

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

Case No. IPR2024-01455

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

PATENT OWNER PRELIMINARY RESPONSE MERITS BRIEF
REQUESTING DENIAL OF INSTITUTION

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PATENT OWNER'S EXHIBIT LIST

EXHIBIT LIST	
2001	Docket Control Order in <i>Procomm International Ptd. Ltd. v. Verizon Communications, Inc. et al.</i> , No. 2:24-cv-009-RWS-RSP (E.D. Tex.)
2002	Opening Claim Construction Brief in <i>Procomm International Ptd. Ltd. v. Verizon Communications, Inc. et al.</i> , No. 2:24-cv-009-RWS-RSP (E.D. Tex.)
2003	Plaintiff's Opposition to Defendants' Motion to Stay in <i>Procomm International Ptd. Ltd. v. Verizon Communications, Inc. et al.</i> , No. 2:24-cv-009-RWS-RSP (E.D. Tex.)
2004	United States District Courts—National Judicial Caseload Profile for 12-month period ending June 30, 2024; available at https://www.uscourts.gov/statistics-reports/analysis-reports/federal-courtmanagement-statistics
2005	LegalMetric District Report for Texas Eastern District Court in Patent Cases (January 2019-April 2024)
2006	Reserved
2007	Infringement contentions in <i>Procomm International Ptd. Ltd. v. Verizon Communications, Inc. et al.</i> , No. 2:24-cv-009-RWS-RSP (E.D. Tex.) dtd March 20, 2024
2008	Docket Report for <i>Procomm International Ptd. Ltd. v. Verizon Communications, Inc. et al.</i> , No. 2:24-cv-009-RWS-RSP (E.D. Tex.)
2009	Invalidity Contentions in <i>Procomm International Ptd. Ltd. v. Verizon Communications, Inc. et al.</i> , No. 2:24-cv-009-RWS-RSP (E.D. Tex.) dtd June 12, 2024
2010	Reserved
2011	Joint Claim Construction Statement in <i>Procomm International Ptd. Ltd. v. Verizon Communications, Inc. et al.</i> , No. 2:24-cv-009-RWS-RSP (E.D. Tex.) dtd March 2, 2025 (Dkt. 43)
2012	Reserved
2013	Ericsson Responsive Claim Construction Brief in <i>Procomm International Ptd. Ltd. v. Verizon Communications, Inc. et al.</i> , No. 2:24-cv-009-RWS RSP (E.D. Tex.) dtd March 2, 2025 (Dkt. 54)

2014	Procomm Reply on Claim Construction in <i>Procomm International Ptd. Ltd. v. Verizon Communications, Inc. et al.</i> , No. 2:24-cv-009-RWS-RSP (E.D. Tex.) dtd April 1, 2025 (Dkt. 59)
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I. INTRODUCTION

Challenged claims 1, 2, and 4-7 of U.S. Patent 8,497,813 (the “’813 Patent”) are directed to a panel antenna comprising an enclosure, an internal cover, one or more micro radios and RF modules, and a radome. Petitioners Ericsson Inc. and Cellco Partnership (d.b.a. “Verizon Wireless”) (“Petitioners”) assert two grounds of unpatentability against the Challenged Claims relying on U.S. Patent Publication No. 2006/0250311 (“Bishop”) and U.S. Patent Publication No. 2006/0181462 (“Kelly”) as the respective primary references. Neither Bishop nor Kelly however suggests the precise arrangement of an enclosure, an internal cover overlapping an aperture of the enclosure, a flange joining the enclosure and a lip extending from the flange to engage the internal cover, and a radome mounted to the internal cover as specified by challenged independent claim 1. Nor is this arrangement obvious in view of the grounds’ secondary references.

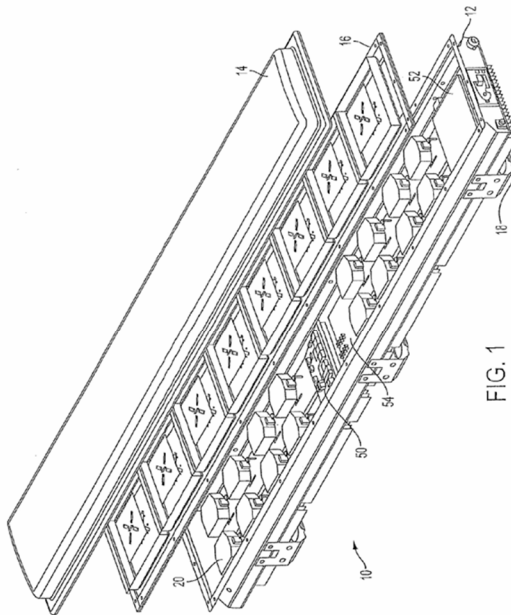
Furthermore, the Petition relies upon the expert testimony of Dr. Henry Houh. Dr. Houh however does appear to meet Petitioners’ own definition of a person of ordinary skill and his testimony should not be considered as reliable. The unreliability of Dr. Houh’s declaration is further compounded by the fact that it is literally a ***word-for-word*** parroting of the Petition. It should therefore be accorded no weight.

Accordingly, the Board should respectfully deny institution because Petitioners have failed to demonstrate a reasonable likelihood that the claims of the '813 Patent are unpatentable.

