

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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AMAZON.COM, INC. and AMAZON.COM SERVICES LLC,  
Petitioner,

v.

NOKIA TECHNOLOGIES OY,  
Patent Owner.

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IPR2024-00799  
Patent 9,473,602 B2

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Before GREGG I. ANDERSON, SCOTT B. HOWARD, and  
STEVEN M. AMUNDSON, *Administrative Patent Judges*.

HOWARD, *Administrative Patent Judge*.

DECISION  
Granting Institution of *Inter Partes* Review  
35 U.S.C. § 314

## I. INTRODUCTION

### A. *Background and Summary*

Amazon.com, Inc. and Amazon.com Services LLC (collectively, “Petitioner”) filed a Petition (Paper 4, “Pet.”) requesting *inter partes* review of claims 1–36 (“the challenged claims”) of U.S. Patent No. 9,473,602 B2 (Ex. 1001, “the ’602 patent”). Nokia Technologies Oy (“Patent Owner”) filed a Preliminary Response (Paper 8, “Prelim. Resp.”).

We have authority, acting on the designation of the Director, to determine whether to institute an *inter partes* review under 35 U.S.C. § 314 (2024) and 37 C.F.R. § 42.4(a) (2024). *Inter partes* review may not be instituted unless “the information presented in the petition filed under section 311 and any response filed under section 313 shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” 35 U.S.C. § 314(a). “When instituting *inter partes* review, the Board will authorize the review to proceed on all of the challenged claims and on all grounds of unpatentability asserted for each claim.” 37 C.F.R. § 42.108(a).

For the reasons set forth below, upon considering the briefing and the evidence of record, we determine that the information presented in the Petition establishes a reasonable likelihood that Petitioner will prevail with respect to at least one of the challenged claims. Accordingly, we institute *inter partes* review on all of the challenged claims based on all of the grounds identified in the Petition.

### B. *Real Parties in Interest*

Petitioner identifies Amazon.com, Inc. and Amazon.com Services LLC as the real parties in interest. Pet. 111.

Patent Owner identifies Nokia Technologies Oy as the real party in interest. Paper 6, 1 (Patent Owner’s Mandatory Notices).

*C. Related Matters*

The parties identify *Nokia Corporation v. Amazon.com, Inc.*, 1-23-cv-01232 (D. Del.) as a related matter. Pet. 111; Paper 6, 1. Patent Owner also identifies *Amazon.com, Inc. v. Nokia Technologies Oy*, IPR2024-00798 (PTAB); *In re Electronic Devices, Including Mobile Phones, Tablet Computers, and Components Thereof*, Inv. No. 337-TA-1038 (ITC); and *Nokia Technologies Oy v. Apple Inc.*, 2:16-cv-01441 (E.D. Tex.) as “proceedings involving or that have involved” the ’602 patent. Paper 6, 1.

Concurrently with the filing of the Petition, Petitioner submitted another petition for *inter partes* review of the ’602 patent: IPR2024-00798. Petitioner filed a document which ranks the petitions in the instant case and IPR2024-00798 and provides an explanation of the material differences between the petitions. See Paper 4 (Statement Regarding Multiple Petitions (“Ranking”)).

*D. The ’602 Patent*

The ’602 patent, which is entitled “Portable Electronic Device,” issued from U.S. Patent Application No. 14/612,712, which was filed on February 3, 2015. Ex. 1001, codes (21), (22), (54). The ’712 application claims the benefit of the filing date of U.S. Patent Application No. 11/393,510 (“the ’510 application,”), which was filed on March 29, 2006, through a series of continuation applications. *Id.* at code (63). The ’602 patent “relates to a portable electronic device and, more particularly, to [a] form factor configuration of a portable electronic device.” *Id.* at 1:19–21. The ’602 patent describes portable electronic devices comprising a first

section movably connected to a second section by a hinge section. *Id.* at 1:43–2:15.

Figure 1 of the '602 patent is reproduced below.

