

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

ERICSSON INC. and CELLCO PARTNERSHIP D/B/A VERIZON WIRELESS.

Petitioners,

v.

PROCOMM INTERNATIONAL PTE. LTD

Patent Owner,

U.S. Patent No. 8,497,813

Issue Date: July 30, 2013

Title: PANEL ANTENNA HAVING SEALED RADIO

ENCLOSURE

Inter Partes Review No.: IPR2024-01455

**PETITIONERS' OPPOSITION TO PATENT OWNER'S REQUEST
FOR DISCRETIONARY DENIAL OF INSTITUTION**

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Patent Trial and Appeal Board

U.S. Patent and Trademark Office

P.O. Box 1450

Alexandria, VA 22313-1450

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PETITIONERS' EXHIBIT LIST

<i>Exhibit No.</i>	<i>Description</i>
1001	U.S. Patent No. 8,497,813 (the "'813 Patent")
1002	Portions of prosecution history of the '813 Patent ("File History")
1003	Declaration of Petitioners' Expert Henry Houh, Ph.D. ("Houh")
1004	U.S. Patent Publication No. 2006/0250311 ("Bishop")
1005	U.S. Patent No. 7,457,503 ("Solheid")
1006	U.S. Patent Publication No. 2009/0134755 ("Lakoduc")
1007	Foreign Publication DE102006020504A1 ("Neuhoff")
1008	U.S. Patent No. 5,986,618 to ("Aakula")
1009	U.S. Patent Publication No. 2006/0181462 ("Kelly")
1010	U.S. Patent Publication No. 2007/0296518 A1 ("Avramis")
1011	International Publication No. WO 2008/009421 ("Korte")
1012	Related Patents
1013	ORDER denying Defendants' Opposed Motion to Stay Pending <i>Inter Partes</i> Review as premature in <i>Procomm International Ptd. Ltd. v. Verizon Communications, Inc. et al.</i> , No. 2:24-cv-009-RWS-RSP (E.D.Tex.)
1014	Defendants' Opposition to Plaintiff Procomm International Pte. LTS.'s Motion for Leave to Amend Infringement Contentions (Dkt. 52) in <i>Procomm International Ptd. Ltd. v. Verizon Communications, Inc. et al.</i> , No. 2:24-cv-009-RWS-RSP (E.D.Tex.)

I. INTRODUCTION

Patent Owner (“PO”) has requested discretionary denial of institution of the Petition for *inter partes* review of the ’813 Patent on the basis that “all six *Fintiv* factors favor discretionary denial” in view of the related district court litigation, *Procomm International Ptd. Ltd. v. Verizon Communications, Inc. et al.*, No. 2:24-cv-009-RWS-RSP (E.D.Tex.) (“Related Litigation”). Req. 1. However, PO mischaracterizes several material facts while ignoring others in seeking discretionary relief from an otherwise meritorious petition.

Petitioners acknowledge that a trial is scheduled in the Related Litigation nine months prior to an expected decision in this proceeding. As set forth more fully below, however, PO contributed to the timing of the petition by failing to seek leave to amend its infringement contentions until February 28, 2025, despite several attempts to improperly amend its contentions well beyond the March 20, 2024 deadline set by the district court, thus, introducing uncertainty and delay as to the scope of the claims asserted in the Related Litigation.

Moreover, Petitioners’ *Sotera* stipulation proffered herein eliminates any overlap of issues presented in the Petition and issues to be tried in the Related Litigation.

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PO's Request also demonstrates the strength of the Petitioners' unpatentability challenges because the Request resorts to mischaracterizing the arguments in the Petition. Specifically, for Ground 1, the Request focuses on FIG. 1 of Bishop to assert that Bishop does not disclose "an aperture through which the cavity of the enclosure may be accessed" where an internal cover and a mounted radome "overlap an area defined by the aperture." Req. 13. However, the Petition relies on FIGs. 3 and 5 of Bishop to show this limitation. Pet. 43.

Likewise, for Ground 2, the Request asserts that the antenna mount of Kelly cannot be the interior cover because the antenna mount is not disclosed as "having at least one RF radiating module fastened to an exterior surface thereof" and "dimensioned to overlap an area defined by the aperture" such that a lip extending from a flange is "engaged by the internal cover to provide the environmental seal." However, contrary to PO's assertion, the Petition clearly identifies the antenna mount along with a portion of the cover as the internal cover. Pet. 70-81.

This Opposition demonstrates that a proper analysis of the *Fintiv* factors, particularly in view of Petitioners' *Sotera* stipulation and the strength of the grounds set forth in the Petition, shows that discretionary denial is not warranted and that PO's Request should be denied in the interest of efficiency, fairness, and patent quality.

Accordingly, Petitioners' hereby respectfully request that the Board deny PO's Request and grant the Petition to institute an *inter partes* review of the '813 Patent.

II. STIPULATION

Petitioners hereby present a *Sotera* stipulation. Petitioners stipulate that if the Board grants the Petition and institutes an *inter partes* review, Petitioners will not pursue in the Related Litigation the specific grounds asserted in the Petition, or any other ground that could have been reasonably raised in an IPR. See *Sotera Wireless, Inc. v. Masimo Corporation*, IPR2020-01019, Paper 12 (P.T.A.B. Dec. 1, 2020) (precedential).

III. ANALYSIS

A. Factor 1: whether the court granted a stay or evidence exists that one may be granted if a proceeding is instituted.

Factor 1 favors institution.

The Board in *Fintiv* recognized that “[a] district court stay of the litigation pending resolution of the PTAB trial allays concerns about inefficiency and duplication of efforts” and that “[t]his fact has strongly weighed against exercising the authority to deny institution under *NHK*.” *Fintiv* 6. The Board also recognized that a denial of a motion to stay as premature pending a decision on institution “usually weighed against exercising authority to deny institution under *NHK*,”

noting that the “proximity of the court’s trial date and investment of time are relevant to how much weight to give to the court’s willingness to reconsider a stay.” *Fintiv* 7.

Here, Petitioners filed a motion for a stay pending *inter partes* review that was denied by the Court as premature pending the Board’s decision on institution. *See* EX-1013. Thus, Factor 1 weighs in favor of institution.

Notably, PO opposed a stay pending resolution of this proceeding, which has been recognized by the Board as the mechanism that “allays concerns about inefficiency and duplication of efforts,” yet seeks to invoke the Board’s discretion to deny institution on the bases of inefficiency and duplication of efforts based on that same stay being denied. PO’s “heads I win, tails you lose” approach should be rejected.

B. Factor 2: proximity of the court’s trial date to the Board’s projected statutory deadline

Factor 2 is neutral.

Petitioners acknowledge that a trial date in the Related Litigation is presently scheduled nine months prior to an expected date of a Final Written Decision in this proceeding. However, trial dates in this district court are often delayed for various reasons, as counsel in the Related Litigation is well aware. *See, e.g. Multimedia Techs. PTE Ltd. v. LG Elecs. Inc., et al.*, 2:22-cv-00494-JRG-RSP, Dkt. 273 (E.D.

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Tex. Mar. 18, 2025) (noting that “[t]his case has been set for trial five times: November 18, 2024, January 27, 2025, February 7, 2025, March 3, 2025, and March 17, 2025. The parties have also been notified that other cases are preferentially set ahead of them for the April 7, 2025 and April 21, 2025 trial settings.”).

Moreover, Petitioners filed the Petition within the window prescribed by statute. PO argues that “Petitioners waited until the last minute to file their IPR” (Req. 4; *See also* Req. 7) as justification for denying institution in the interest of fairness, yet PO’s conduct in the Related Litigation is responsible for the timing of the Petition by creating uncertainty as to the claims asserted and infringement theories that, even today, remains unresolved.

The court’s deadline for identifying asserted claims and serving infringement contentions was March 20, 2024. *See* EX-2001 6. Despite this deadline, PO repeatedly served proposed amended contentions, in certain cases adding additional asserted claims, yet PO waited nearly a year to file a motion for leave to amend its infringement contentions on February 28, 2025. *See* EX-1014. PO knew it would need to seek leave to amend its infringement contentions to assert new claims at least as early as July 17, 2024, but rather than seeking leave to amend and resolving any doubt as to the scope of its infringement case, PO instead continued to attempt alter the scope of its infringement case through multiple

rounds of proposed amendments. *See* EX-1014. PO's conduct introduced uncertainty as to the scope of its infringement case and asserted claims, causing delay in Petitioners' filing, particularly since Petitioners only get one bite at the apple when seeking an *inter partes* review.

C. Factor 3: investment in the parallel proceeding by the court and the parties

Factor 3 favors institution.

As held by the Board in *Fintiv*, “[i]f, at the time of the institution decision, the district court has not issued orders related to the patent at issue in the petition, this fact weighs against exercising discretion to deny institution under *NHK*.”

Fintiv 10. No orders have been issued or are expected to be issued by the district court.

PO argues that by the expected July 29, 2025, institution decision date, the *Markman* hearing will have been held in the district court. However, there are no claim construction issues regarding the '813 Patent that have been raised that have any bearing on the grounds set forth in the Petition because the prior art relied on in the Petition meets each of the claim terms under any reasonable interpretation.