II. BACKGROUND

A. The '813 Patent

The '813 Patent is titled “Panel Antenna Having Sealed Radio Enclosure” and describes a “panel antenna having an enclosure, an internal cover, one or more micro radios and RF modules, and a radome.” Ex.1001, abstract. Figures 1 and 6 provide two exemplary embodiments of the invention:



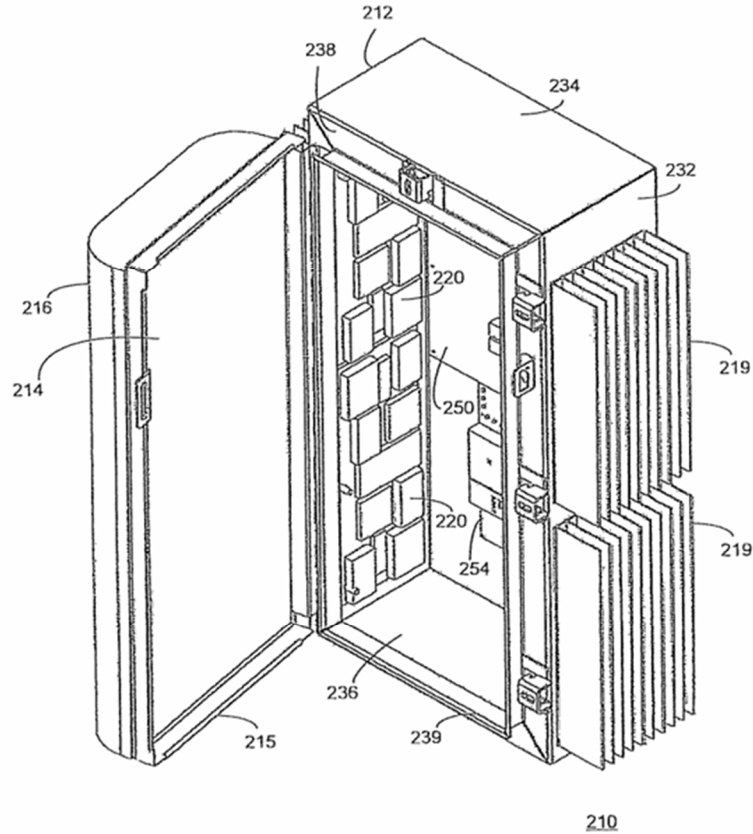


Figure 6

Ex.1001, 3:24-25, 3:35-36.

The '813 Patent describes features of the exemplary panel antenna design as including:

- An enclosure formed by a rear panel and side walls, with an internal cavity and an aperture for access (Ex.1001, 3:60-4:3);
- An internal cover that seals the aperture (Ex.1001, 5:25-49);

- Micro radios mounted inside the enclosure on internal surfaces, each connected to an RF module (Ex.1001, 6:6-33);
- Heat sinks attached externally to manage heat generated by active electronics (Ex.1001, 7:16-20); and
- A radome mounted externally to protect the RF modules without interfering with internal electronics (Ex.1001, 6:34-57).

Furthermore, the '813 Patent's claims recite these elements in specific claimed arrangements. For example, independent claim 1 further specifies "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." Alternatively, independent claim 8 further specifies "the internal cover is mounted to the active radio enclosure by a hinge, so that the active radio components may be accessed without disturbing the location of the radome or RF modules with respect to the internal cover."

B. The Alleged Prior Art

1. Bishop

U.S. Patent Publication No. 2006/0250311 to Bishop ("Bishop") is titled "Enclosure with Ground Plane" and describes a "system and method for mounting

one or more radio antennas in an outdoor enclosure by placing a ground plane underneath the antennas and above any electrical devices.” Ex.1004, abstract. Fig. 1 of Bishop shows the invention comprises an enclosure 102 having a door 103 that opens to the side and a ground plane 106 on top of the enclosure:

