

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

HANSHOW AMERICA INC. AND HANSHOW
TECHNOLOGY CO., LTD.,

Petitioner,

v.

SES-IMAGOTAG INC.,

Patent Owner.

Case No. IPR2024-00190

Patent No. 10,674,340

PATENT OWNER'S PRELIMINARY RESPONSE

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APPENDIX 1: CLAIM LISTING

[1pre]	A method for communicating spatially localized information to a mobile terminal, the method being performed by a central server configured to access a planogram associating a plurality of unique identifiers of radio-frequency peripherals with a plurality of locations within a predetermined area, each of the plurality of locations being defined by a vertical and horizontal position within a plane perpendicular to a floor of the predetermined area, and each of the plurality of locations being associated one-to-one with a corresponding unique identifier, the method comprising:
[1a]	receiving a communication from a mobile terminal, the communication comprising a unique identifier received by the mobile terminal from a radio-frequency peripheral located in the predetermined area, the unique identifier being particular to the radio-frequency peripheral, wherein the radio-frequency peripheral includes an antenna and an electronic chip configured for near-field communication, and is configured to be activated by the mobile terminal when the radio-frequency communication peripheral is within a communication range of the mobile terminal, wherein the communication range is less than twenty centimeters;
[1b]	determining a location of the mobile terminal within the predetermined area based on the location associated with the unique identifier of the received communication in the planogram, the location of the mobile terminal comprising the vertical and horizontal position of said location; and
[1c]	transmitting to the mobile terminal spatially localized information associated with the location of the mobile terminal.
[2]	The method according to claim 1, further comprising: when the mobile terminal is positioned relative to the radio-frequency communication peripheral within the communication range, energy of electromagnetic waves emitted by the mobile terminal activating the radio-frequency communication peripheral, thereby setting-up a radio-frequency communication between the mobile terminal and

	the radio-frequency peripheral, wherein the communication range is a range of the electromagnetic waves emitted by the mobile terminal.
[3]	The method according to claim 1, wherein the central server receiving the communication from the mobile terminal is via the Internet.
[4]	The method according to claim 1, wherein the spatially localized information is further associated with account data specific to the user of the mobile terminal previously stored in a database accessible to the central server via a communication network.
[5pre]	A system for communicating spatially localized information to a mobile terminal, the system comprising:
[5a]	a central server configured to access a planogram associating a plurality of unique identifiers of radio-frequency peripherals with a plurality of locations within a predetermined area, each of the plurality of locations being defined by a vertical and horizontal position within a vertical plane of the predetermined area, and each of the plurality of locations being associated one-to-one with a corresponding unique identifier;
[5b]	a mobile terminal configured to communicate with the central server; and
[5c]	a plurality of radio-frequency peripherals distributed throughout the predetermined area, wherein each radio-frequency peripheral includes an antenna and an electronic chip configured for near-field communication, and is configured to be activated by the mobile terminal when the radio-frequency communication peripheral is within a communication range of the mobile terminal, wherein the communication range is less than twenty centimeters,
[5d]	wherein the central server is configured to:
[5e]	receive a communication from a mobile terminal, the communication comprising a unique identifier received by the mobile terminal from a radio-frequency peripheral located in the predetermined area, the unique identifier being particular to the radio-frequency peripheral;

[5f]	determine a location of the mobile terminal within the predetermined area based on the location associated with the unique identifier of the received communication in the planogram, the location of the mobile terminal comprising the vertical and horizontal position of said location; and
[5g]	transmit to the mobile terminal spatially localized information associated with the location of the mobile terminal.
[6pre]	The system according to claim 5, wherein at least one radio-frequency peripheral is an electronic label which comprises:
[6a]	a radio-frequency communication module configured to receive data representing information relating to an item from a central server;
[6b]	a memory to store said data;
[6c]	a microcontroller to control the display of information relating to an item;
[6d]	a display screen to display said item-related information.
[7]	The system according to claim 6, wherein the mobile terminal is adapted to transmit data to the electronic label via the radio-frequency communication module of said electronic label.
[8]	The system according to claim 5, wherein the chip and the antenna are arranged at different points of the radio-frequency peripheral, and wherein the radio-frequency peripheral comprises connections configured to ensure a communications link between the antenna and the chip.
[9]	The system according to claim 8, wherein the chip is connected to a microcontroller of the radio-frequency peripheral, and wherein the antenna is arranged on or within a case inside which the microcontroller is housed.

APPENDIX 2: PETITIONER’S ASSERTED GROUNDS

Petitioner asserts the follow grounds:

Ground	Petitioner’s Asserted Art
1	Claims 1–5, 8: Siotia and Sakata
2	Claims 6–7, 9: Siotia, Sakata, Akao
3	Claims 8–9: Siotia, Sakata, Akao, Chen
4	Claims 1–3, 5, 8: Ghosh and Sakata
5	Claims 6–7, 9: Ghosh, Sakata, Akao
6	Claims 8–9: Ghosh, Sakata, Akao, Chen

I. INTRODUCTION

Petitioner challenges the validity of claims 1–9 of U.S. Patent 10,674,340 (EX-1001, “’340 Patent). This is Petitioner’s second swing at the ’340 Patent, IPR2024-00189 (the “189 Petition”) being Petitioner’s preferred petition. As shown below, the Board should not consider the merits of this Petition, given that Petitioner utterly fails to justify filing two petitions to challenge a garden-variety electronics patent with a mere nine claims—only two of which are independent and have similar overlapping limitations.

But if the Board considers this Petition on the merits, the Board will see why Petitioner ranked it second—the asserted prior art, on its face, fails to disclose central limitations in the two independent claims—limitations [1a] and [5c].¹ Specifically, the Petition offers six

¹ For the Board’s convenience, Patent Owner adopts Petitioner’s limitation numbering in this Preliminary Response. By doing so, Patent Owner does not concede that Petitioner has properly isolated key limitations, as in fact it has not, but instead, bundles limitations together to attempt to obscure the fact that the art does not teach all of the limitations of the claims.

purported grounds, all six of which rely on Sakata to disclose limitations [1a] and [5c], but Sakata discloses neither the recited “near-field communication,” nor the recited less than twenty centimeters communication range. Moreover, Petitioner fails to articulate a cogent motivation to combine Sakata with the other art it offers—Siotia (Grounds 1–3) or Ghosh (Grounds 4–6). Indeed, as shown below, Sakata is incompatible with both Siotia and Ghosh, and thus, a skilled artisan would not have been motivated to combine these references.

Petitioner ranked this petition second for a reason—the art simply does not raise a reasonable likelihood of unpatentability. Institution should be denied on both discretionary and substantive grounds.

II. DISCRETIONARY DENIAL AS UNWARRANTED PARALLEL PETITION

This Petition is the second-ranked of two petitions attacking the ’340 Patent’s nine total claims. Petitioner filed a separate paper attempting to explain the need for multiple petitions, but there is no credible explanation. The Board should use its discretion to deny institution of this Petition.

A. Neither the length nor the complexity of the '340 Patent claims justify two petitions.

Despite Petitioner's representations to the contrary (Petitioners Ranking and Explanation of Material Differences Between Petitions, Paper 2 ("Ranking"), 4), the '340 Patent's two independent claims are not especially long. Claim 1 is 228 words long and claim 5 is 248. This is well within the norm for the technology at issue here.² Moreover, although claim 1 recites a method and claim 5 recites a system, the limitations are parallel and largely identical. For instance, both require the four main elements of (1) a planogram, (2) a mobile terminal, (3) "radio-frequency peripherals" configured with an antenna, near-field communication, and a communication range of less than 20 cm, and (4) a

² See Kristen Osenga, *The Shape of Things to Come: What We Can Learn From Patent Claim Length*, 28 Santa Clara High Tech. L.J. 617, 636 (2012), (available at: <http://digitalcommons.law.scu.edu/chtlj/vol28/iss3/3>) (showing in the electronic arts, average first-independent-claim-length between 1968 and 2008 ranged from approximately 200 to 150 words).

server that can determine location of the mobile terminal and return “spatially localized information.” *See* EX-1001, claims 1, 5.

