wireless transceiver*” as a specific structural element of the claimed appliance—not as the appliance itself.

Dr. Houh’s Declaration does not cure these deficiencies. Dr. Houh asserts that a POSITA “would have understood (and found it obvious) that the control device 400, as a device, would have a device housing enclosing its parts.” EX1002, ¶ 491. But this conclusory assertion does not address the fundamental problem: Seo does not disclose that the current detection unit “(not shown)” is physically located within the control device 400’s housing, nor that the physically distributed sensors—*e.g.*, temperature sensors installed inside refrigerator and freezer compartments, an external temperature sensor located outside the refrigerator, and height sensors mounted on individual shelves—are co-located with the communication unit 440 within a single housing.

**E. All Seo-Based Grounds (Grounds 11–15) Fail for the Same Reasons**

Because the Petition’s Ground 11 mapping fails to establish that Seo discloses a single enclosure housing the current sensor, the first sensor, the antenna, and the

wireless transceiver, this deficiency applies to every Ground that depends on Seo's disclosure of this limitation. Grounds 12 through 15 each rely on the Seo-Chan combination as their base, and none of the additional secondary references—Goldsmith (Ground 12), Fraden (Ground 13), Betts-LaCroix (Ground 14), or Doherty (Ground 15)—is asserted to provide an independent disclosure of the single-enclosure requirement. Pet. at 94–98. The Board should therefore deny institution of Grounds 11 through 15 on this additional, independent basis.

## V. CONCLUSION

For the foregoing reasons, Patent Owner respectfully requests that the Board deny institution of the Petition in its entirety.

Respectfully submitted,

Dated: February 27, 2026

By: /Peter Lambrianakos  
Peter Lambrianakos (Reg. No. 58,279)  
**FABRICANT LLP**  
411 Theodore Fremd Avenue,  
Suite 206 South  
Rye, New York 10580  
Tel. 212-257-5797  
Fax. 212-257-5796  
Email: plambrianakos@fabricantllp.com

**CERTIFICATE OF WORD COUNT**

The undersigned hereby certifies that the portions of the above-captioned PATENT OWNER'S PRELIMINARY RESPONSE has 4,281 words in compliance with the 14,000 word limit set forth in 37 C.F.R. § 42.24. This word count was prepared using Microsoft Word for Office 365.

Respectfully submitted,

February 27, 2026

By: /Peter Lambrianakos \_\_\_\_\_/  
Peter Lambrianakos (Reg. No. 58,279)  
Lead Counsel for Patent Owner  
**FABRICANT LLP**  
411 Theodore Fremd Avenue,  
Suite 206 South  
Rye, New York 10580  
Tel. 212-257-5797  
Fax. 212-257-5796

**CERTIFICATE OF SERVICE**

A copy of the foregoing PATENT OWNER'S PRELIMINARY RESPONSE  
has been served on Petitioner's counsel of record as follows:

Alex S. Yap  
Email: Amazon\_SmartSpeaker\_IPRs@mofocom  
E-mail: AYap@mofocom  
Mehran Arjomand  
E-mail: MArjomand@mofocom  
**MORRISON & FOERSTER LLP**  
707 Wilshire Blvd., Suite 6000  
Los Angeles, CA 90017

Yunan Yuan  
E-mail: AYuan@mofocom  
**MORRISON & FOERSTER LLP**  
755 Page Mill Road  
Palo Alto, CA 94304-1018

*Attorneys for Amazon.com Services LLC*

February 27, 2026

By: /Peter Lambrianakos /  
Peter Lambrianakos (Reg. No. 58,279)  
Lead Counsel for Patent Owner