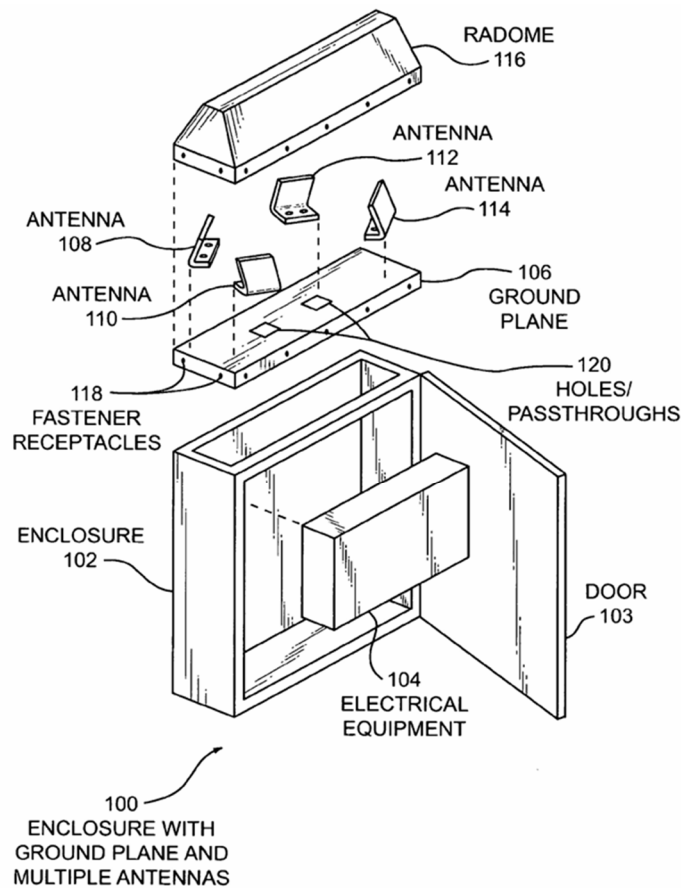


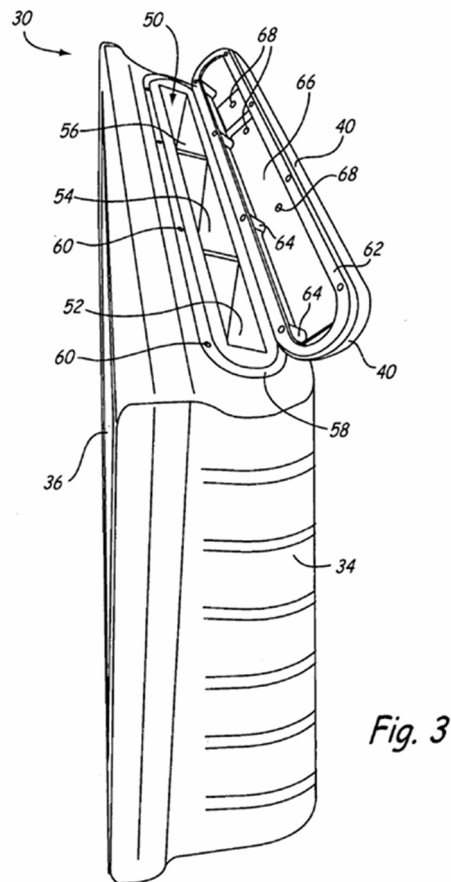
FIG. 1

Ex.1004, Fig. 1. Bishop further describes a plurality of antennas 108, 110, 112, and 114 attached to ground plane 106 on top of enclosure 102. Ex.1004, [0024]. A radome 116 covers the plurality of antennas. *Id.*

2. Kelly

U.S. Patent Publication No. 2006/0181462 to Kelly et al. (“Kelly”) is titled “Integrated Antenna / Access Door for a Mobile Computer” and describes a “mobile computer having an access door with an integrated antenna system. The access door comprises an antenna board mounted inside a radome. The antenna board contains one or more antennas, and is located inside the radome access door at a position which allows the antenna or antennas to send and receive data with minimal interference from the computer screen or computer housing.” Ex.1009, abstract.

Fig. 3 of Kelly shows the mobile computer described by Kelly:



Ex.1009, Fig. 3. The computer 30 comprises a housing 34. Ex.1009, [0022]. On top of housing 34 is a radome 40 which also serves as an access door to housing 34. *Id.* An antenna board 66 is located in the radome/access door 40. Ex.1009, [0026]. The antenna board 66 provides a location for one or more antennas to be located in the radome 40. The antenna board 66 is preferably positioned inside the radome/access door 40 such that any antennas located on the board 66 will be

positioned above the screen 36 and outside the metal housing 34 once the radome/access door 40 is affixed to the housing 34. *Id.*

III. CLAIM CONSTRUCTION

“Petitioners propose that each claim term in the Challenged Claims be given its plain and ordinary meaning in this proceeding, and that no specific construction of any claim term is required.” Pet., 18.

In the underlying district court proceedings, the parties submitted a Joint Claim Construction Statement, Ex. 2011. Patent Owner submitted an opening brief on claim construction. Ex. 2002. Petitioners submitted a responsive claim construction brief. Ex. 2013. Patent Owner submitted a reply brief on claim construction. Ex. 2014. Patent Owner did not brief any terms relevant to the ’813 Patent.

Thus, for purposes of this Preliminary Response to the Petition, Patent Owner agrees that the claim terms can be interpreted according to their plain and ordinary meaning in view of the specification, remaining claim language, and other intrinsic evidence. Patent Owner does not believe any specific construction is required at this stage of the proceeding, but reserves the right to propose constructions in any future papers, such as in a Patent Owner Response or in papers submitted in the district court litigation.

IV. PERSON OF ORDINARY SKILL IN THE ART

Petitioners submit that a person of ordinary skill in the art (“POSA”) would have been “familiar with electronic devices, radio communication, environmental enclosures, and heat management... A POSA would have a working knowledge of deleterious environmental effects on outdoor electronics and be aware of prophylactic measures routinely used against these effects... A POSA would have gained knowledge of these concepts through a mixture of training and work experience, such as by having a Bachelor’s degree in Electrical or Mechanical Engineering or equivalent and four years of experience; or by obtaining a Master’s degree in Electrical or Mechanical Engineering or equivalent, but having only one to two years of experience; or by having no formal education but experience in radio communications and environmental enclosures of at least eight years.” Pet., 19-20.

As explained in Section V, Petitioners’ expert Dr. Houh does not appear to meet this definition of a POSA. Patent Owner also believes that Petitioners’ proposed definition of a POSA is more complicated than necessary, as it sets forth three categories of experience (2 years, 4 years, and 8 years). Nevertheless, Patent Owner applies this definition of a POSA for the purposes of this Preliminary Response, while reserving the right to define the level of skill of a POSA in any

future papers in this IPR. Patent Owner submits that institution should be denied regardless of the POSA definition.

V. THE HOUH DECLARATION SHOULD BE ASSIGNED NO WEIGHT

The Petition should be treated as pure attorney argument. Rather than citing qualified expert testimony supported by citations to evidence, this Petition cites the declaration of an expert who does not appear to meet his own definition of a POSA and whose declaration is a *word-for-word* copy of the arguments in the Petition. The purpose of an expert declaration is to provide an explanation of the arguments and evidence presented in the Petition for the Board (and the opposing party). An expert declaration that merely parrots the Petition does not serve this purpose and should be disregarded.