Nor are the claims particularly complex. Petitioner says that no claim constructions are required to interpret the claims for purposes of its Petitions. Petition, 3. Petitioner does not, for example, propose any complex or exotic means-plus-function constructions, or propose any convoluted scientific constructions. Petitioner does not suggest that there is there anything esoteric about the underlying technology such that lengthy background explanations are required. Indeed, the Petition required less than four full pages to explain the technology—approximately three of which comprised images—and essentially just duplicated the discussion from the first petition. Petition, 4–9; *see also* 189 Petition, 4–9. In fact, the ’340 Patent’s specification is less than eight full columns long, containing only four figures.

The ’340 Patent claims and background technology are, thus, decidedly average in their length and complexity, making this case far from the rare situation where filing more than one petition is warranted. Instead, this case is indistinguishable from the vast majority of cases where multiple petitions are unnecessary. *See* Nov. 2019 PTAB Consol. Trial Practice Guide (“TPG”), 59 (discussing only “rare” situations in

which multiple petitions are appropriate). Notably, in IPR2024-00188, Petitioner challenged fifteen claims in a single petition, and in IPR2024-00208, Petitioner challenged twenty claims in a single petition.

Intel Corp. v. AX Wireless, IPR2023-01140, Paper 12 (Feb. 14, 2024) is instructive. There, the petitioner challenged seven claims in a first petition and a different set of seven claims (from the same patent) in a second petition. *Id.*, 9. Of the seven claims challenged in the second petition, only one was independent. *Id.*, 4. The Board declined to institute the second petition because the petitioner had failed to justify multiple petitions. *Id.*, 9–10. The Board rejected the assertion that fourteen claims was too large a number of claims to challenge in a single petition. *Id.*, 7. Moreover, while in the Board’s view the independent claim was lengthy—the independent claim in *Intel* was 487 words, nearly twice as long as the independent claims here, and almost as long as both independent claims combined—that also did not justify multiple petitions because of the substantial overlap of the claims. *Id.*, 8. In addition, the Board found it important that there were no complex or lengthy claim construction issues to confront. *Id.*, 9.

This case is much like *Intel*. The petitioner challenged fourteen (total) claims—seven in the first petition and seven in the second—but could have challenged all fourteen in the same petition. Here, Petitioner is challenging the very same claims—twice. Thus, this case is more inappropriate for multiple petitions than *Intel*. Moreover, like in *Intel*, no claim constructions or complex technology is at issue to justify multiple petitions. And the two independent claims in this case are not materially longer than the one independent claim in *Intel*, and like in *Intel*, the dependent claims here require little additional analysis. The Board should reject Petitioner’s multiple petitions.

B. Petitioner’s claim regarding priority is an argument against institution of this Petition.

Petitioner argues that it needed two petitions because of a potential dispute over the prior-art status of the Ghosh reference. Ranking, 2–3. Ghosh appears in only three of the six grounds in this second-ranked Petition. Petition, 71, 100. But because Ghosh is in Petitioner’s *second-ranked* petition, the purported priority dispute concerning Ghosh does not show a need for a second petition; it shows the opposite.

Xilinx, Inc. v. Analog Devices, Inc., IPR2020-01484, Paper 11 at 9 (Mar. 15, 2021), cited by Petitioner (Ranking, 4), explains why

Petitioner’s assertion regarding a purported priority dispute suggests the Board should use its discretion to deny institution. In *Xilinx*, the Board allowed multiple petitions because there was a *bona fide* dispute over the prior-art status of a primary reference in a *first* petition. *Xilinx, Inc.*, IPR2020-01484, Paper 11 at 8. The *second* petition substituted the disputed reference with a different, undisputed reference. *Id.* This order of presentation was critical: If the patent owner disputed priority as to the disputed reference in the first petition and won, then there would have been no challenge at all. The order of presentation is *why* multiple petitions were allowed; it was not, as Petitioner suggests, the simple fact of a priority dispute. The TPG “does not convey that *whenever* a priority issue is involved, Petitioner is entitled to file two petitions against the same claims of the same patent.” *Square, Inc. v. 4361423 Canada Inc.*, IPR2019-01630, Paper 13 at 9 (Apr. 2, 2020).³ “Rather, the operative phrase [in the TPG] is ‘may be needed, although this should be rare.’” *Id.* (quoting TPG, 59).

Here, the supposedly disputed reference is in Petitioner’s *second-ranked* Petition, not its first. Ranking, 2. The potential priority dispute

³ All emphasis added unless otherwise noted.

with respect to Ghosh, thus, was irrelevant to Petitioner’s alleged need to file a second petition. Unlike in *Xilinx*, Petitioner does not suggest a dispute as to priority in its first-ranked petition such that if Patent Owner prevailed, Petitioner would be deprived of a challenge. Instead, Petitioner identifies all of the references in its first-ranked Petition as Section 102(b) prior art, not subject to a priority dispute. 189 Petition, 16 (Fujiwara), 53 (Arntzen), 59 (Bandy), 61 (Fowler). Petitioner cannot justify a second petition based on a potential priority issue when its first-ranked petition is not subject to any such issue.

In cases on footing similar to this one—where the *second*-ranked petition contains the supposed priority dispute—the Board has denied institution of the second-ranked petition. For instance, in *Dexcom, Inc. v. Abbott Diabetes Care, Inc.*, IPR2023-01252, Paper 9 at 10–14 (Feb. 5, 2024), the Board denied institution of multiple petitions where—as here—the alleged priority dispute was only in the secondary, backup petition. As the Board said in *Dexcom*, “[w]e agree with Patent Owner that Petitioner presents ‘an argument *against*, not for, instituting the 1252 petition. We are concurrently instituting Petition 1, which Petitioner’s own arguments suggests renders Petition 2 unnecessary.’” *Id.* (internal citation omitted); *see also Apple Inc. v. Seven Networks, LLC*,

IPR2020-00281, Paper 10 at 8 (Aug. 14, 2020) (priority dispute in second-ranked petition does not justify multiple petitions). The same is true here—the supposed Ghosh priority dispute is an argument against institution, not for it.

C. Petitioner is simply hedging its bets.

Although Petitioner claims that the variability of the art required two different petitions, this is untrue. Across the two Petitions, Petitioner seeks to present ten grounds—the first-ranked Petition by itself includes four—relying on four different primary references. It does not matter that the references use different language because the substance of the challenges, including the mapping of elements to IC tags, is similar, as is the asserted art. *Compare* 189 Petition, 18, *with* Petition, 16–18.

This Petition does not represent some materially different or new challenges or approach to the supposed unpatentability of the '340 Patent. Instead, it merely represents an opportunity for Petitioner to double its word count and hedge its bets. Such considerations do not transform this case into the “rare” case where multiple petitions are warranted. The Board should exercise its discretion to deny institution on this second-ranked petition.

III. BACKGROUND

A. Overview of the Technology.

In retail stores, goods are displayed on shelves; the front of the shelves (*i.e.*, rails) may include labels displaying information about the goods (*e.g.*, price). For example, a grocery store shelf containing eggs might include a label on the shelf rail identifying the brand of eggs, the number of eggs in each carton, and the price of each carton. If the store decides to instead display cheese in this location, the existing label for eggs on the shelf rail would be replaced with a new label providing information about the cheese now in that location.

Electronic shelf labels⁴ are used in supermarkets or other retail stores to display information about an item, for instance, its sale price. EX-1001, 1:13–2:4. There are several advantages to electronic labels over their paper cousins, including allowing automated price changes.