Pet. 18.

D. Factor 4: overlap between issues raised in the petition and in the parallel proceeding.

Factor 4 favors institution.

In view of Petitioners' *Sotera* stipulation, there will be no overlap between the issues raised in the petition and issues to be adjudicated in the Related Litigation. In addition, Petitioners are not relying on any corresponding system art in the Related Litigation.

In the Related Litigation, PO asserted only Claim 1 and Claim 4 dependent from Claim 1. PO recently filed a motion for leave to amend its infringement contentions in an effort to additionally assert Claims 5 and 6, also dependent from Claim 1. EX-10xx xx. Petitioners have challenged Claims 1, 2, and 4-7, thus, even if PO's late motion to amend its infringement contentions is granted, only a subset of the challenged claims will be asserted in the Related Litigation.

E. Factor 5: whether the petitioner and the defendant in the parallel proceeding are the same party.

Factor 5 is neutral.

Each of the Petitioners is a defendant in the Related Litigation. Nothing within *Fintiv* suggests that the same party between the proceedings weighs in favor of discretionary denial. *See HP Inc. v. Slingshot Printing LLC*, IPR2020-01084,

Paper 13 at 9 (having the “same parties as parallel proceeding” makes factor 5 “neutral”)).

F. Factor 6: other circumstances that impact the Board’s exercise of discretion, including merits.

1. The Merits of the Petition Are Strong

The merits of the Petition are particularly strong and warrant institution in the interest of the public benefit in strengthening the patent system by allowing the review of patents challenged with sufficiently strong merits showing unpatentability of at least one claim. Here, the Petition sets forth two grounds, each of which presents challenges that plainly demonstrate the unpatentability of the challenged claims.

a. Overview

As set forth in the Overview (Section II) of the Petition, the Challenged Claims are directed to a six-sided (boxlike) enclosure (**purple**) for housing radios (**blue**) wherein one of the sides forms an access cover (**gold**), which includes one or more RF radiating modules (**orange**) fastened to its exterior surface that are covered by a radome (**green**). FIG. 6 of the '813 Patent illustrates a claimed embodiment wherein the access cover is hinged:

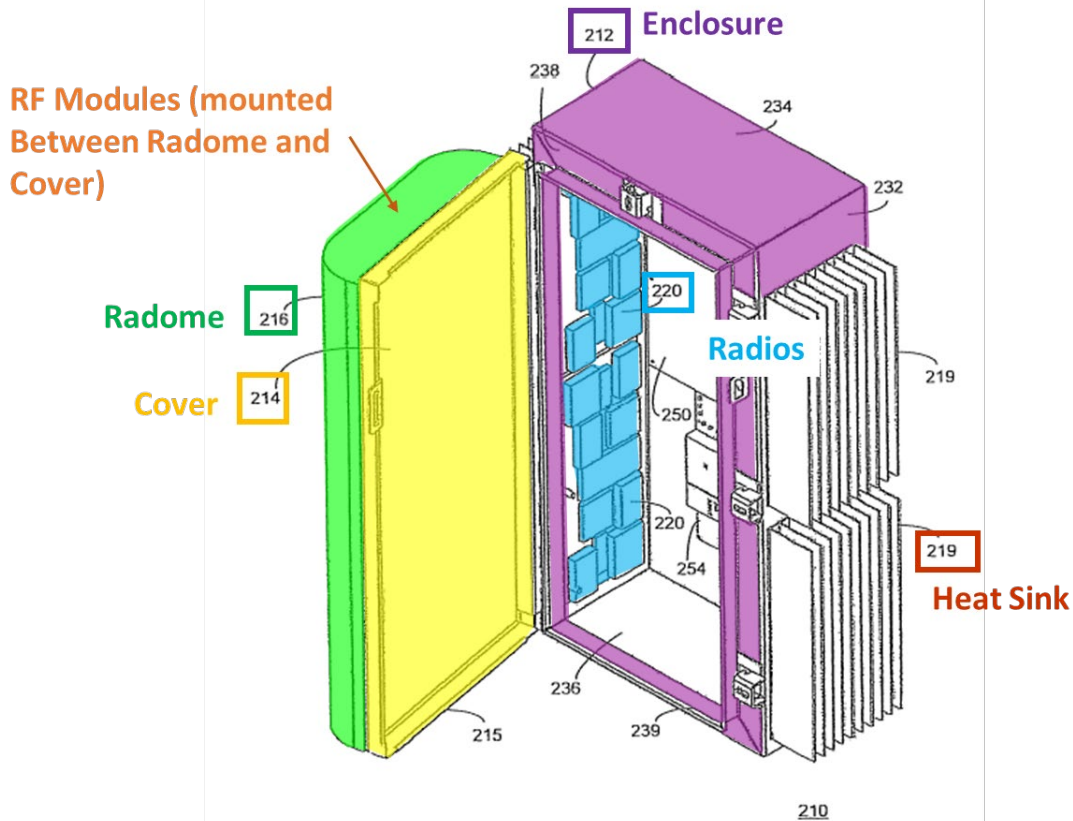


Figure 6

EX-1001 FIG. 6¹; Pet. 2

However, six-sided (boxlike) enclosures for housing radios having a panel antenna forming an access cover were well-known. For example, U.S. Patent Publication No. 2006/025311 (“Bishop”) (EX-1004) discloses such an enclosure having an unhinged access cover forming a ground plane of the panel antenna:

¹ Figures with color have been annotated by Petitioners.

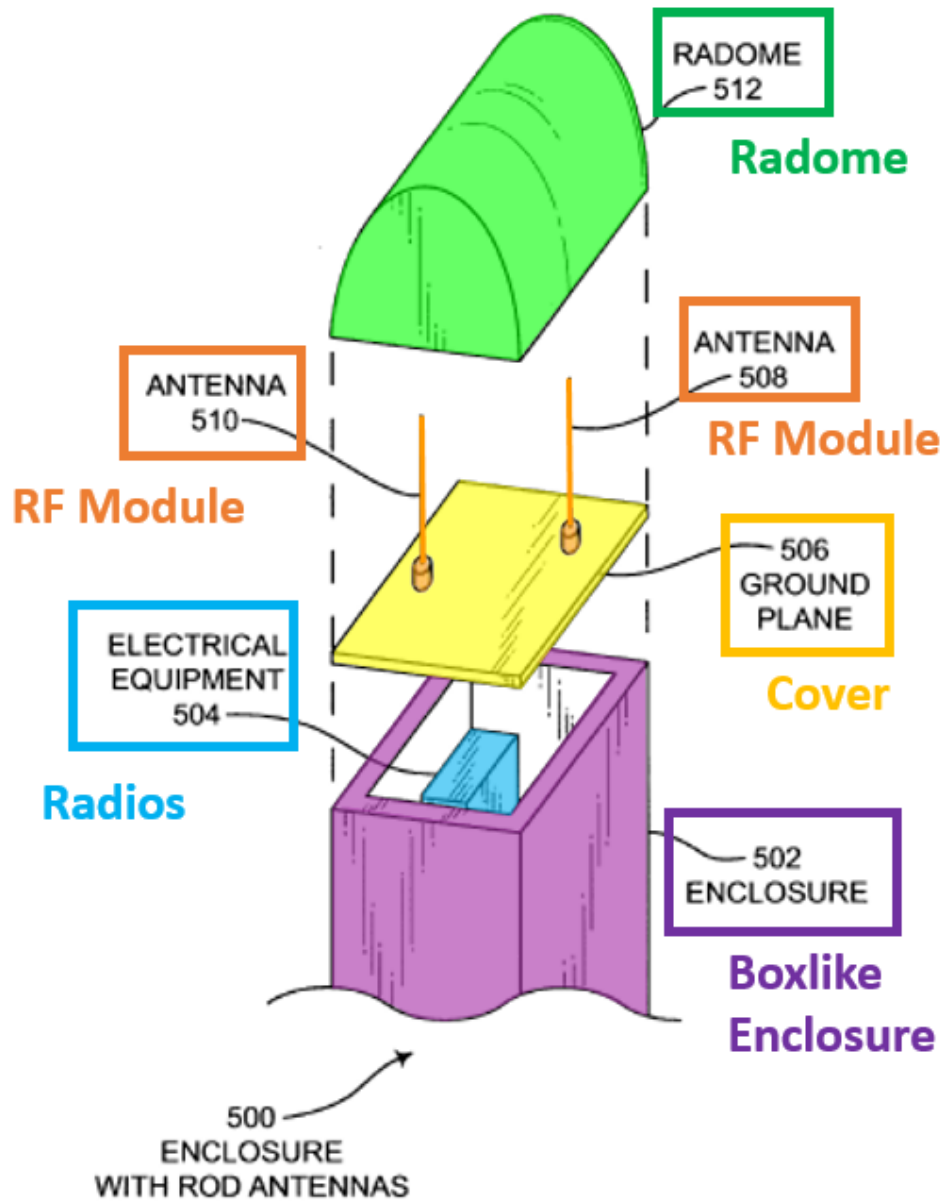


FIG. 5

EX-1004 FIG. 5; Pet. 3.