Here, Petitioners' expert Dr. Houh has not shown that he meets his own definition of a POSA. Dr. Houh testifies that a person of ordinary skill would have been familiar with radio communications. Ex.1003, ¶47. But 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. Ex.1003, ¶¶10-21 (listing his expertise as “Web Site Development, Data Networking, Optical Networking, Telecommunications, and Media Streaming”—not radio communications—and providing experience in

computer networks, telephone lines, Voice-over-IP, and speech recognition—again, not radio communications). Dr. Houh’s declaration does not provide a single example of experience with radio communications. *Id.*

The only mention of radios in Dr. Houh’s background is that a former classmate founded “a software radio company” sometime in the late 1990s and that Dr. Houh would sometimes speak with him. Ex. 1003, ¶13. But the fact that Dr. Houh knew somebody 30 years ago that might qualify as a POSA and that they spoke about software radios occasionally does not mean Dr. Houh himself qualifies as a POSA. Indeed, Dr. Houh’s POSA definition requires at least “one to two years” of work experience in radio communications (EX1003, ¶48), but Dr. Houh identifies no actual work experience in that field.

Furthermore, a comparison of pages 38-54 of the Petition and paragraphs 78-117 of Dr. Houh’s Declaration shows that the Declaration is merely a word-for-word copy of the Petition’s arguments for claim 1 on Ground 1. Likewise, a comparison of pages 67-82 of the Petition and paragraphs 150-170 of Dr. Houh’s Declaration again shows that the Declaration is merely a word-for word copy of the Petition’s arguments for claim 1 on Ground 2. This is particularly problematic because the Petition periodically alleges in conclusory fashion that “a POSA understands” a particular assertion and then cites to Dr. Houh’s Declaration where

the assertion is simply repeated verbatim without additional supporting evidence. Pet., 69 (alleging that “a POSA understands [antenna 114] to be a panel antenna”), 78-79 (alleging a POSA understands that Avramis’s heat sink improves Kelly’s computer). Respectfully, a declaration by an expert who lacks the requisite qualifications and whose testimony merely parrots the exact language of the Petition with no supporting evidence should be accorded little weight and merit denial of institution.

The Federal Circuit has held that expert declarations that parrot the petition should be disregarded. *Bell Semiconductor LLC v. NXP B.V.*, 2024 WL 4984053 at *3 (Fed. Cir. 2024) (unpub.) (“Board accurately characterized NXP’s expert testimony as conclusory and correctly pointed out that the only evidence in NXP’s petition was a citation of their expert’s declaration that parrots the language of the petition.”); *Garmin International, Inc. v. LoganTree, LP*, 825 Fed.Appx. 894, 898 n.5 (Fed. Cir. 2020) (unpub.) (“The Board, however, correctly found that Garmin’s expert merely parroted attorney argument without any supporting evidence or reasoning.”).

The Board, too, has repeatedly held that expert declarations like Dr. Houh’s—which parrots the Petition *word-for-word*—should be disregarded. *See, e.g., Xerox Corp. v. Bytemark, Inc.*, IPR2022-00624, Paper 12 (Director Review:

Feb. 10, 2023) (precedential), 5 (“the declaration copies, word-for-word, Petitioner’s conclusory assertions ... as though they are facts, rather than setting forth facts and evidence in support of Petitioner’s assertions”); *Halliburton Energy Services, Inc. v. Schlumberger Tech. Corp.* IPR2017–02072, Paper 11, 2018 WL 1891086 (PTAB Apr. 12, 2018) (decision denying institution) at *7 (“Mr. Todd’s testimony, which, again, merely parrots the conclusory statement ... is entitled to little, if any, weight”); *Free-Flow Packaging Int’l, Inc. v. Automated Packaging Sys., Inc.*, IPR2016-00447, Paper 7 (PTAB June 22, 2016), 10 (“Dr. Kimmel’s declaration...does nothing more than parrot the language of the Petition word for word”).

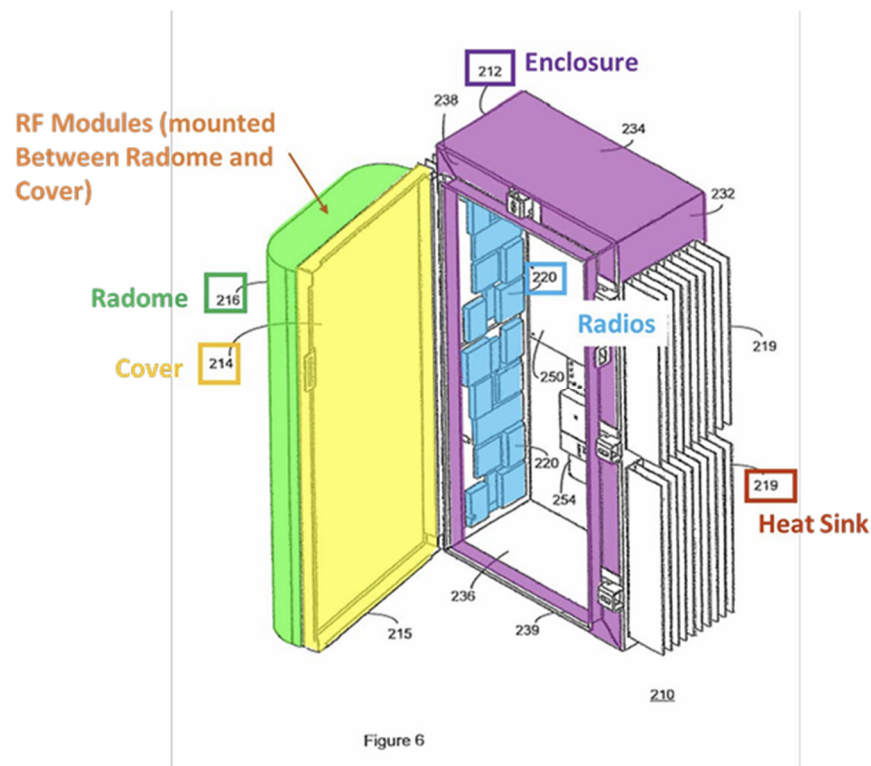
In sum, the Petition is based on duplicative and unreliable expert testimony. In an IPR, expert testimony is supposed to explain the reasoning and evidence in a manner that helps the Board understand the arguments in the Petition. *Xerox Corp. v. Bytemark, Inc.*, IPR2022-00624, Paper 12 (Director Review: Feb. 10, 2023) (precedential), 5. An expert declaration like this one, which merely parrots the Petition word-for-word throughout based on the say-so of an unqualified expert, does not help the Board at all. This expert declaration should be disregarded.