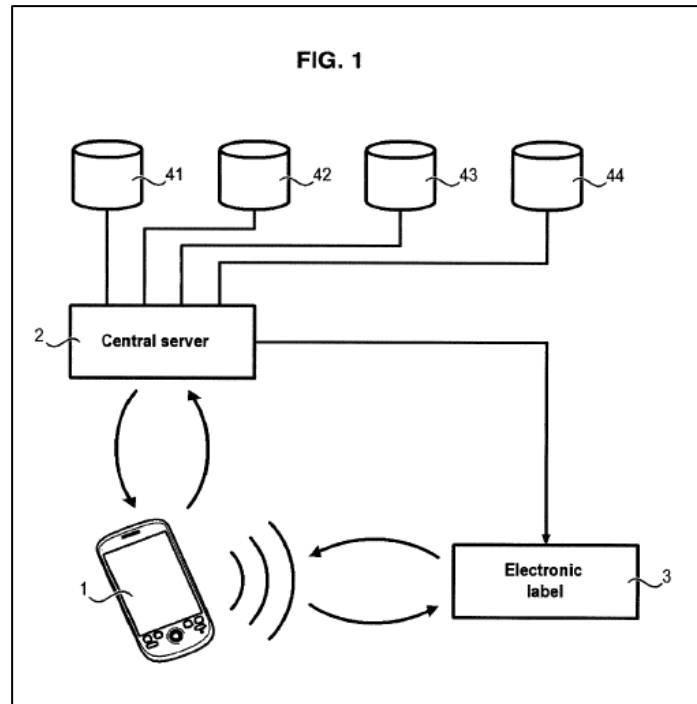
⁴ Sometimes, the acronym ESL is used for the term “electronic shelf labels.” But the Siotia reference uses that acronym to mean something very different, an “Electronic Shopping List.” *See* EX-1003, Abstract. To avoid confusion, Patent Owner will not use the ESL acronym for shelf labels, and will reserve that acronym for Siotia’s shopping list.

Id., 1:36–42. But at the time of the invention, electronic label systems were “relatively rigid” in their display possibilities and often could only update price. *Id.*, 1:48–56.

B. Overview of the ’340 Patent.

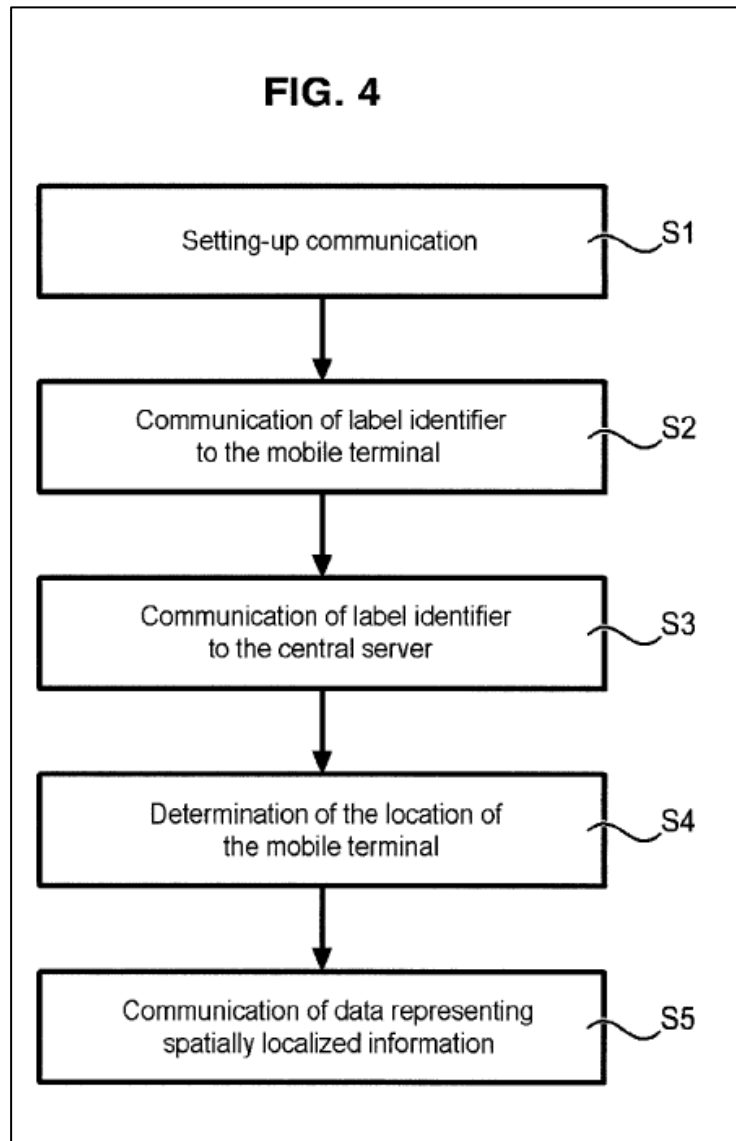
In contrast with the prior art, the invention disclosed in the ’340 Patent expanded the versatility of electronic shelf labels by disclosing systems and methods allowing customers to receive spatially localized information complementing the information the consumer sees in the sales area. *Id.*, 2:8–14. Spatially localized information can include, for instance, health data associated with particular products, or medical contra-indications including the presence of allergens specified by the shopper. *Id.*, 7:9–15. Providing such information requires knowing the exact location of the shopper in reference to the particular items that the shopper is interested in. The ’340 Patent describes systems and methods directed to such precise location determination—both vertical and horizontal position—and the provision of information relevant to a shopper at that precise location.

Figure 1, below, is a non-limiting example of such a system. A customer with a “mobile terminal”—*e.g.*, smartphone—can communi-



cate with a central server in a store through WIFI, 3G or otherwise. *Id.*, 3:59–4:28. Electronic shelf labels are distributed throughout the sales area, and each label has a unique label identifier. *Id.*

As shown in Fig. 4, below, the mobile terminal activates the shelf label via radio-frequency, thereby setting up communication with the label. *Id.*, 6:6–10. The label provides its unique identity to the mobile terminal, which then communicates via WIFI (or otherwise) with a server. The server is responsible for determining the precise location of the mobile terminal “using the data of a planogram associating a location with the label identifier. A planogram lists the locations of all the



electronic labels 3 and of the items on sale in the sales area.” *Id.*, 6:29–37. The “uniqueness of the label identifier and of the location associated with each electronic label 3 allows unambiguous determination of the location of the electronic label,” *id.*, 6:43–47, and therefore, the shopper. Once the “unique” location of the shopper is identified, specific

relevant information can be provided to the shopper based on that unique location.

The type of RFID used is central to making this system work. Specifically, the '340 Patent discloses that the use of near-field communication with “relatively short range” is required. *Id.*, 6:53–55. A range of “less than 20 cm, more preferably less than 10 cm, and ... even 5 cm,” *id.*, is used for two reasons. First, the short range is necessary to avoid interference with other labels and to obtain highly precise location information. *Id.* Second, the short range is important for security reasons. As the '340 Patent describes it,

[A] short range requires *deliberate* action by the user of the mobile terminal 1 to set up communication between the mobile terminal 1 and the electronic label 3. The user then has no reason to fear for the protection of private life and since the system proves to be little intrusive it cannot easily be diverted from its primary vocation set forth in this description.

Id., 6:59–65.

The '340 Patent includes two independent claims: claim 1 (method) and claim 5 (system); both require the four main elements of (1) a planogram, (2) a mobile terminal, (3) “radio-frequency peripherals” configured with an antenna, near-field communication, and a

communication range of less than 20 cm, and (4) a server that can determine location of the mobile terminal based on the association of the unique identifier of the radio-frequency peripheral and location (horizontal and vertical position) in the planogram and transmit to the mobile terminal “spatially localized information.” *See id.*, claims 1, 5.