During prosecution, the applicant gained allowance of the Challenged Claims over a rejection based on Bishop by amending Claim 1 to incorporate the

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limitations recited in original Claim 8, which the Office indicated would be allowable if rewritten in independent form. EX-1002 36. Original Claim 8 read:

*8. The panel antenna of claim 1, wherein **a flange joins the first and second side walls and the top and bottom wall**, and **a lip extends from the flange**, further defining the aperture through which the cavity of the enclosure may be accessed, the lip being engaged by the internal cover to provide the environmental seal.*

EX-1002 249.

The **flange/lip** feature recited in Claim 8 is illustrated in FIG. 6 below:

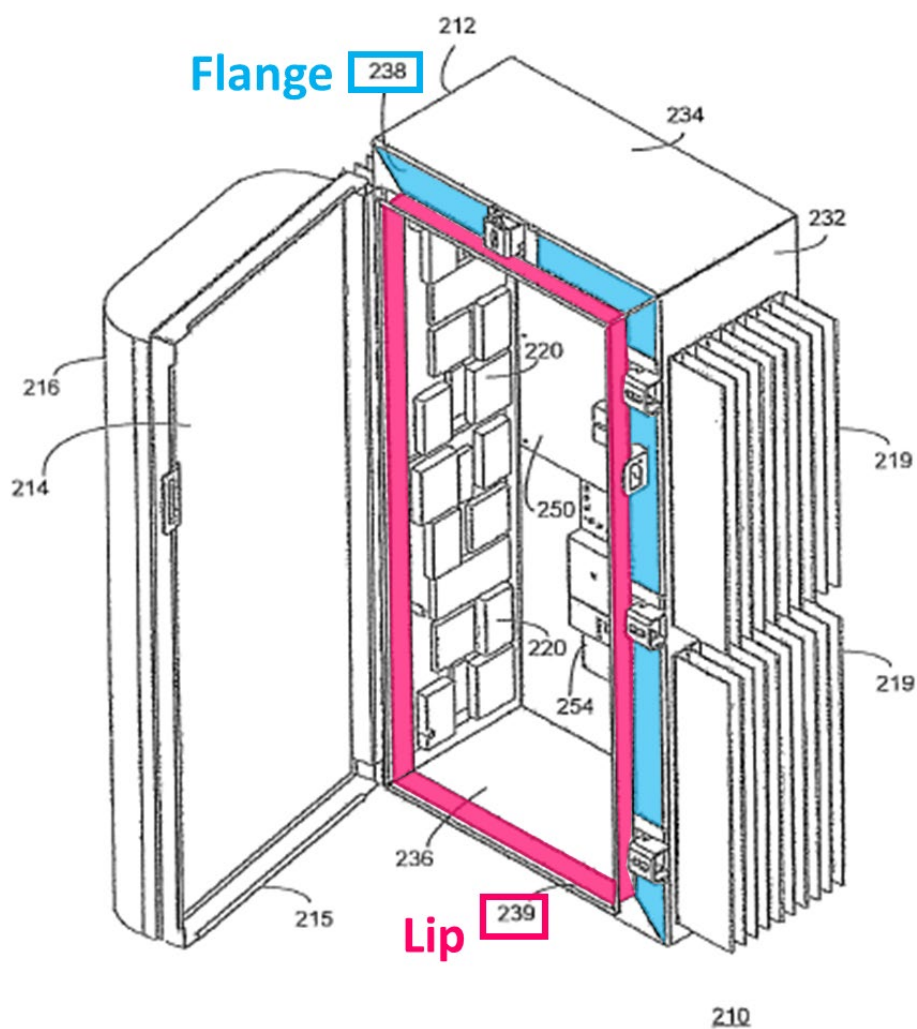
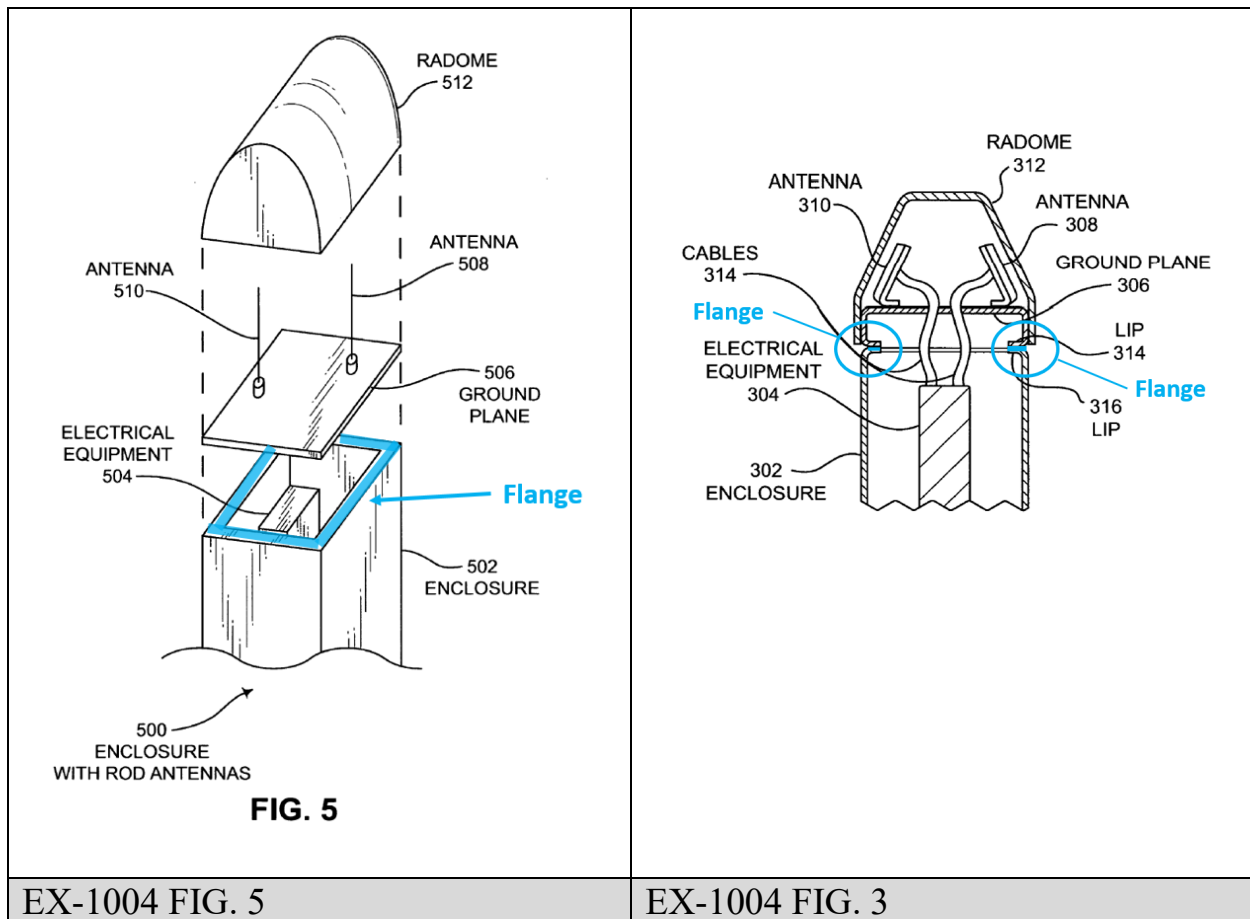