VI. CLAIMS 1, 2, AND 4-7 ARE NOT OBVIOUS OVER PETITIONERS' REFERENCES

- A. Bishop does not suggest “an aperture through which the cavity of the enclosure may be accessed” and “an internal cover[] dimensioned to overlap[] the aperture” with “a radome mounting to the internal cover” (Ground 1)**

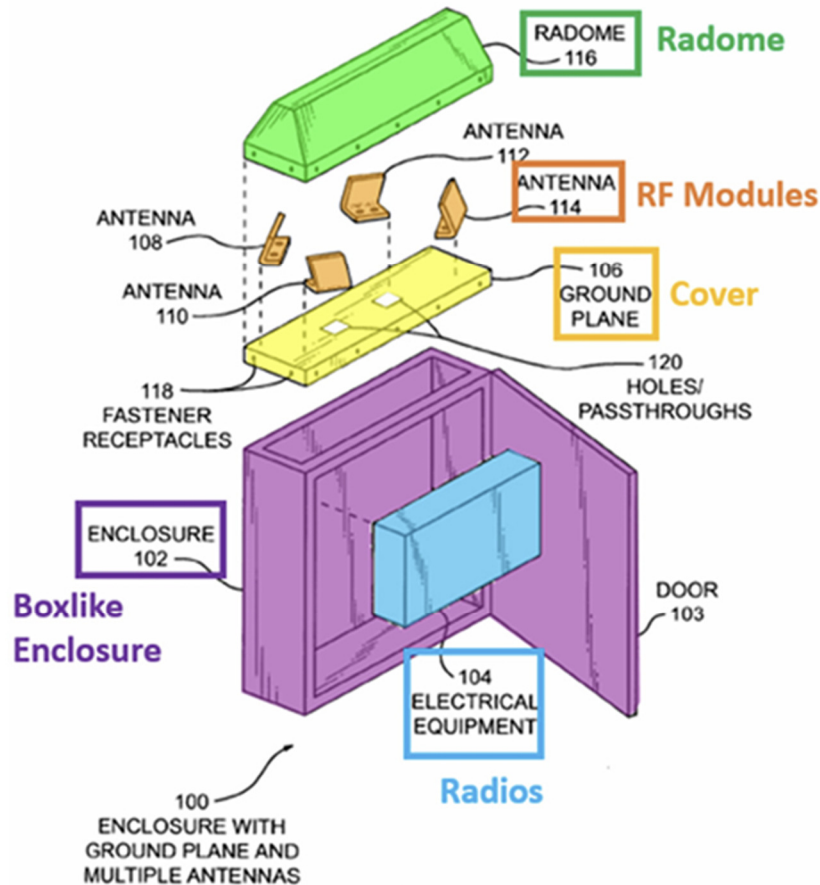
Claim 1 – the only independent Challenged Claim – specifies that the claimed panel antenna comprises an enclosure having “an aperture through which the cavity of the enclosure may be accessed.” The claim further specifies that an “internal cover” with a radome mounted thereto “overlap an area defined by the aperture” – that is, the internal cover with the radome must overlap the aperture. The '813 Patent teaches that the disclosed examples of the claimed arrangement provide the “advantage” that “electronic components, such as the micro radios 220, may be accessed without disturbing the location of the RF modules 224 with respect to the internal cover 214 or the radome 216.” Ex.1001, 9:1-5.

Bishop does not suggest this claimed arrangement. As shown by Petitioners' annotations to Fig. 6 of the '813 Patent, enclosure 212 has an aperture (in this example, defined by flange 238) through which the cavity of the enclosure is accessible:



Pet., 2. Internal cover 214 on which is mounted radome 216 controls access to the enclosure via the aperture. Cover 214 opens and the interior of enclosure 212 is accessible through the aperture that cover 214 overlaps.

Bishop by contrast does not suggest “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.” This is readily apparent from Petitioners’ annotations of Bishop:



Pet., 27. 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, where radome 116 is mounted, 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.