Claim 1 is reproduced below with those elements emphasized:

[1pre] A method for communicating spatially localized information to a *mobile terminal*, the method being performed by a *central server configured to access a planogram associating a plurality of unique identifiers of radio-frequency peripherals with a plurality of locations within a predetermined area, each of the plurality of locations being defined by a vertical and horizontal position within a plane perpendicular to a floor of the predetermined area, and each of the plurality of locations being associated one-to-one with a corresponding unique identifier*, the method comprising:

[1a] receiving a communication from a *mobile terminal*, the communication comprising a *unique identifier received by the mobile terminal from a radio-frequency*

peripheral located in the predetermined area, the unique identifier being particular to the radio-frequency peripheral, wherein *the radio-frequency peripheral includes an antenna and an electronic chip configured for near-field communication*, and *is configured to be activated by the mobile terminal when the radio-frequency communication peripheral is within a communication range of the mobile terminal, wherein the communication range is less than twenty centimeters*;

[1b] *determining a location of the mobile terminal within the predetermined area based on the location associated with the unique identifier of the received communication in the planogram, the location of the mobile terminal comprising the vertical and horizontal position of said location*; and

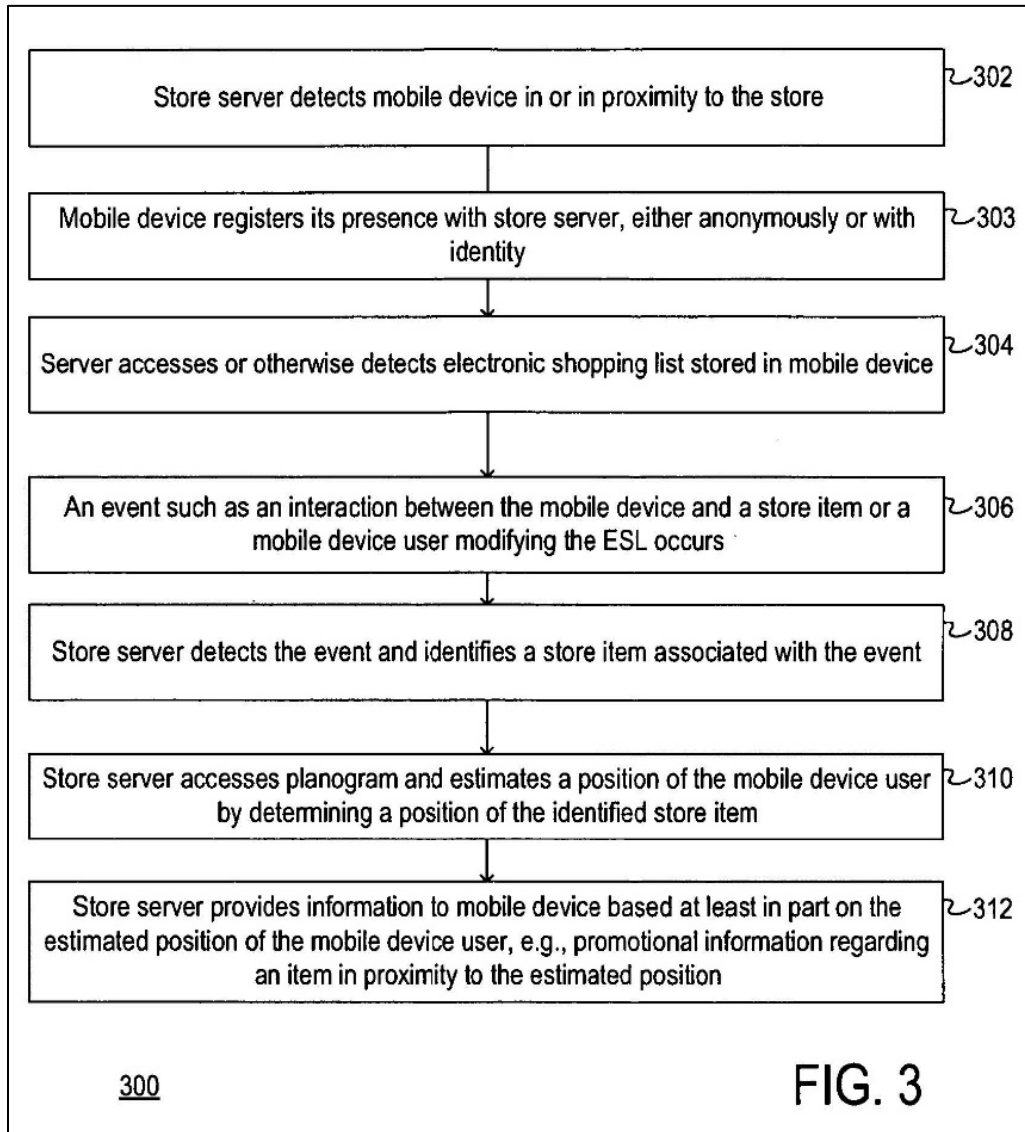
[1c] *transmitting to the mobile terminal spatially localized information associated with the location of the mobile terminal*.

C. Asserted Prior Art References.

1. Siotia

Siotia (U.S. Patent Application No. 2010/0070365, EX-1003) is directed to the use of an electronic shopping list (what Siotia calls an “ESL”). Whereas the ’340 Patent is concerned with finding a precise location of a shopper, because Siotia is directed to a shopping list and providing “guided shopping information,” it discloses a system intended to capture the “approximate ... location of [a] user.” EX-1003, [0042]; *see also id.*, [0023] (“In one embodiment, the disclosed subject matter identifies the general location of the user in a store....”).

As described in Figure 3, below, after the store server detects a device in proximity to the store, the device “registers its presence with the store server.” The server accesses the electronic shopping list. A “shopping event, such as the mobile device interacting with a store item using the phone or the user moving an item from the [list] to a shopping cart,” is detected by the server, and the server then “estimates a position of the mobile device user.”



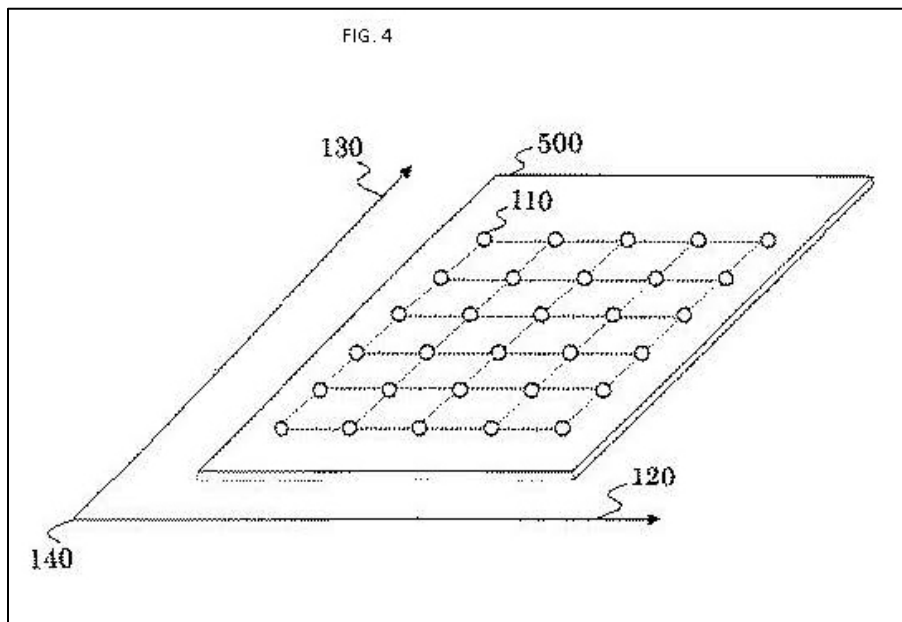
Petitioner relies on a purported obviousness combination for numerous limitations, acknowledging that Siotia does not disclose, at least, the existence of horizontal and vertical product positions as required by the challenged claims. Petition, 19–20. It is further undisputed that Siotia discloses neither near-field communications nor a communication range less than 20 cm. *Id.*, 24–25.

2. Sakata

Sakata (Japanese Application Publication No. 2007-155383, EX-1008) is a Japanese patent application and because Petitioner has failed to present an appropriate translation, the Board should disregard it. 37 C.F.R. §42.63(b) requires that “an affidavit attesting to the accuracy of the translation” accompany a proffered translation. But here, the certificate Petitioner offers is not by a translator, but rather, a member of the “Translation Department” of Legal Advantage LLC. The signatory appears to be an Operations Director for the company, and not a translator. (<https://www.linkedin.com/in/hal-pieroway-297a98b/?originalSubdomain=ca>.) As such, there is no indication that the person who signed the certificate has personal knowledge that the document is a “true and accurate translation.” EX-1008, 1. Nor did the Operations Director signing the certificate do so under the penalty of perjury as required by 37 C.F.R. §42.2. Sakata is, thus, inadmissible, and the Board should not consider it.