Figure 6

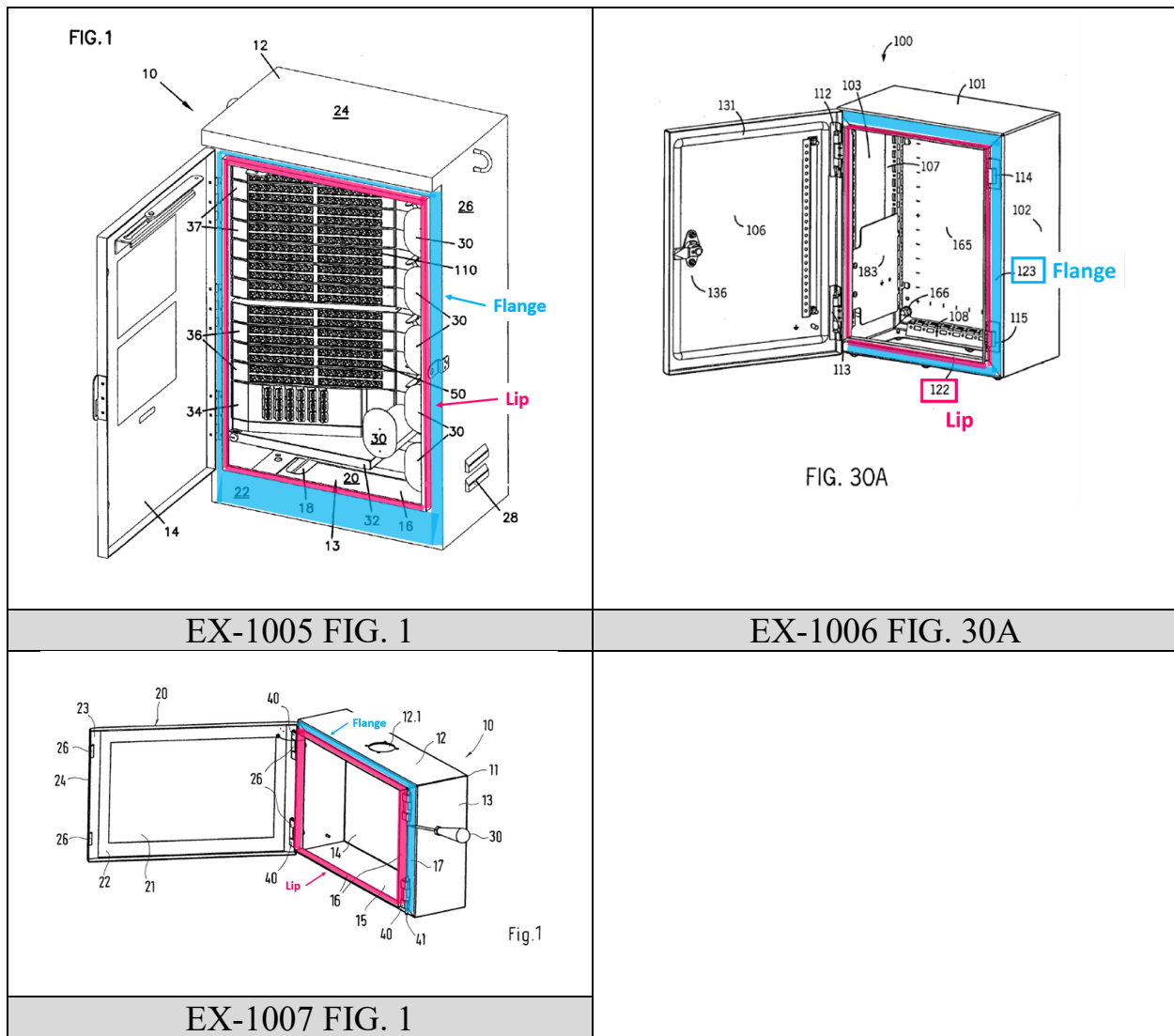
EX-1001 FIG. 6; Pet. 5

As illustrated below, Bishop embodies the recited **flange**, but not the **lip**:

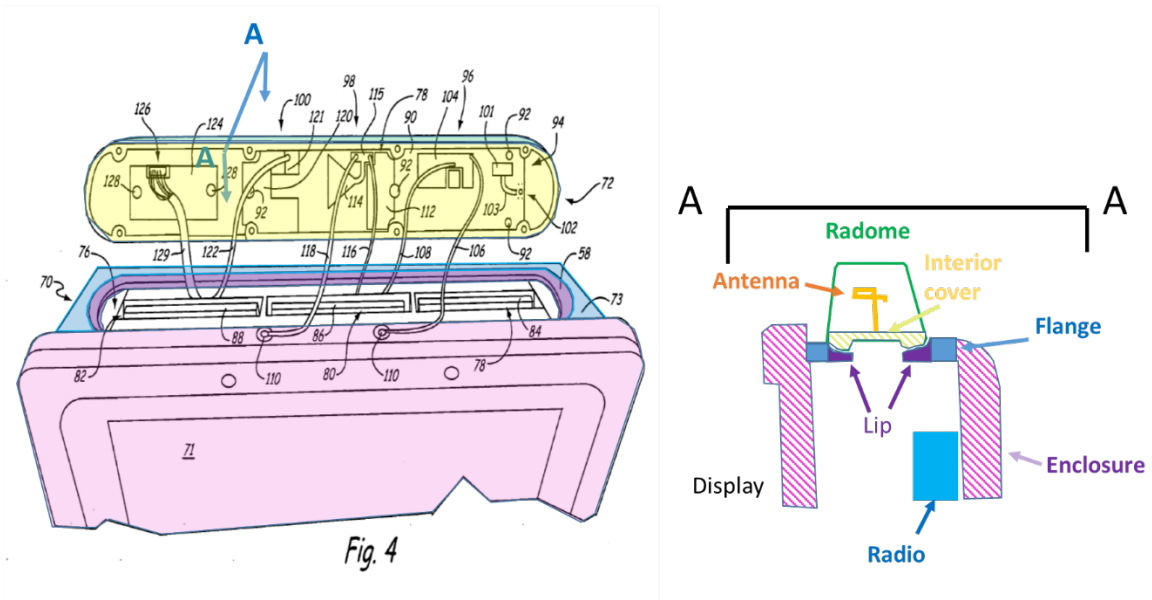


However, the flange/lip feature that formed the basis for allowance of the Challenged Claims was well known for engaging a panel to a boxlike enclosure to provide an environmental seal, and, specifically, was well known in environmental enclosures housing communications equipment as demonstrated by the following examples:

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In addition, U.S. Patent Publication No. 2006/0181462 (“Kelly”) (EX-1009), discloses the claimed panel antenna including the flange/lip feature. Kelly discloses an enclosure with a hinged cover having external antennas covered by a radome that forms an environmental seal with the enclosure by engaging the flange/lip feature formed by the enclosure. EX-1003 ¶33.



EX-1009 Fig. 4; EX-1003 ¶33.

As demonstrated by Bishop and Kelly, a panel antenna having a six-sided (boxlike) enclosure for housing radios was well known at the time of the purported invention. In addition, the flange/lip feature for providing an environmental seal was also well known as demonstrated by Kelly, and the other identified prior art enclosures that house communications equipment. These references are naturally combined together, and the combinations discloses each limitation recited in the Challenged Claims. EX-1003 ¶34.

b. Summary of the '813 Patent

The '813 Patent is titled “Panel Antenna Having Sealed Radio Enclosure” and particularly identifies the field of invention as relating to “arrangements of

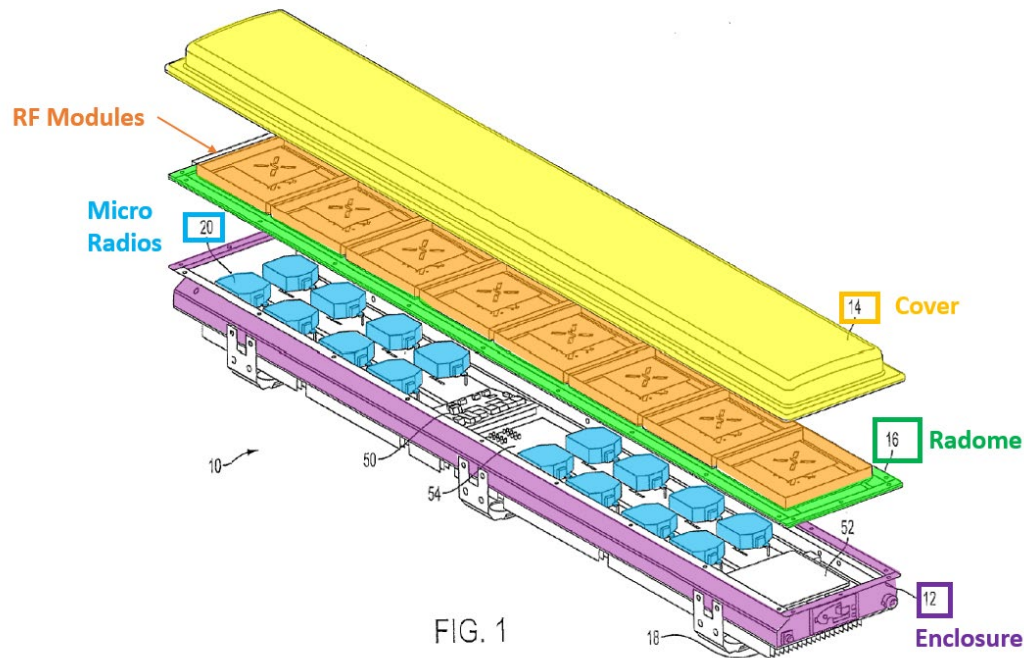
passive and active components in an [sic] multiple radiating element panel antenna.” EX-1001 Title, 1:7-10; EX-1003 ¶35.

The '813 Patent summarizes the invention as a panel antenna including:

- (1) an enclosure defining a cavity and an aperture for accessing the cavity;
- (2) a cover dimensioned to overlap the aperture of the enclosure;
- (3) a radome;
- (4) a heat sink mounted to an external surface of the enclosure;
- (5) at least one active radio component (e.g., micro radio(s)) mounted inside the cavity of the enclosure; and
- (5) at least one passive radio element (e.g., RF radiating module(s)) mounted external to the cavity of the enclosure.

EX-1001 2:7-23; EX-1003 ¶36.

The '813 Patent describes two embodiments differing in the positional relationship between the cover, radome, and the passive radio element(s). In a first embodiment (“Embodiment I”), the cover is positioned exterior to the radome such that the passive radio elements(s) are positioned between an interior surface of the cover and the radome. The '813 Patent provides FIG. 1 as an illustration of Embodiment I:



EX-1001 FIG. 1; EX-1003 ¶37.