Perhaps recognizing this distinction, the Petition further alleges that “[a]lthough 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.” Pet., 44. But this reorientation does not address the fundamental difference between Bishop and the ’813 Patent: Bishop accesses the interior of enclosure 102 through a door 103 that is different than the ground plane 106 where radome 116 is mounted. As a result, the aperture through which the cavity of the enclosure may be accessed is the aperture covered by door 103, not the aperture covered by ground plane 106. Even if Bishop is reoriented in the manner proposed by the Petition, the interior of enclosure 102 is still accessed through door 103. This modification does not resolve the fundamental problem that Bishop accesses the interior of enclosure 102

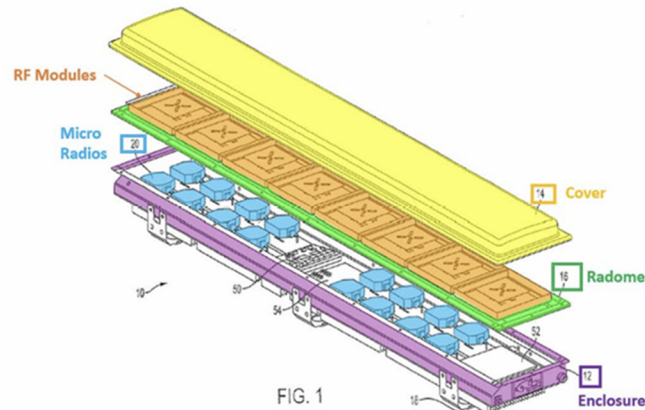
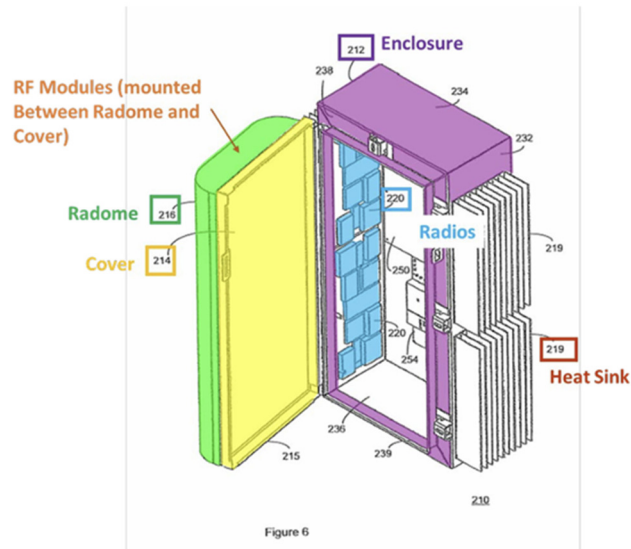
through door 103, not ground plane 106. None of the Ground 1's secondary references are cited for this issue; Petitioners' Ground 1 challenge thus fails to establish that the claims are an obvious modification of Bishop.

For this reason, the Petition fails to demonstrate that Bishop combined with the secondary references suggest the Challenged Claims as alleged in Ground 1.

B. Kelly does not suggest an “internal cover having at least one RF radiating module fastened to an exterior surface thereof” “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” (Ground 2)

Claim 1 further specifies a specific arrangement of the claimed internal cover, RF module, flange, and lip. *First*, the RF module is fastened to the *exterior* surface of the interior cover: “the internal cover having at least one RF radiating module fastened to an exterior surface thereof.” *Second*, the lip extending from the flange joining the walls of the enclosure “engage[s] the internal cover to provide the environmental seal.” In other words, the lip engages the internal cover to seal the enclosure. Kelly does not suggest the combination of these features.

Annotated Figs. 1 and 6 of the '813 Patent illustrates an example of the claimed configuration:



Pet., 2, 10.

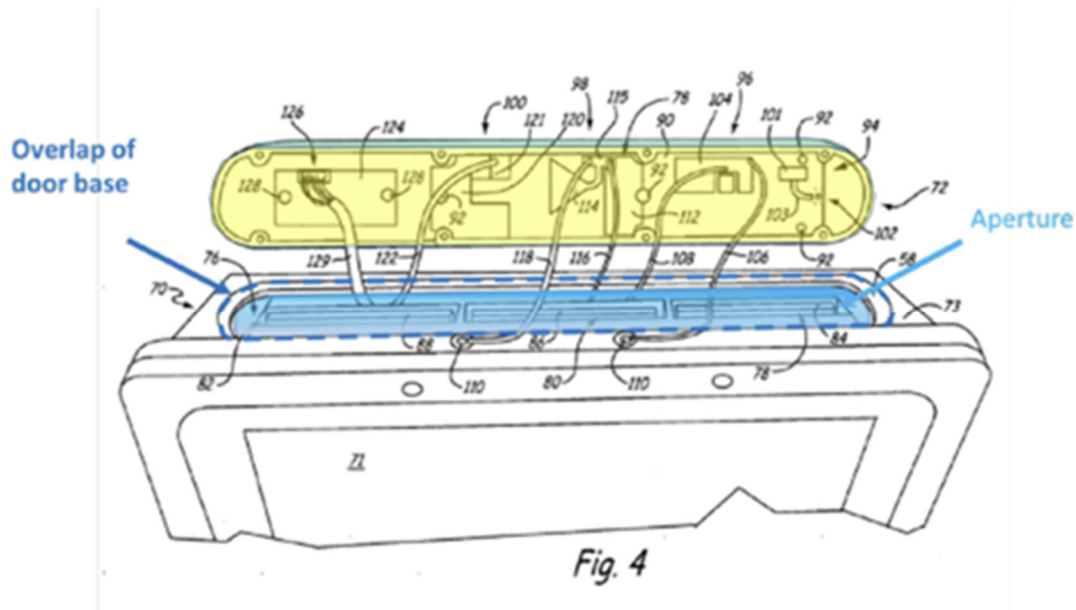
As claimed by the '813 Patent, this example shows that the RF radiating module is on the exterior of cover 214—beneath radome 216 and on the surface of cover 214 facing away from enclosure 212. Furthermore, the surface of cover 214 facing towards enclosure 212 (i.e., the interior surface that does not have the RF

radiating module fastened to it) is the surface that is engaged by the lip extending from the flange to provide the environmental seal as claimed. The '813 Patent further describes an exemplary embodiment as follows:

The enclosure 212 includes an inward-turned flange 238 and an outwardly extending lip 239. The outwardly extending lip 239 is joined to an inner periphery of flange 238, and defines an opening through which an interior of the enclosure 212 may be accessed. Internal cover 214 has a lip 215 around its perimeter, and is dimensioned to enclose lip 239. In one embodiment, resilient seals may be included in the interface between lip 239 and lip 215. The resilient seals may provide environmental sealing, RF shielding, or both.

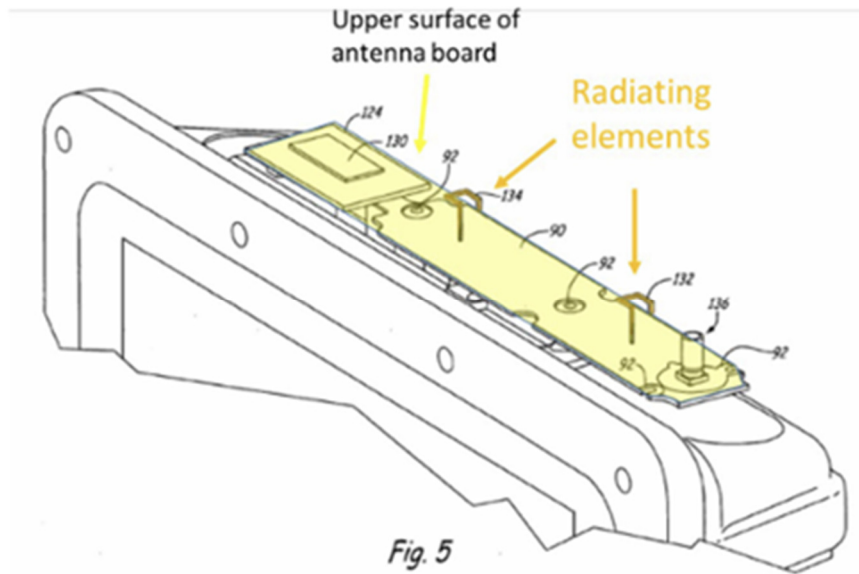
Ex.1001, 7:21-32.

Kelly does not suggest the specific claimed arrangement where the RF radiating module is fastened to the exterior surface of an internal cover that is engaged by a lip extending from a flange to provide the environmental seal. This can be seen from Fig. 4 of Kelly as annotated by Petitioners:

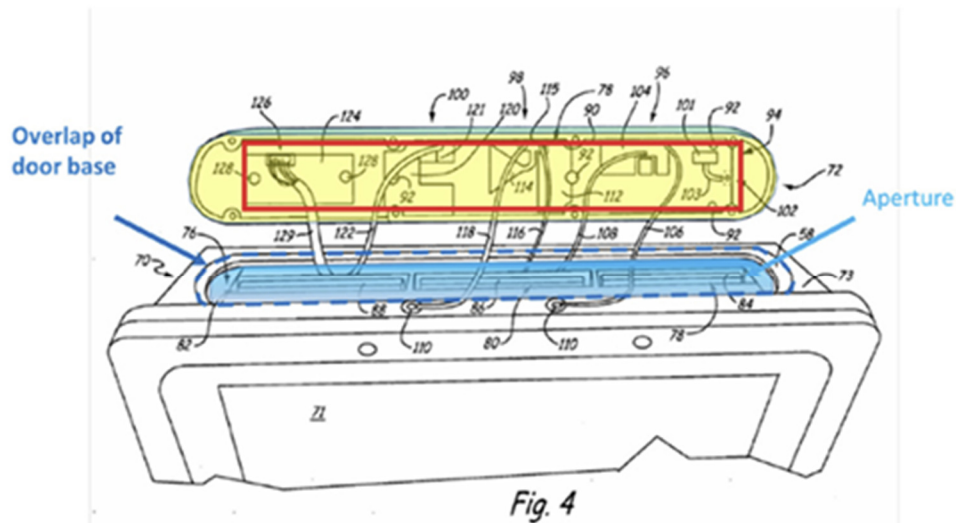


Pet., 81.