To the extent the Board does consider Sakata (it should not), the proffered translation purports to describe a sheet-like mesh of RFID tags arranged in a matrix that can be stretched over a floor, ceiling, or wall of a building. EX-1008, [0009], [0011]. The idea is that in a

building—say an Amazon warehouse—the RFID mesh can be installed on the warehouse floor to keep track of robots with readers in them. *Id.*, [0011] (readers installed in “a cane, footwear, cart, or self-propelled robot”). Figure 4, below, shows an exemplary sheet-like mesh described in Sakata.



Sakata uses the RFID tags to locate a position in the relevant coordinate system. Sakata discloses that the coordinate points—that is, the distance between the RFID tags—can be at intervals of “1 cm, 10 cm, 50 cm, 1 m, and 5 m.” *Id.*, [0015]. But Sakata never discloses any particular reading range for the RFID tags themselves. Sakata discloses that its system works by reading tags in the spaces between the tags. As Sakata puts it, “the readable distance of the IC tags must be kept

sufficiently smaller than the corresponding coordinate point interval to avoid incorrect reading of IC tags at adjacent coordinate points.” *Id.*

Importantly, while Sakata never discloses a specific communication range for its IC tags—making it an incomplete reference for purposes of the Petition—Sakata is clear that its system is fundamentally different from the system of the ’340 Patent (and the art with which Petitioner tries to combine it). In the Sakata system, tracking is done in the background and does not require deliberate action by the object being tracked. As Sakata puts it, “the recognition code is read non-contact by the reader using the radio waves received by the device as the operating power....” *Id.*, [0009], [0022] (The chip “can transmit an ID number, by non-contact, using the radio waves received by the antenna as operating power, and each tag ... can wirelessly (RF) read, by non-contact, information including the unique ID of each IC tag using a reader (or scanner).”). The use of non-contact tags makes sense in the system of Sakata, as Sakata is not trying to provide spatially relevant information to the object it is tracking, but rather, is simply following the object as it moves through a matrix of IC tags. Put differently, if you are in the business of tracking a robot, you can hardly have the robot stop at each tag (at intervals smaller than 20 cm) and tap.

3. Akao

Akao (Japanese Application Publication No. 2009-64316, EX-1004), like Sakata, should not be considered by the Board because Petitioner failed to offer an appropriate translation. The translation for Akao does not conform with 37 C.F.R. §42.63(b) and the requirements of an affidavit under 37 C.F.R. §42.2, 37 C.F.R. §1.68, and 28 U.S.C. §1746. The certificate of the proffered translation was signed by Dan McCourt, who does not state that he did the attached translation and does not state that he has personal knowledge that the document is “a true and accurate translation.” EX-1004, 1. Nor did McCourt execute the certificate under the penalty of perjury. The Board should, therefore, decline to consider Akao.

To the extent the Board considers Akao (it should not), the proffered translation purports to describe a system for providing product information “from electronic shelf label to the customer’s mobile device” to increase the “convenience of the customers and promote the purchase of products.” EX-1004, 2. The label has a central processing unit, random access memory, memory section, and “a short-range communication section” for communicating with a mobile device. *Id.* The product information is transmitted to the device by a detection signal

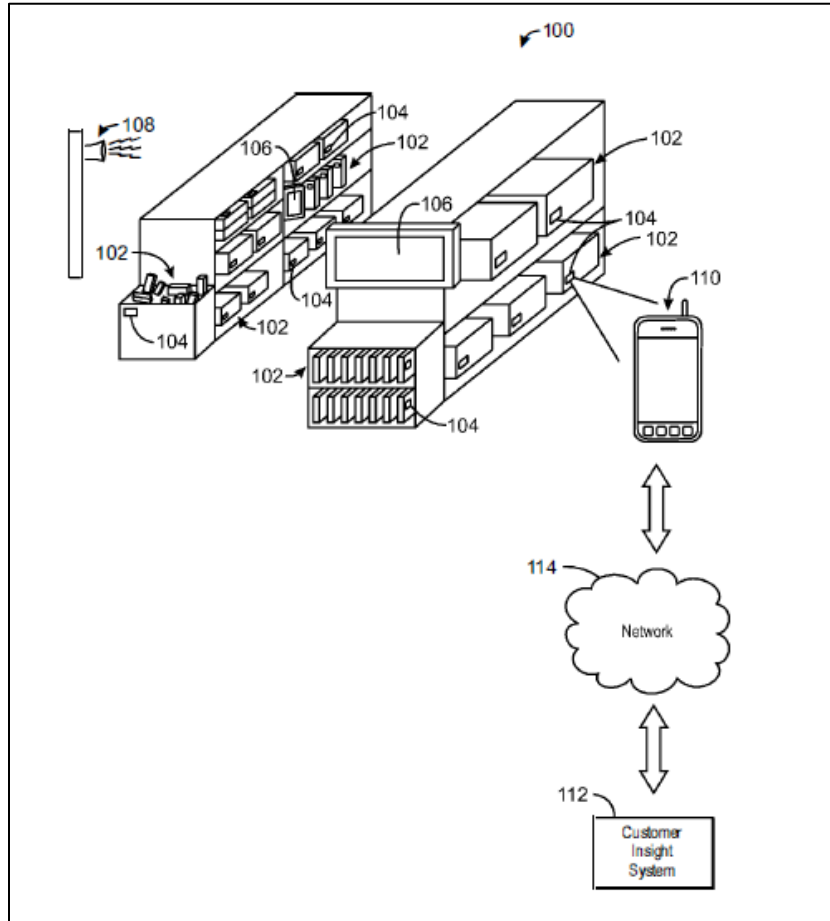
when approaching the shelf label body (*id.*, [0007]) on a local area network, wide area network, satellite, or cable television line (*id.*, [0013]).

4. Chen

Chen (U.S. Patent No. 7,283,036, EX-1006) is directed to a wireless display device with an antenna unit with two antennas, processing unit, display unit, and power supply unit. EX-1006, Abstract.

5. Ghosh

Ghosh (U.S. Patent Application No. 2012/0095805, EX-1007) provides for a computer-implemented method of acquiring customer insight information in a retail environment. EX-1007, Abstract. Ghosh discloses an interaction between a mobile device and a product, determining a customer location “based on a planned location of the product,” and performing a business action based on that interaction. *Id.* Ghosh discloses product identification tags that can include electronic tags such as RFID tags, but does not disclose the required near-field communication tags, and does not disclose the required less-than-20 cm-communication range. *Id.*, [0009]. Figure 1 of Ghosh, reproduced below, is a perspective view of a retail environment that includes Ghosh’s customer insight system.



IV. PETITIONER HAS NOT ESTABLISHED A REASONABLE LIKELIHOOD OF SUCCESS IN SHOWING THAT ANY CLAIM IS UNPATENTABLE.

“Petitioner bears the burden on institution of demonstrating a reasonable likelihood that it will prevail in showing the unpatentability of at least one claim. ... Petitioner must file a Petition that, among other requirements, ‘identifies ... the evidence that supports the grounds for the challenge to each claim.’” *SMIC, Ams. v. Innovative Foundry Techs., LLC*, IPR2020-00837, Paper 13 at 13–14 (Oct. 9, 2020) (citing 35 U.S.C. §§314(a) and 312(a)(3)). Here, the Board should deny

institution of *inter partes* review under 35 U.S.C. §314(a) because Petitioner has not met its burden to demonstrate a reasonable likelihood that it will prevail as to any challenged claim based on the information contained within the Petition.

The Petition presents only obviousness grounds. Petition, 3. A claim is invalid under 35 U.S.C. §103(a) as obvious only if “the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made” to the POSITA. *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). An obviousness determination must be based on four factual inquiries: (1) the scope and content of the prior art; (2) the differences between the claims and the prior art; (3) the level of ordinary skill in the art; and (4) objective indications of nonobviousness. *Id.* (citing *Graham v. John Deere Co. Kan. City*, 383 U.S. 1, 17–18 (1966)). A party alleging obviousness is “required to place themselves in the minds of those of ordinary skill in the relevant art *at the time the invention was made*, to determine whether that which is now plainly at hand would have been obvious at such earlier time.” *Millenium Pharms., Inc. v. Sandoz Inc.*, 862 F.3d 1356, 1367 (Fed. Cir. 2017). When a limitation is missing from the asserted prior art

references, this gap cannot be filled simply by blanket assertions of common sense and “this is particularly true where the missing limitation goes to the heart of an invention.” *Arendi S.A.R.L. v. Apple Inc.*, 832 F.3d 1355, 1362–63 (Fed. Cir. 2016). Petitioner has not met this burden for any challenged claim under any ground of unpatentability (Grounds 1–6) as discussed in Sections IV.A–IV.E, below.