With reference to FIG. 1, the '813 Patent explains that panel antenna 10 comprises an enclosure 12 (purple), cover 14 (gold), and radome 16 (green). The panel antenna includes a plurality of micro radios 20 (blue) mounted within the enclosure 12 that may be thermally coupled to heat sinks 18. As illustrated in this embodiment (Embodiment I), a plurality of RF modules 24 (orange) are positioned between an internal surface of cover 14 and radome 16 with the external surface of cover 14 forming an outer surface of panel antenna 10. EX-1001 3:51-59; EX-1003 ¶38.

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The '813 Patent also describes a second embodiment ("Embodiment II") wherein the radome is positioned exterior to the cover such that the passive radio elements(s) (e.g., RF module(s)) are positioned between an exterior surface of the cover and the radome. The '813 Patent provides FIG. 6 as an illustration of Embodiment II:

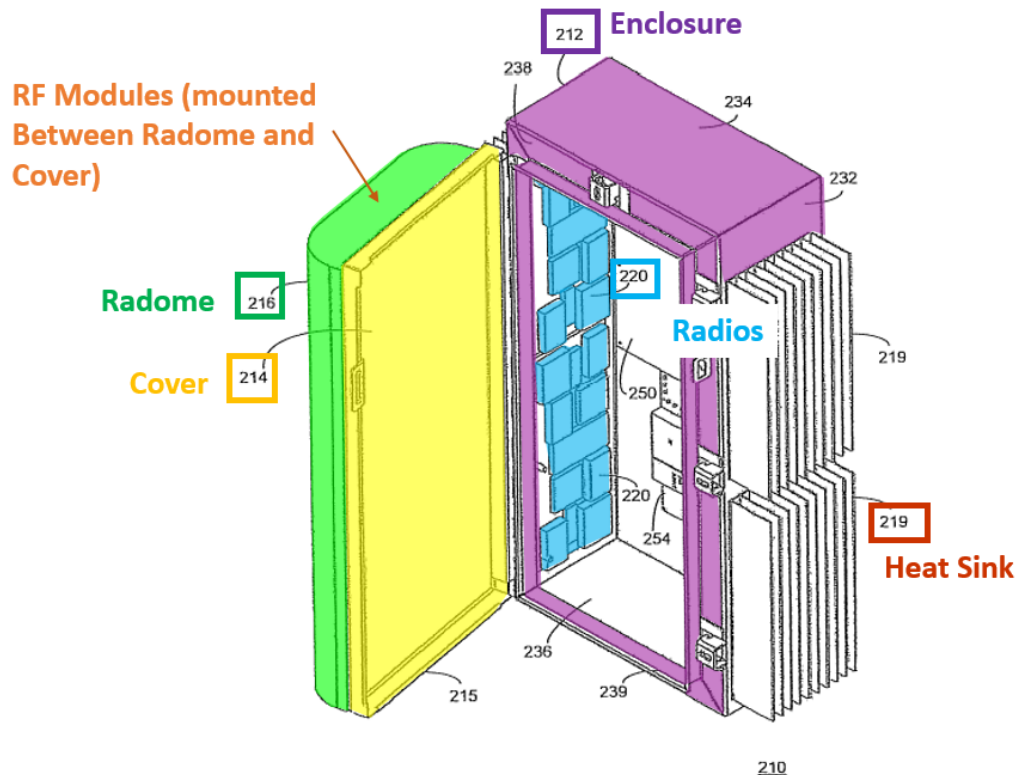


Figure 6

EX-1001 FIG. 6; EX-1003 ¶39.

With reference to FIG. 6, the '813 Patent explains that panel antenna 210, like panel antenna 10 illustrated in FIG. 1 (Embodiment I), comprises an enclosure

212 (**purple**), cover 214 (**gold**), and radome 216 (**green**). The panel antenna includes a plurality of micro radios 220 (**blue**) mounted within the enclosure 212 that may be thermally coupled to heat sinks 219. As illustrated in this embodiment (Embodiment II), radome 216 (**green**) is positioned external to cover 214 (**gold**) such that the external surface of radome 216 forming an outer surface of panel antenna 210. EX-1001 6:65-7:7; EX-1003 ¶40.

The Challenged Claims are directed only to Embodiment II of the disclosed panel antenna wherein the RF module(s) are mounted to an exterior surface of the cover and enclosed by a radome (as indicated by the bolded text), and also include the **flange/lip** feature. EX-1003 ¶43. Specifically, Claim 1 reads:

A panel antenna, comprising:

an enclosure, the enclosure including a rear panel, a first side wall, and a second side wall, a top wall and a bottom wall, the rear panel and the walls defining a cavity, the walls further defining an aperture through which the cavity of the enclosure may be accessed,
*an internal cover, the internal cover being dimensioned to overlap an area defined by the aperture of the enclosure and providing an environmental seal and electromagnetic shielding for the cavity, **the internal cover having at least one RF radiating module fastened to an exterior surface thereof,***
at least one micro radio mounted to an internal surface of the first side wall, the micro radio being coupled to the RF radiating module;

*a first heat sink, mounted to an external surface of the first side wall,
and
a radome, **the radome mounting to the internal cover and enclosing
the RF radiating module;**
wherein a flange joins the first and second side walls and the top
and bottom wall, and a lip extends from the flange, further defining
the aperture through which the cavity of the enclosure may be
accessed, the lip being engaged by the internal cover to provide the
environmental seal.*

**c. Ground 1 Plainly Demonstrates that Claim 1 is
Unpatentable**

Under Ground 1, the Petition challenges Claims 1, 2, and 4-7 as obvious over Bishop in view of Avramis, Lakoduc, and/or Korte. Claim 1, the sole independent claim challenged, is shown below:

[1.0] *A panel antenna, comprising:*
[1.1] *an enclosure, the enclosure including a rear panel, a first side wall, and a second side wall, a top wall and a bottom wall, the rear panel and the walls defining a cavity, the walls further defining an aperture through which the cavity of the enclosure may be accessed,*
[1.2] *an internal cover, the internal cover being dimensioned to overlap an area defined by the aperture of the enclosure and providing an environmental seal and electromagnetic shielding for the cavity,*

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[1.3] the internal cover having at least one RF radiating module fastened to an exterior surface thereof,

[1.4] at least one micro radio mounted to an internal surface of the first side wall, the micro radio being coupled to the RF radiating module;

[1.5] a first heat sink, mounted to an external surface of the first side wall, and

[1.6] a radome, the radome mounting to the internal cover and enclosing the RF radiating module;

[1.7] wherein a flange joins the first and second side walls and the top and bottom wall, and a lip extends from the flange, further defining the aperture through which the cavity of the enclosure may be accessed, the lip being engaged by the internal cover to provide the environmental seal.

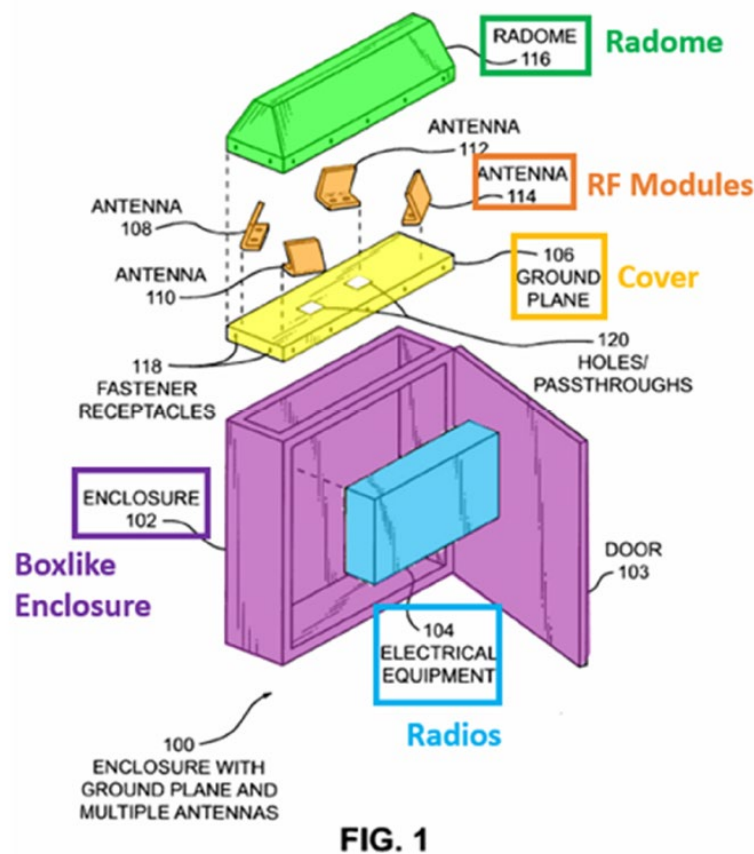
In its Request responding to the merits of Ground 1, PO disputes only a single issue – that “Bishop does not suggest an enclosure including walls ‘defining an aperture through which the cavity may be accessed’ [1.1] where an internal cover and a mounted radome [1.6] ‘overlap an area defined by the aperture.’[1.2]” Request 12-13. Notably, the Request does not challenge the Petition’s descriptions of the State of the Art, the prosecution history, or the combination of Bishop with the other references.