It is critically important to recognize that Petitioners' annotations in yellow conflate two different elements: access door 72 and antenna board 90. Access door 72 is the entire area annotated in yellow in Fig. 4 above, whereas antenna board 90 as shown in Fig. 4 is on the surface of access door 72 facing towards the housing and comprises only a portion of that surface, as shown by Fig. 5:



Annotated Fig. 4 below corrects this conflation and shows access door 72 in yellow and the portion of access door 72 with antenna board 90 outlined in red:



Because the Petition conflates access door 72 and antenna board 90, it fails to establish that one of access door 72 and antenna board 90 maps to the claimed internal cover. If antenna board 90 is mapped to the claimed internal cover, it does not engage a lip extending from a flange to provide the environmental seal as claimed. Rather, Figs. 4 and 5 show that it is access door 72—not antenna board 90—that seals the aperture:

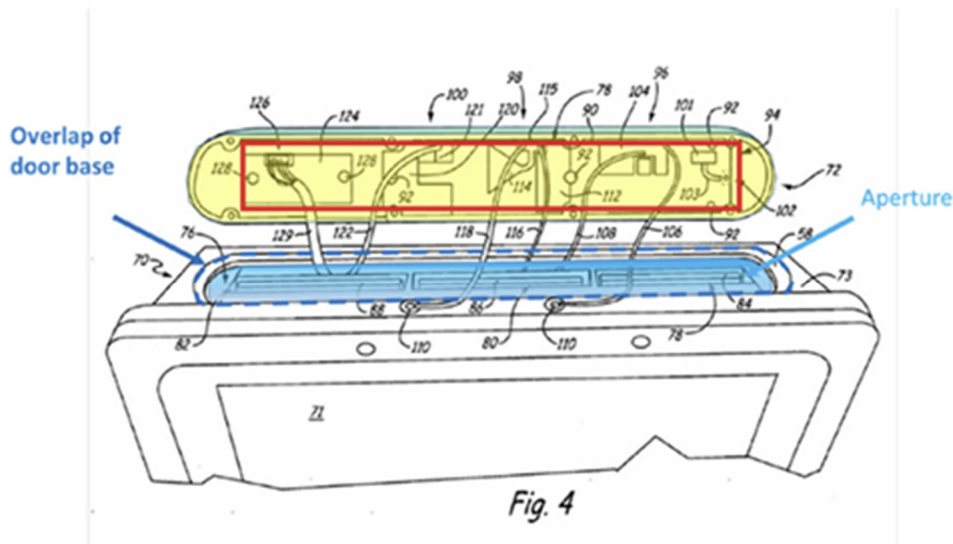
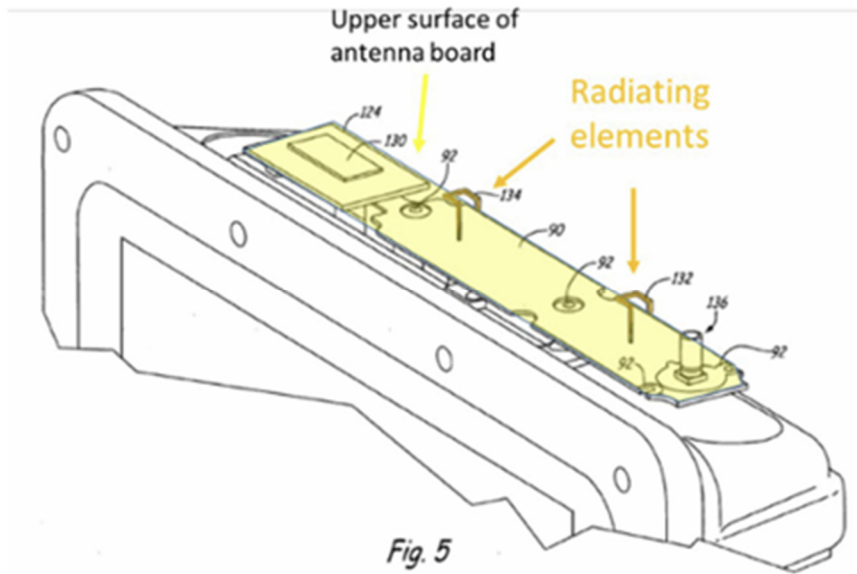


Fig. 5 shows that antenna board 90 does not match the shape of the surface of access door 72 and does not extend to the lip:



Kelly simply lacks any teaching of how antenna board 90, rather than access door 72, seals Kelly's device.

Alternatively, if access door 72 is mapped to the claimed internal cover, it does not have a RF radiating module fastened to an exterior surface thereof as claimed because the radiating elements are on the *interior* surface of the access door (i.e., the surface facing towards the housing). In either case, Kelly does not suggest the limitations of the internal cover specified by the claims. Furthermore, Ground 2's secondary reference (Avramis) is not cited for this issue; Petitioners' Ground 2 challenge thus fails to establish that the claims are an obvious modification of Kelly.

For this reason, the Petition fails to demonstrate that Kelly combined with the secondary references suggest the Challenged Claims as alleged in Ground 2.

VII. CONCLUSION

For the reasons set forth above, the Petition fails to demonstrate a reasonable likelihood that any of challenged Claims 1, 2 and 4-7 of the '813 Patent are unpatentable.

Dated: April 29, 2025

Respectfully submitted,

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CERTIFICATE OF COMPLIANCE WITH TYPE-VOLUME LIMITS

This Patent Owner Preliminary Response Merits Brief Requesting Denial of Institution (“Response”) consists of 3,518 words, excluding table of contents, table of authorities, certificate of service, this certificate, or table of exhibits. The Response complies with the type-volume limitation of 14,000 words set out at 37 C.F.R. §42.24 and Acting Director Stewart’s March 26, 2025 Memorandum titled “Interim Processes for PTAB Workload Management.” In preparing this certificate, counsel has relied on the word count of the word-processing system used to prepare the paper (Microsoft Word).

Dated: April 29, 2025

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CERTIFICATE OF SERVICE

The undersigned hereby certifies that, pursuant to 37 CFR § 42.6(e), a true and correct copy of the foregoing **PATENT OWNER PRELIMINARY RESPONSE MERITS BRIEF REQUESTING DENIAL OF INSTITUTION** have been served electronically via email on counsel of record for Petitioners:

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