A. Sakata cannot be combined with either primary reference to reach the challenged claims for all grounds.

All six of the asserted grounds rely on Sakata to teach limitations [1a] and [5c], which recite the near-field-communications limitation and the less-than-20-cm-communication-range limitation. In material part, limitation [1a] recites “wherein the radio-frequency peripheral includes ... *an electronic chip configured for near-field communication*, ... and is configured to be activated by the mobile terminal when the radio-frequency communication peripheral is within a communication range of the mobile terminal, *wherein the communication range is less than twenty centimeters*.” Limitation [5c] recites similar limitations.

Petitioner combines Siotia with Sakata to purportedly teach limitations [1a] and [5c] for Grounds 1–3, and Ghosh with Sakata for

limitations [1a] and [5c] for Grounds 4–6. Petition, 24–25, 32, 82, 89–90. But Sakata does not disclose the near-field-communications or less-than-20-cm-communication-range limitations of [1a] and [5c], and so, all Grounds fail, and institution should be denied.

1. Sakata does not disclose near-field communications as required by all challenged claims, and is inconsistent with such communications.

Petitioner does not cite anything in Sakata that supposedly teaches near-field communications because no such disclosure exists. Instead, Petitioner argues that it would have been obvious to configure the tags of Sakata as near-field communications devices and then use Sakata’s *modified* tags in a combination with Siotia or Ghosh. Petition, 24–25, 82. According to Petitioner, a “POSITA would further understand that RFID technology includes NFC technology as a subspecies, and that radiofrequency peripherals employing NFC technology will be implemented as claimed in [1a].” Petition, 23. Petitioner cites paragraph 77 of its expert’s report for this proposition, but the expert offers no analysis on this point. Here is the totality of the “analysis” provided by the expert in paragraph 77:

As I discussed earlier in the backgrounds section, a POSITA would further understand that RFID technology

includes NFC technology as a subspecies, and that radio-frequency peripherals employing NFC technology will be implemented with the activation sequence, the communication range, and the antenna/chip configuration as claimed in [1a].

EX-1011, ¶77.

In the expert’s background sections (paragraphs 45–53 for example), he concludes that a POSITA would know that “NFC tags are a subset of RFID tags,” but never offers any analysis of why Sakata would use near-field communications in its invention. The expert never explains why, for example, it would be desirable—or even possible—to do so. Nor does the expert, or the Petition for that matter, explain how near-field communications would be compatible with Sakata’s express teaching that the RFID tags used in Sakata’s systems are “non-contact.”

The expert’s discussion is not analysis; it is *ipse dixit*, and the Board should reject it as such. *Xerox Corp. v. Bytemark, Inc.*, IPR2022-00624, Paper 9 at 15–16 (Aug. 24, 2022) (precedential) (affording expert opinion little to no weight or probative value when it replicates the flawed analysis of the petition verbatim and fails to “cite to any additional supporting evidence or provide any technical reasoning to

support” the opinion); *Wenzhou Xin Sanitary Ware Co. v. Delta Faucet Co.*, IPR2023-01332, Paper 13 at 23–25 (Feb. 7, 2024) (“Although Petitioner cites the [expert] Declaration when making these assertions, the cited paragraph of the Declaration simply mirrors the Petitioner’s conclusory statements without providing any objective, supporting evidence.”); *TQ Delta, LLC v. Cisco Sys., Inc.*, 942 F.3d 1352, 1362 (Fed. Cir. 2019) (rejecting “*ipse dixit* declaration” that was “[u]ntethered to any supporting evidence, much less any con-temporaneous evidence”); *ActiveVideo Networks, Inc. v. Verizon Commc’ns, Inc.*, 694 F.3d 1312, 1327 (Fed. Cir. 2012) (rejecting “a conclusory statement” regarding what “a person of ordinary skill in the art would have known” as “not sufficient and is fraught with hindsight bias”). The Federal Circuit has made clear that a petitioner cannot “satisfy its burden of proving obviousness” by “employ[ing] mere conclusory statements” and “must instead articulate specific reasoning, based on evidence of record” to support an obviousness determination. *In re Magnum Oil Tools Int’l, Ltd.*, 829 F.3d 1364, 1380–81 (Fed. Cir. 2016).

Just as importantly, Sakata’s system is inconsistent with the use of near-field communications. Petitioner asserts that “NFC technology [is] a subspecies” of RFID. Petition, 23. As shown in the background

materials offered by Petitioner’s expert, one of the benefits of this sub-species over other types of RFID is that because the range is so small, near-field communications require some deliberate action on the part of the user to activate it, enhancing its security. For instance, Petitioner’s expert cites WO 2010/082835 as background art. Ex. 1011, ¶49. The expert quotes this background art as explaining that because of the “physical proximity of the unit to the reader,” “users ... hav[e] control over the process.” *Id.* (quoting WO 2010/082835, 6:6–11); *see also, id.*, ¶47 (quoting U.S. Patent App. Pub. No. 2008/0255947 (“For example, embodiments of the present invention provide for the use of NFC and/or other relatively short range communications between a mobile device and a POS device such as when a user of the mobile device scans or waves or taps the mobile device in front of or near the POS device when paying for goods or services.”)). This is consistent with the teachings of the ’340 Patent, which describes “deliberate action by the user of the mobile terminal 1 to set up communication between the mobile terminal 1 and the electronic label 3.” EX-1001, 6:59–65.

Sakata, by contrast, teaches a system that does not depend on, and would be incompatible with, the requirement of a deliberate action by the object being tracked. Sakata says that its tags are “non-contact.”

See EX-1008, [0009] (“the recognition code is read non-contact by the reader”), [0022] (reading “by non-contact, using the radio waves”). The reason for this is that Sakata tracks in the background without interaction by the robot (or other reader-carrying device). This is made clear by the types of uses envisioned by Sakata.

This IC tag position information identifying device can be used as flooring or wall material of a building [it] is similar to the sheet example in FIG. 3, but when used on a floor, IC tags are held more stably than when using sheets, making the IC tags suitable for the reading of IC tag information by machines such as carts or conveyance robots. Wall materials are suitable for cases such as tool management, where hooks or the like are attached to a wall, and articles are managed by hanging the articles on the hooks. In this case, the IC tag may be attached to a hook at the coordinate point.

Id., [0019].

Sakata’s automated tracking is incompatible with the systems with which Petitioner attempts to combine it. For instance, Siotia expressly requires a “shopping event” to trigger its location detection. Ex. 1003, ¶[0024] (describing a “shopping event” in which the mobile device “interact[s] with a store item”). Ghosh, which discloses use of

near-field communication, also describes its system as contemplating user actions. *See, e.g.*, Ex. 1007, Fig. 3 (Step 302 “Receive a Product Interaction from a Personal Mobile Device”), [0011] (“The act of scanning a product identification tag 104 can also include the user manually entering a product code displayed on the product...”). Yet, neither the Petition nor Petitioner’s expert explains why a skilled artisan would have combined a system like Siotia or Ghosh that contemplates a deliberate action with a system like Sakata that relies, instead, on automated tracking.