In raising this dispute, PO bases its argument on a single embodiment in Bishop shown in FIG. 1, while ignoring the embodiments of FIGs. 3 and 5 relied

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upon in the Petition as disclosing these specific elements in an apparent attempt to mischaracterize the strong merits of Ground 1.

Specifically, PO argues that Bishop's deficiency "is readily apparent from Petitioners' annotations of Bishop" (PO Req. 13) and provides the following annotated FIG. 1 of Bishop from the Petition:



Req. 13 (citing Pet. 27)

PO attempts to distinguish Claim 1 from Bishop based entirely on the argument that because the interior of the environmental box depicted in FIG. 1 of

Bishop (shown above) is accessed through an aperture covered by a door, then (i) the door does not meet the limitations of the *internal cover* recited in element [1.2] because there is no radome mounted to it as recited in element [1.6], and (ii) the ground plane with the radome mounted to it does not meet the limitations of the *internal cover* because the interior of the box is accessed through the door:

In Bishop, the interior of enclosure 102 is accessed by an aperture defined by door 103 on the side of the enclosure. But because there is no radome mounted on door 103, Petitioners instead attempt to map ground plane 106, which has a radome 116 mounted on it, to the claimed internal cover. This mapping however also fails because Bishop does not teach accessing the interior of enclosure 102 through the aperture covered by ground plane 106. Instead, Bishop teaches the interior of enclosure 102 is accessed through the separate door 103. Thus, ground plane 106 cannot be the claimed internal cover because the aperture covered by it is not the aperture through which the cavity of the enclosure in Bishop may be accessed. Rather, it is the aperture covered by door 103 that is through which the cavity of the enclosure in Bishop is accessed. But door 103 does not fit the rest of the mapping to claim 1 because it does not have a radome mounted to it.

Req. 13-14.

However, the entirety of PO's argument is specious because it completely ignores Petitioners' reliance on the embodiments disclosed in FIGS. 3 and 5 of

Bishop as plainly set forth in the Petition. The Petition provides “Annotated FIG. 5” as shown below:

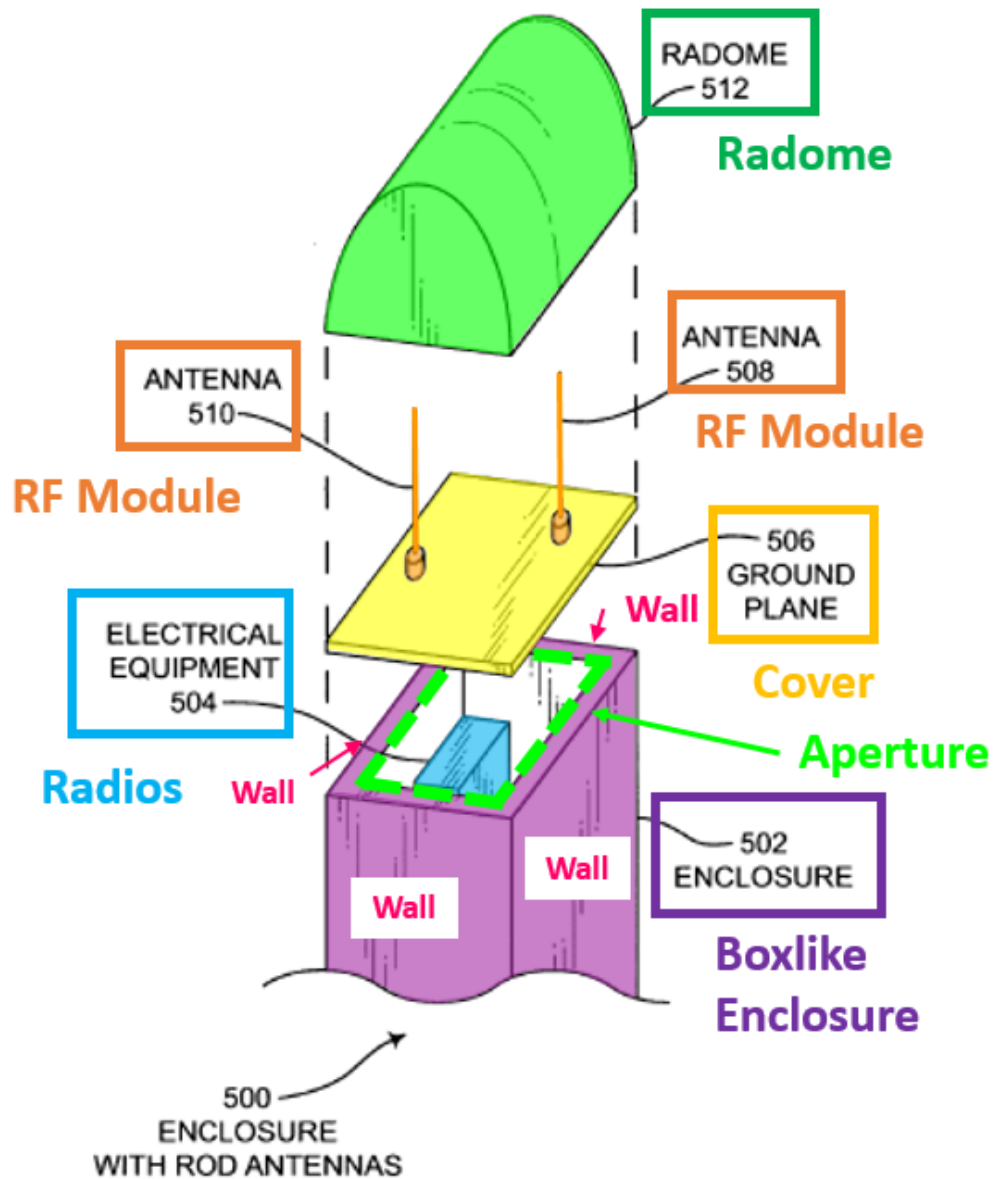


FIG. 5

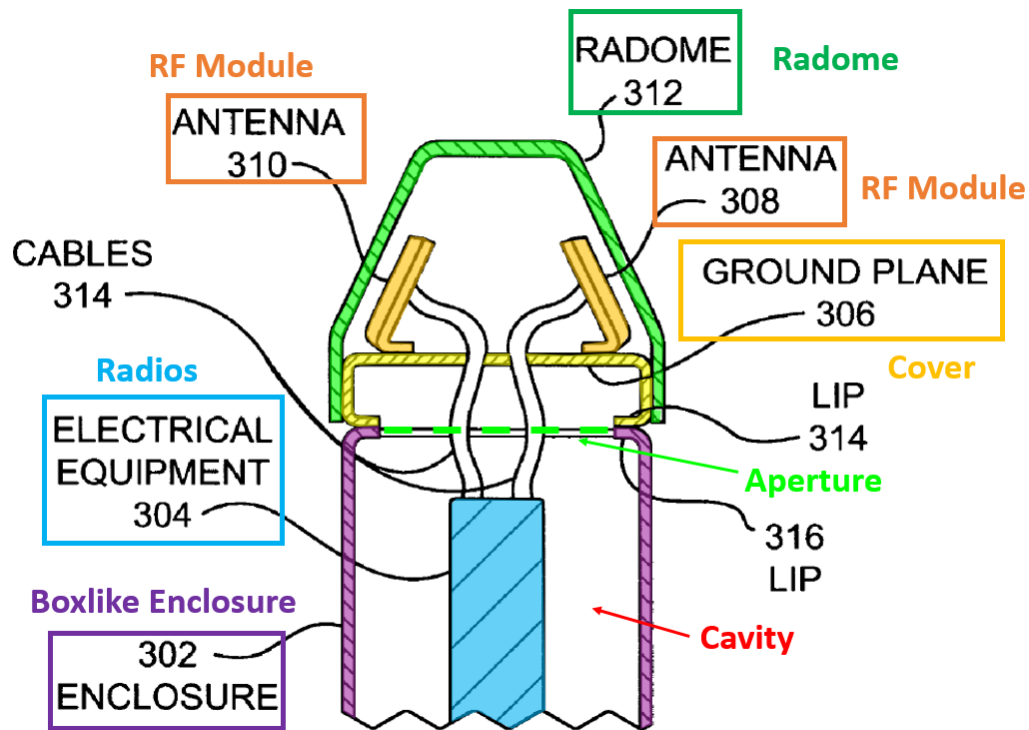
EX-1004 FIG. 5 (“Annotated FIG. 5”); EX-1003 ¶79 (Pet. 40).

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As set forth above, PO does not dispute that Bishop discloses a panel antenna forming one of the walls of an environmental box, only that the wall with the radome mounted to it must cover an aperture allowing access to the interior of the box. The Petition expressly acknowledges that, in the embodiment of FIG. 1, Bishop discloses that one of the walls may be hinged to afford access to the electrical equipment housed within the interior cavity of the enclosure. Pet. 42. However, the Petition also expressly states that Bishop further discloses that “[i]n some embodiments, **an enclosure may not have a door and may afford access to the electrical equipment 104 by some other means.**” EX-1004 [0027] (emphasis added); EX-1003 ¶85. (Pet. 42-43).