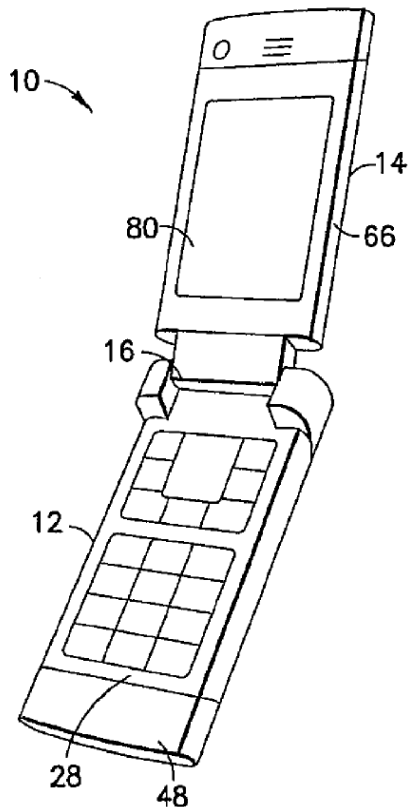


**FIG. 1**

Figure 1 “is a perspective view of a mobile telephone comprising features of the invention” in the open configuration. Ex. 1001, 2:22–23; *see also id.* at 3:2–3. Specifically, Figure 1 illustrates a portable electronic device 10 comprising a hand-held mobile telephone that is a flip-phone; “[h]owever, in alternate embodiments, features of the invention could be used in other types of portable electronic devices, such as a PDA or a hand-held gaming device for example.” *Id.* at 2:60–64. In Figure 1, the portable electronic device 10 comprises “a first section 12 connected to a second section 14 by a movably connecting section 16,” which is a hinge. *Id.* at 2:64–67. The portable

electronic device also includes a first housing member 28 and an antenna cover 48 of the first section 12, and a second housing member 66 and a front portion 80 of the second section 14. *Id.* at 3:27–29, 3:45–47, 4:52–53, 4:63–65. The first section 12 generally comprises a first housing member, an engine, a battery, a user input section, and an antenna module. *Id.* at 3:27–29. The second section 14 generally comprises a second housing member, a display module, and a camera. *Id.* at 4:52–53.

The first housing member 28 of the first section 12 contains components of a user input section, a battery, and an engine with a printed circuit board (PCB), a transceiver, a processor, and a memory. Ex. 1001, 3:59–4:10. The first housing member 28 forms opposite exterior lateral sides and a rear side of the first section 12. *Id.* at 3:36–39. The first housing member 28 generally includes a one-piece tubular member which is preferably comprised of metal, such as aluminum, and “could be formed from an extruded member with holes punched into it after it is extruded.” *Id.* at 3:30–36. The front side of the first housing member 28 has holes therethrough for portions of the user input section to be located in the holes. *Id.* at 3:39–41.

The second housing member 66 forms portions of opposite exterior lateral sides, a front side, and a rear side of the second section 14. Ex. 1001, 4:60–62. The second housing member 66 “preferably comprises a one-piece member having a general tubular shape” which is preferably comprised of metal, such as aluminum, and “could be formed from an extruded member with holes punched into it after extrusion.” *Id.* at 4:54–60. The front side of the second housing member 66 has a hole therethrough for the front portion 80 of a display module (the main display), and the rear side of the second

housing member 66 has a hole therethrough for a rear portion of the display module. *Id.* at 4:62–5:2.

The relationship between the battery, engine, and keyboard is shown in Figure 8, not reproduced. *See id.* at Fig. 8, 3:63–4:10. Embodiments showing different configurations of those elements are shown in Figures 9 through 13, not reproduced. *See id.* at Figs. 9–13, 5:26–60.

*E. Illustrative Claim*

Claims 1, 15, and 22 are independent claims and claim 1, reproduced below, is illustrative of the subject matter of the challenged claims.