Where a prior art reference is incompatible, the Petition fails to establish a motivation to combine. *See Aruba Networks, Inc. v. XR Commc’ns LLC*, IPR2018-00701, Paper 10 at 9–10, 15 (Aug. 27, 2018); *Samsung Elecs. Co. v. Mojo Mobility Inc.*, IPR2023-01100, Paper 11 at 18-19 (Feb. 12, 2024) (“Petitioner provides no reason (beyond hindsight) explaining why a [POSITA] would have made a combination...that appears unworkable and mixes incompatible features...without sufficient explanation.”). “The factual inquiry whether to combine references must be thorough and searching and the need for specificity pervades authority on motivation to combine.” *Aruba Networks, Inc. v. XR Commc’ns LLC*, IPR2018-00701, Paper 10 at 9 (citing *In re Nuvasive, Inc.*, 842 F.3d

1376, 1381–82 (Fed. Cir. 2016)). Similarly, where, as here, a petitioner has failed to provide factual support for its proposed motivation, institution must be denied. *See Samsung Elecs. Co. v. Red Rock Analytics, LLC*, IPR2018-00555, Paper 16 at 19–22 (Aug. 30, 2018). Petitioner had the obligation to demonstrate that a person of skill in the art would have had a reasonable likelihood of success combining the references, and such cannot be shown here. *Eli Lilly & Co. v. Teva Pharms. Int’l GmbH*, 8 F.4th 1331, 1345 (Fed. Cir. 2021); *see also Envirotainer AB v. DoubleDay Acquisitions, LLC*, IPR2022-00851, Paper 70 at 32–33 (Feb. 1, 2024) (finding that Petitioner’s brief argument could not “fill the gap in reasoning” on how a POSITA would combine the references given the “concern” and “complications” from doing so).

2. Sakata does not disclose any specific range, including the required less than 20 cm.

The independent claims require, not only “radio-frequency peripheral[s]” configured for near-field communications, but peripherals with a specific “communication range” of “less than twenty centimeters.” Sakata, on which Petitioner relies for all six grounds for this teaching, does not disclose this range.

Sakata discloses no specific communication range at all for its tags. Instead, the only specific disclosure regarding distances is a disclosure regarding exemplary distances between tags in the background matrix. “[E]ach coordinate point of the x-axis 120 and y-axis 130 is a physical distance corresponding to an interval, the X-coordinate point interval 160 and Y-coordinate point interval 170 are set, for example, at intervals of 1 cm, 10 cm, 50 cm, 1 m, and 5 m respectively.” Sakata, [0015]. The only disclosure regarding the communication range for the tags is the generic statement that the “readable distance of the IC tags must be kept sufficiently smaller than the corresponding coordinate point interval to avoid incorrect reading of IC tags at adjacent coordinate points.” *Id.* But this is not a disclosure of a communication range of less than 20 cm as required by the claims.

Petitioner points to Sakata’s statement that “the reading range is restricted to the immediate vicinity of the IC tag.” Petition, 24 (citing EX-1008, [0022]), 82 (same). But Petitioner does not explain how this teaches the recited communication range. Nor does Petitioner offer any evidence suggesting that a POSITA would have understood “immediate vicinity” to be a communication range of less than 20 cm, other than the conclusory statement of Dr. Tentzeris. *Id.*, 24 (citing EX-1011, ¶78),

82 (citing EX-1011, ¶192). But a conclusory declaration merely parroting the attorney argument cannot support Petitioner’s assertion. *Xerox Corp.*, IPR2022-00624, Paper 9, 15–16; *TQ Delta LLC*, 942 F.3d at 1362 (rejecting “*ipse dixit* declaration” that was “[u]ntethered to any supporting evidence, much less any contemporaneous evidence”).

As shown above, Sakata does not disclose any communication range at all, let alone a communication range within the required less than 20 cm. But even if the Board accepts Petitioner’s contention that one can combine (1) Sakata’s general statement that the readable distance of the IC tags must be smaller than the coordinate point interval with (2) Sakata’s disclosed distance between tags of 1 cm, 10 cm, 50 cm, 1 m, and 5 m to reach a communication range within the less than 20 cm limitation, Sakata still does not render this limitation obvious. This is so because even where part of a range is disclosed in the prior art (it is not here), obviousness is rebutted if the “art in any material respect taught away” from the claimed invention. *In re Geisler*, 116 F.3d 1465, 1469 (Fed. Cir. 1997) (quoting *In re Malagari*, 499 F.2d 1297, 1303 (CCPA 1974)); *see also Allergan, Inc. v. Sandoz Inc.*, 796 F.3d 1293, 1305 (Fed. Cir. 2015) (affirming district court’s finding that there was “ample evidence of teaching away,” that supported a

conclusion of nonobviousness, notwithstanding overlapping ranges disclosed in the prior art).

As discussed above, Sakata's system is intentionally designed so that the tracked robot (or other reader-carrying device) does not need to deliberately interact with the tags. That is why Sakata expressly teaches that his tags are "non-contact." Contact tags are contrary to the nature of Sakata's invention. Yet, the claimed communication range—less than 20 cm—expressly contemplates a range that would include contact tags, *i.e.*, a communication range of 0 cm. Thus, while contact is not required to infringe the claims—the recited range is broader than that—the range contemplates contact, which Sakata does not disclose. As such, even if Sakata could be manipulated such that it discloses a communication range within some undefined portion of the less than 20 cm requirement (it does not), the limitation still would not have been obvious from Sakata's teachings.

B. Petitioner improperly relies on NFC standards such as ISO 14443 in Grounds 4–6.

Petitioner should be precluded from relying on NFC standards because Petitioner introduced no evidentiary support. In some portions of the Petition, Petitioner simply refers generically to the standards.

Petition, 68. For Ground 4, Petitioner asserts that a POSITA would understand that “NFC standards such as ISO 14443 typically operate within a distance of less than twenty centimeters.” Petition, 81–82. Whatever manner Petition attempts to use the standards, Petitioner violates 37 C.F.R. §42.104(b)(5) by failing to provide them as exhibits. 37 C.F.R. §42.104(b)(5) requires the Petition to include, inter alia, “[t]he exhibit number of the supporting evidence relied upon to support the challenge.” But Petitioner failed to file any exhibit(s) on any NFC standard, and in particular not on ISO 14443. Further, Petitioner does not cite to evidentiary support for its assertions about a POSITA’s knowledge regarding these standards. Petitioner, therefore, failed to comply with 37 C.F.R. §42.104(b)(5).

Beyond the mere regulatory violation, there is no support for Petitioner’s assertion. Petitioner relies on the declaration of Dr. Tentzeris. Petition, 81 (citing EX-1011, ¶191). But that declaration just parrots the conclusory statements of the petition. *Xerox Corp.*, IPR2022-00624, Paper 9, 15–16; *TQ Delta LLC*, 942 F.3d at 1362; *ActiveVideo Networks*, 694 F.3d at 1327. Further, Petitioner asserts that “a POSITA would find that Ghosh’s disclosure of NFC tags necessarily and inherently teaches the claimed communication range of less than twenty

centimeters.” Petition, 81–82; EX-1011, ¶191. To show inherent disclosure, “mere possibility is not enough.” *PersonalWeb Techs., LLC v. Apple, Inc.*, 917 F.3d 1376, 1382 (Fed. Cir. 2019). Instead, “a party must show that *the natural result flowing* from the operation as taught would result in the performance of the questioned function.” *Id.* (internal quotation marks omitted, emphasis in original). Neither Petitioner nor Dr. Tentzeris provides any analysis to show that Ghosh’s NFC tags would necessarily follow any particular NFC standard, such as ISO 14443, or that any such standard would necessarily have a communication range less than twenty centimeters.

Therefore, because Petitioner improperly relies on NFC standards for Ground 4, which is incorporated into Grounds 5 and 6 (Petition, 100), Petitioner has failed to demonstrate a reasonable likelihood of success of showing any claim is unpatentable for Grounds 4 through 6.

C. Petitioner fails to show a POSITA would have been motivated to combine Sakata with either Siotia or Ghosh.

Neither Petitioner nor its expert provide a cogent analysis for why (or how) a skilled artisan would have combined Sakata with either Siotia (for Grounds 1–3) or Ghosh (for Grounds 4–6). Without providing such an analysis, Petitioner fails to carry its burden of proof.