The Petition specifically references the embodiment illustrated in “Annotated FIG. 5” (shown above and ignored by PO) and states that a POSA understood that the enclosure 502 illustrated in Annotated FIG. 5 includes no door, and that the aperture (**green**) defined by the four walls is one such other means for affording access to the interior cavity of the enclosure when ground plane 506 is removed. Thus, a POSA understood that the aperture (**green**) constitutes *an aperture through which the cavity of the enclosure may be accessed* as recited in element [1.1]. EX-1003 ¶86 (Pet. 43)

The Petition further provides “Annotated FIG. 3” as shown below:



EX-1004 FIG. 3 (“Annotated FIG. 3”); EX-1003 ¶80 (Pet. 41)

With respect to element [1.2] reciting the *internal cover*, the Petition plainly sets forth, with reference to Annotated FIG. 3, that Bishop discloses that ground plane 306 (**gold**) [*internal cover*] may be attached to enclosure 302, for example, by fastening means extending through mated lips 314 and 316. As illustrated, by dimensioning the ground plane so that lip 314 of the ground plane mates with lip 316 of the enclosure the ground plane [*internal cover*] covers the entirety of the area of the aperture [*dimensioned to overlap an area defined by the aperture*]. Bishop further discloses that a gasket or sealant may be positioned between the lips

to provide a seal [*providing an environmental seal*]. EX-1004 [0045-46]; EX-1003 ¶88.

Bishop further discloses that the ground plane may shield the various antennae from interference from electrical equipment housed within the enclosure and may prevent unwanted interference between noise or other energy generated within the enclosure from interfering with or otherwise degrading the performance of signals transmitted or received on the antennae [*providing electromagnetic shielding for the cavity*]. EX-1004 [0032], [0037]; EX-1003 ¶89.

As expressly described by the '813 Patent, the *internal cover* may serve as a ground plane. EX-1001 8:46-47. Although the embodiment in Bishop is oriented such that the ground plane [*internal cover*] forms the top of the enclosure, consistent with the teaching of the '813 Patent, a POSA understood that the enclosure of Bishop may be oriented such that the ground plane forms the front cover of the enclosure. EX-1003 ¶90 (Pet. 43-44).

Thus, the Petition's reference to the orientation of the box is simply pointing out that Claim 1 cannot be patentable merely because the embodiment of Bishop shows the internal cover at the "top" of the box rather than the "front" of the box relative to the ground.

Hence, the Petition plainly demonstrates that Claim 1 is unpatentable under at least Ground 1 based on Bishop. The strong merits of Ground 1 highly weigh in support of institution.

d. Ground 2 Plainly Demonstrates that Claim 1 is Unpatentable

Under Ground 2, the Petition challenges Claims 1, 2, and 7 as obvious over Kelly alone or in view of Avramis. For ease of reference, Claim 1, the sole independent claim challenged, is shown below:

[1.0] *A panel antenna, comprising:*

[1.1] *an enclosure, the enclosure including a rear panel, a first side wall, and a second side wall, a top wall and a bottom wall, the rear panel and the walls defining a cavity, the walls further defining an aperture through which the cavity of the enclosure may be accessed,*

[1.2] *an internal cover, the internal cover being dimensioned to overlap an area defined by the aperture of the enclosure and providing an environmental seal and electromagnetic shielding for the cavity,*

[1.3] *the internal cover having at least one RF radiating module fastened to an exterior surface thereof,*

[1.4] *at least one micro radio mounted to an internal surface of the first side wall, the micro radio being coupled to the RF radiating module;*

[1.5] *a first heat sink, mounted to an external surface of the first side wall, and*

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[1.6] a radome, the radome mounting to the internal cover and enclosing the RF radiating module;

[1.7] wherein a flange joins the first and second side walls and the top and bottom wall, and a lip extends from the flange, further defining the aperture through which the cavity of the enclosure may be accessed, the lip being engaged by the internal cover to provide the environmental seal.

In its Request responding to the merits of Ground 2, PO disputes only the limitations related to the “internal cover”, specifically elements [1.2] and [1.3]. This dispute only arises as a result of PO’s rewriting of the Petition’s identification of which features of Kelly meet the internal cover limitations.

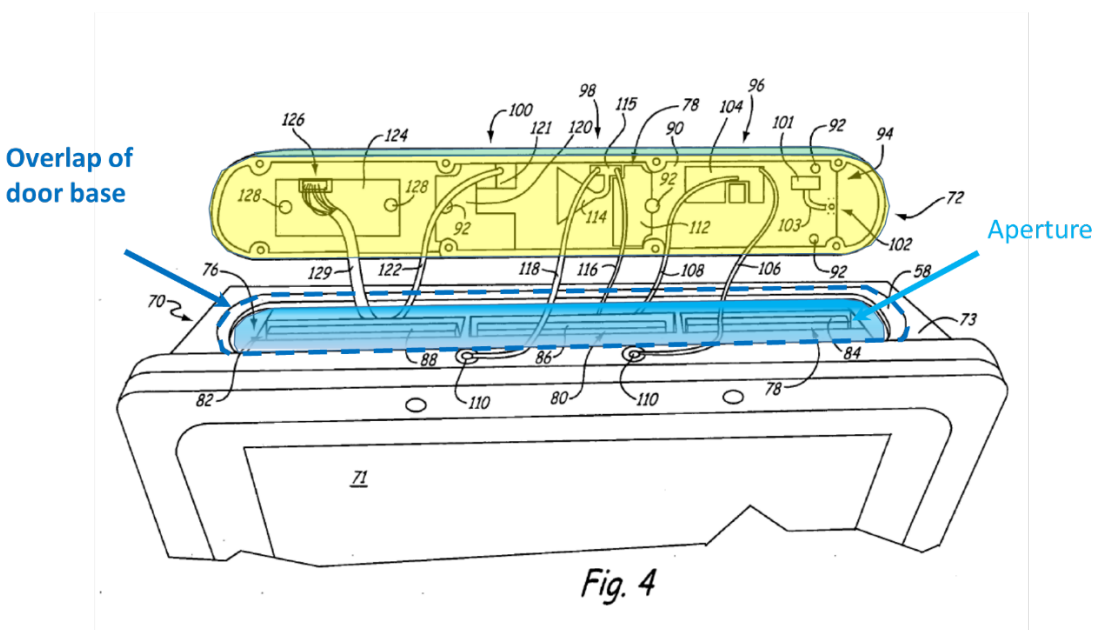
PO suggests the Petitioners “conflate two different elements: access door 72 and antenna board 90” and then presents the false choice that the claimed interior cover, must be either the access door or the antenna board. PO asserts that if the antenna board 90 is the internal cover, “it does not engage a lip extending from a flange to provide the environmental seal,” and if the access door 72 is the internal cover, “it does not have a RF radiating module fastened to an exterior surface thereof.” Req. 17-20.

The Petition, however, is explicit in identifying the internal cover of Kelly as being “the base portion of the door” which “includes an antenna board 90 and seal”

As shown in Annotated FIG. 4:

Kelly discloses a base portion of the door includes an antenna board 90 and seal (yellow) [internal cover] that overlaps (dashed blue line) the aperture (light blue) of the housing to environmentally seal the interior [environmental seal] and minimize interference [electromagnetic shielding].

Pet. p. 70

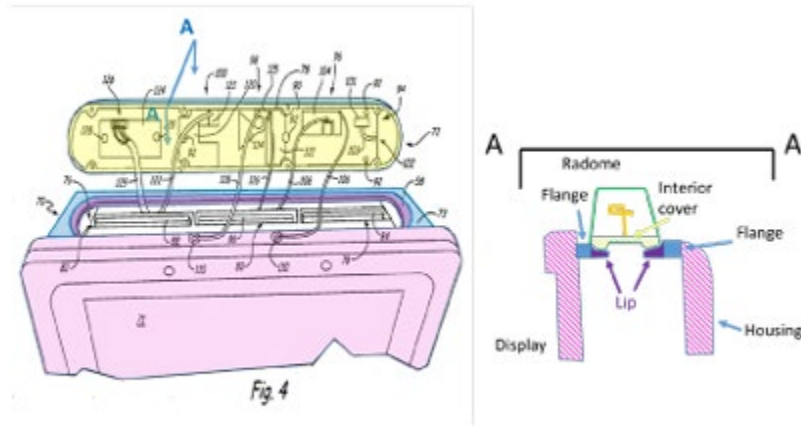


Pet. 71, citing EX-1009 FIG. 4; EX-1003 ¶154.

Further the Petition includes a description of the exterior surface of the internal cover having RF modules, including an annotated cross section, based on FIG. 4, for showing such components:

Kelly discloses multiple RF antennas [*RF radiating modules*] fastened to the upper surface [*exterior surface*] of the antenna board [*portion of the internal cover*].

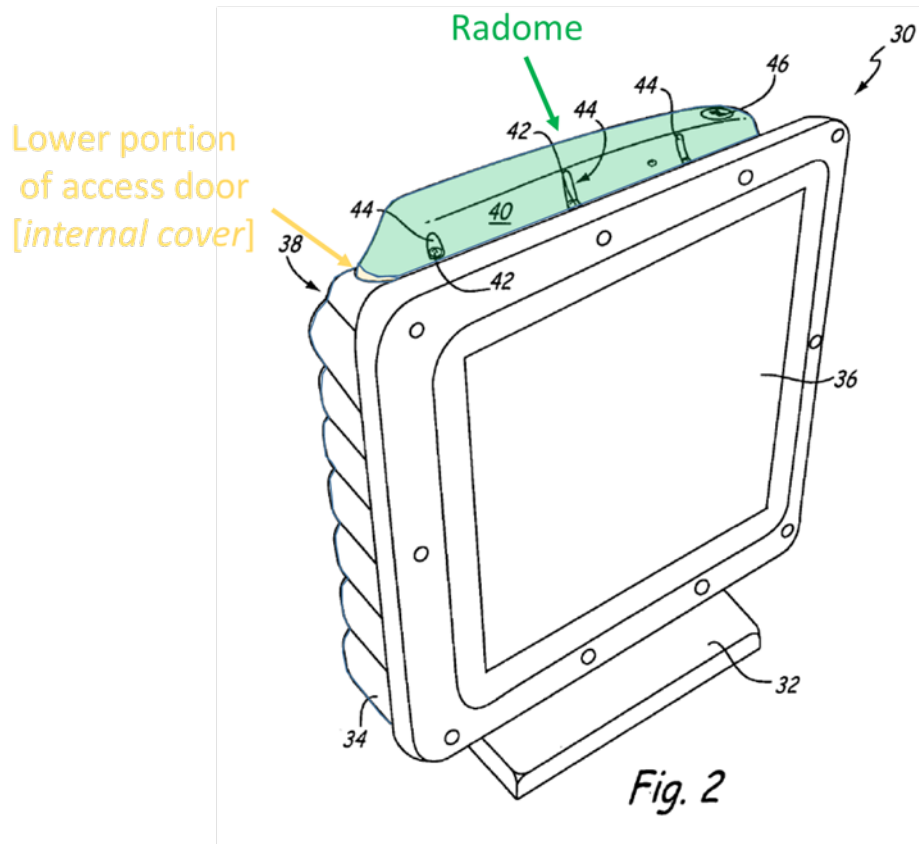
Pet. 72



EX-1009 FIG. 4 EX-1003 ¶169

Thus, as described in the Petition, the internal cover of Kelly includes the bottom (lower) portion of the access door as well as the antenna board (as shown in annotated FIG. 4. Pet. 71), and not one or the other as suggested by the PO. As such, the internal cover meets both limitation [1.2] and [1.3] as described in detail by the Petition.

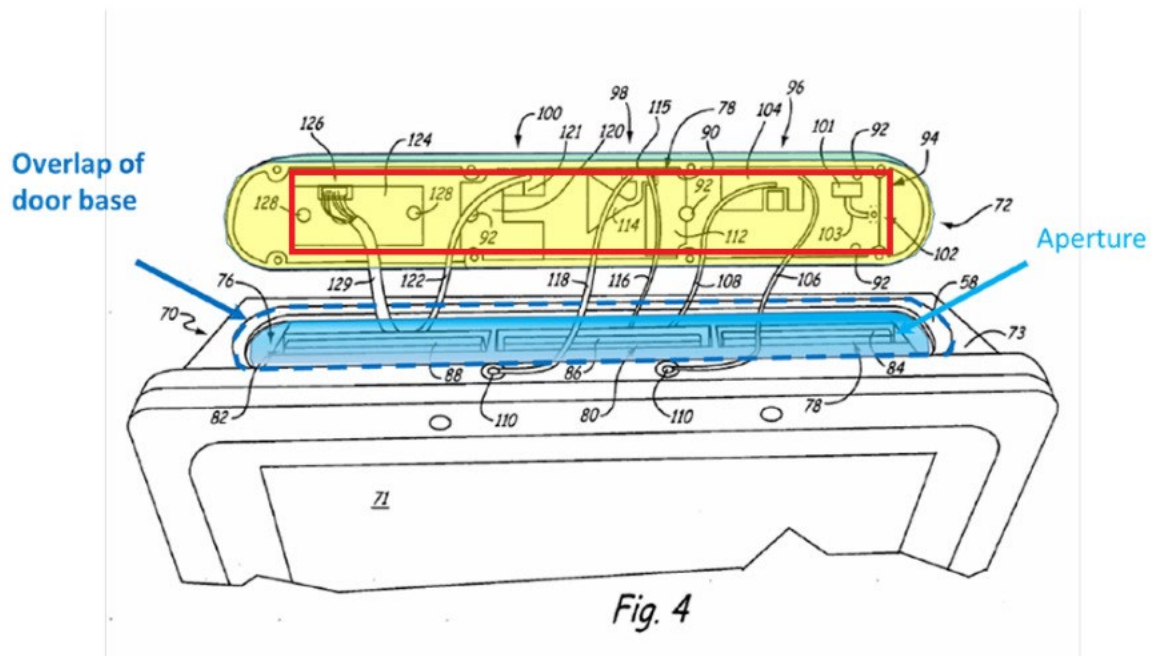
The Petition further identifies the components of the internal cover of Kelly inferentially when discussing limitation [1.6], noting that “Kelly discloses a radome (green) extending from the internal cover (yellow) and enclosing the RF antennas.” Pet. 79. Annotated FIG. 2 shows the radome extending from the “lower portion of access door [internal cover]”



Pet. 80; EX-1009 FIG. 2; EX-1003 ¶168.

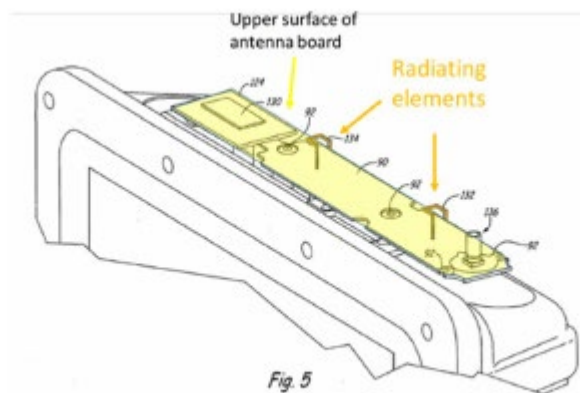
The internal cover of Kelly meets each of the limitations of [1.2] and [1.3].

PO's modified FIG. 4 shows the lower portion of the radome and the antenna board 90, which make up the internal cover, overlap an area defined by the aperture of the enclosure.



Req. 18

As shown in FIG 5 reproduced by PO, clearly the radiating elements on the exterior surface (opposite the opening) of the antenna board 90 (which makes up a portion of the interior cover) includes *at least one RF radiating module fastened to an exterior surface thereof* as required in element [1.3].



Req. 19

Hence, the Petition plainly demonstrates that Claim 1 is unpatentable under at least Ground 2 based on Kelly alone, or in view of Avramis. The strong merits of Ground 2 also highly weigh in support of institution.

2. The Settled Expectations of the Parties Favors Institution

The '813 Patent issued on July 30, 2013. In the Related Litigation, PO has accused products of infringement that were on sale at least by 2018. At the time that PO filed the infringement case, Petitioners had been selling the accused products for at least 6 years, free of any claim of infringement. Thus, the Board should institute review to allow Petitioners to challenge a patent that was asserted 6 years after it began selling the accused products because Petitioners' settled expectation has been that it was not infringing the '813 Patent.

**3. The Petition is Properly Supported by Expert Testimony
That Cites the Underlying Factual Support**

The Request asserts that "Dr. Houh testifies that his qualifications are in *network* communications, not radio communications, and it does not appear that the qualifications provided by Dr. Houh are sufficient to meet his own definition of a POSA." Req. 21 (emphasis in original). However, Dr. Houh's testimony expressly states that he served as an "expert witness in over 150 patent-related cases where I wrote expert reports and testified in over 100 depositions on topics

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such as mobile wireless technologies.” Because mobile wireless technologies encompass radio communications, PO’s assertion is without factual support.

The Request also asserts that “Dr. Houh’s Declaration shows that the Declaration is merely a word-for-word copy of the Petition’s arguments.”

However, Dr. Houh’s declaration contains factual support for all of his opinions, and it is necessary that such opinions and factual citations be included in the Petition pursuant to 37 § 42.6(a)(3) which states that “arguments must not be incorporated by reference from one document into another document.”

Thus, the Petition is properly supported by expert testimony that cites the underlying factual support.

IV. CONCLUSION

For the foregoing reasons, the Director should deny PO’s request for discretionary denial of institution.

Respectfully submitted,

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Dated: May 1, 2025

CERTIFICATION OF SERVICE

I hereby certify that on May 1, 2025, a copy of Petitioner's Response to Discretionary Denial was filed by filing this document through the PTACT's System as well as delivering a copy via electronic mail upon the following:

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