In fact, no such motivation to combine exists because, as discussed above, Sakata is fundamentally at odds with the systems of Siotia and Ghosh. Sakata is directed to a system of background tracking—robots in a warehouse and so on—that requires no deliberate interaction between the robot and tags. Siotia and Ghosh, by contrast, concern systems that contemplate interaction with the shopper. EX-1003, ¶[0024] (describing a “shopping event” in which the mobile device “interact[s] with a store item”); EX-1007, Fig. 3 (Step 302 “Receive a Product Interaction from a Personal Mobile Device”), [0027] (“The product interaction can be initiated by the customer’s personal mobile device, for example, by scanning of a product tag.”). Petitioner does not explain why a POSITA would look to Sakata to improve these systems.

D. Petitioner fails to show a POSITA would have been motivated to combine Siotia with Sakata for Grounds 1–3.

Petitioner asserts that a POSITA would have been motivated to modify Siotia by substituting the “RFID IC tag” disclosed by Sakata for “Siotia’s RFID device.” Petition, 37. But Petitioner ignores the vastly different disclosures and goals of Sakata and Siotia, both from each other and from the ’340 Patent. Siotia relates to “planogram guided shopping” for efficient shopping. EX-1003, Title, [0020].

Sakata, on the other hand, is unrelated to shopping, but focuses on “the fields of object position surveying, position identification, position indication, and the like.” EX-1008, [0001].

Petitioner asserts that a POSITA would be motivated to combine Siotia with Sakata based on Sakata’s purported advantages of using tags “with short communication ranges for avoiding communication interference and more precise location finding.” Petition, 37. Siotia, however, discloses a system that is triggered by a “shopping event.” EX-1003, [0024]. Siotia gives examples of shopping events such as scanning a “bar code, UPC code, [taking] pictures, and the like” or “interacting” with an item “using the phone or the user moving an item from the [electronic shopping list] to a shopping cart.” *Id.* Sakata takes the opposite approach, requiring non-contact reading as the reading device moves in between tags. EX-1008, [0015], [0019], [0022].

Moreover, Siotia is concerned with obtaining “an estimate of the user’s physical location with the store,” and recognizes such an estimate may be less precise than other systems, such as GPS systems, but is sufficient for its purposes. EX-1003, [0025]. Petitioner fails to articulate why Siotia would be improved with the supposedly more accurate location finding of Sakata. Nor does Petitioner explain why a POSITA

would be motivated to add more precise tracking when Siotia itself states that such tracking is unnecessary. EX-1003, [0025].

Petitioner’s attempt to frame its proposed modification as a simple substitution of one device for another, Petition, 38, ignores that Sakata discloses IC tags on a “sheet-like” or “mesh-like” target, which is stretched “over at least one of a floor, ceiling, or wall of a building, EX-1008, [0011]–[0012]. Petitioner fails to explain how Sakata’s sheet-like or mesh-like target would be stretched over anything disclosed in Siotia. Petitioner provides no rationale for combining these references, but instead improperly uses the ’340 Patent as a “roadmap” for putting them together like a “jigsaw puzzle.” *InTouch Techs., Inc. v. VGO Commc’ns, Inc.*, 751 F.3d 1327, 1351 (Fed. Cir. 2014).

Without being able to articulate a motivation to combine Siotia and Sakata based on their own disclosures, Petitioner turns again to the knowledge of a POSITA regarding “NFC standards such as ISO 14443.” Petition, 37. As discussed above, Petitioner has not submitted any exhibits for these standards, and therefore, they should not be considered. Further, Petitioner fails to explain how these standards, which are not mentioned in either Siotia or Sakata, would motivate a POSITA to combine those references. Petitioner further fails to offer any

explanation as to how Sakata’s tags would be modified to incorporate near-field communication, or how the supposedly modified tags of Sakata would be used in Siotia. As such, Petitioner improperly uses alleged POSITA knowledge as “a wholesale substitute for reasoned analysis and evidentiary support,” which cannot support an obviousness determination. *Arendi*, 832 F.3d at 1361–62.

Therefore, because Petitioner fails to show a POSITA would have been motivated to combine Siotia and Sakata, or what such a combination would entail, Petitioner does not have a reasonable likelihood of success of showing any claim is unpatentable for Ground 1. Because Grounds 2 and 3 also require this combination (with the additional Akao reference) (Petition, 41), Petitioner also does not have a reasonable likelihood of success of showing any claim is unpatentable for Grounds 1–3.

E. Petitioner fails to show a POSITA would have been motivated to combine Ghosh with Sakata for Grounds 4–6.

Petitioner asserts that a POSITA would have been motivated to modify Ghosh by incorporating “Sakata’s disclosure of vertical positioning.” Petition, 93. But Ghosh has no use for Sakata’s vertical positioning because Ghosh is not concerned with precise tracking of

location, but rather acquiring customer insight information in a retail environment. EX-1007, Abstract. Indeed, Petitioner fails to articulate any particular aspect of the Ghosh system that would be improved by adding Sakata's vertical positioning.

Petitioner misrepresents the disclosure of Ghosh, stating that it “teaches determining the precise location of the customer within the store through NFC interactions.” Petition, 93 (citing EX-1007, [0020]). This is incorrect. Ghosh never discloses determining the “precise location of the customer.” Instead, Ghosh merely discloses determining the location of the customer by “cross-referencing the product identifier with the store planogram.” EX-1007, [0020]. In particular, Petitioner has not shown that anything in Ghosh that focuses on “customer location and foot traffic” to gain insights, *id.*, [0008], would indicate that having information about the vertical position of an NFC reader would provide any additional benefit.

As with the Siotia-Sakata combination, Petitioner improperly relies on the knowledge of a POSITA regarding “NFC standards such as ISO 14443.” Petition, 98. Not only has Petitioner failed to submit any exhibits for these standards, Petitioner fails to explain how these standards, which are not mentioned in either Ghosh or Sakata, would

motivate a POSITA to combine those references. *See Arendi*, 832 F.3d at 1361–62.

Therefore, because Petitioner fails to show a POSITA would be motivated to combine Ghosh and Sakata, or what such a combination would entail, Petitioner does not have a reasonable likelihood of success of showing any claim is unpatentable for Ground 4. Because Grounds 5 and 6 also require this combination (with additional references) (Petition, 100), Petitioner also does not have a reasonable likelihood of success of showing any claim is unpatentable for Grounds 5 and 6.

V. THERE IS NO GOOD CAUSE FOR A PRE-INSTITUTION REPLY

In view of the deficiencies in the Petition discussed above, Petitioner might seek to file a pre-institution reply. But there would be no good cause for a pre-institution reply. Other than the multiple petition issue, which Petitioner already addressed in its ranking, all of Patent Owner’s arguments above address the merits of the Petition, and Petitioner could have—and should have—addressed these issues in the Petition itself. Petitioner would have no good cause to bolster the merits of its Petition in a pre-institution reply. *See, e.g., Ontel Prods. Corp. v.*

Guy A. Shaked Invs. Ltd., IPR2020-01703, Paper 10 at 2 (Feb. 4, 2021)
(denying reply for “subjects that Petitioner should have developed in
its Petition”).

VI. CONCLUSION

For the reasons set forth above, Petitioner cannot meet its burden
of establishing that at least one claim is unpatentable as obvious over
the cited art, and the Board should exercise its discretion to deny insti-
tution. Patent Owner respectfully requests that the Board deny institu-
tion of this Petition for all challenged claims of the '340 Patent.

February 28, 2024

Respectfully submitted,

By: /Jessica C. Kaiser/

Jessica C. Kaiser

Reg. No. 58,937

Lead Counsel for Patent Owner

CERTIFICATE OF COMPLIANCE

Pursuant to 37 C.F.R. § 42.24(d), I, Jessica C. Kaiser, certify that
PATENT OWNER'S PRELIMINARY RESPONSE contains 9,073
words, excluding those portions identified in 37 C.F.R. § 42.24(a), as
measured by the word-processing system used to prepare this paper.

February 28, 2024

Respectfully submitted,

By: /Jessica C. Kaiser/

Jessica C. Kaiser

Reg. No. 58,937

Lead Counsel for Patent Owner

CERTIFICATE OF SERVICE

Pursuant to 37 C.F.R. § 42.6(e), I certify that on February 28, 2024, a copy of **PATENT OWNER'S PRELIMINARY RESPONSE** was served upon the below-listed counsel by electronic mail:

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Dated: February 28, 2024

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