1. [1pre] A portable electronic device comprising:
  - [1a] a one piece housing forming enclosed exterior lateral sides and a rear side;
  - [1b] a cut out in the rear side of said housing;
  - [1c] a camera located in said housing and extending to said cut out at said rear side;
  - [1d] an engine section comprising a printed circuit board, a transceiver, a processor and a memory;
  - [1e] a user input section located above the engine section and a battery, wherein the user input section is located adjacent the battery and the engine section;
  - [1f] wherein the battery and engine section are housed in the housing and the user input is located in an opening between said exterior lateral sides of said one piece housing of the portable electronic device.

Ex. 1001, 6:21–35; *see also* Pet. 113 (adding limitation designations).

*F. Prior Art and Asserted Grounds*

Petitioner asserts that the challenged claims would have been unpatentable on the following grounds:

| <b>Claim(s) Challenged</b>  | <b>35 U.S.C. §<sup>1</sup></b> | <b>Reference(s)/Basis</b>                      |
|-----------------------------|--------------------------------|------------------------------------------------|
| 1, 11, 12, 15               | 103                            | Nguyen <sup>2</sup>                            |
| 1–7, 9–13, 15–28, 30–34, 36 | 103                            | Nguyen, Zadesky, <sup>3</sup> Oda <sup>4</sup> |
| 1–36                        | 103                            | Nguyen, Zadesky, Oda, Gettemy <sup>5</sup>     |

Petitioner also relies on the testimony of Steven Visser (Ex. 1003). Patent Owner relies on the testimony of Franco Lodato (Ex. 2001).

II. ANALYSIS

*A. Legal Standards*

In *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1 (1966), the Supreme Court set out a framework for assessing obviousness under 35 U.S.C. § 103 that requires consideration of four factors: (1) the “level of ordinary skill in the pertinent art,” (2) the “scope and content of the prior art,” (3) the “differences between the prior art and the claims at issue,” and (4) if in evidence, “secondary considerations” of non-obviousness such as

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<sup>1</sup> The Leahy-Smith America Invents Act (“AIA”) included revisions to 35 U.S.C. §§ 102 and 103 that became effective on March 16, 2013. Because Patent Owner has not argued in this proceeding that the ’602 patent is entitled to rely on the filing date of a parent application, we apply the AIA version of those sections. Applying the pre-AIA version would not change the results.

<sup>2</sup> US 2003/0222845 A1, published Dec. 4, 2003 (Ex. 1004).

<sup>3</sup> US 7,515,431 B1, filed July 2, 2004 (Ex. 1005).

<sup>4</sup> EP 1,482,733 A1, published Dec. 1, 2004 (Ex. 1006).

<sup>5</sup> US 6,618,044 B1, filed May 25, 2000 (Ex. 1007).

“commercial success, long-felt but unsolved needs, failure of others, etc.” *Id.* at 17–18. “While the sequence of these questions might be reordered in any particular case,” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 407 (2007), the U.S. Court of Appeals for the Federal Circuit has repeatedly emphasized that “it is error to reach a conclusion of obviousness until all those factors are considered,” *WBIP, LLC v. Kohler Co.*, 829 F.3d 1317, 1328 (Fed. Cir. 2016). Because Patent Owner does not address objective evidence of non-obviousness, we focus solely on the first three *Graham* factors.

*B. Level of Ordinary Skill in the Art*

The level of ordinary skill in the pertinent art at the time of the invention is a factor in how we construe patent claims. *See Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–13 (Fed. Cir. 2005) (en banc). It is also one of the factors we consider when determining whether a patent claim would have been obvious over the prior art. *See Graham*, 383 U.S. at 17–18.

Factors pertinent to a determination of the level of ordinary skill in the art include “(1) the educational level of the inventor; (2) type of problems encountered in the art; (3) prior art solutions to those problems; (4) rapidity with which innovations are made; (5) sophistication of the technology; and (6) educational level of active workers in the field.” *Envtl. Designs, Ltd. v. Union Oil Co. of Cal.*, 713 F.2d 693, 696–97 (Fed. Cir. 1983) (citing *Orthopedic Equip. Co. v. All Orthopedic Appliances, Inc.*, 707 F.2d 1376, 1381–82 (Fed. Cir. 1983)). “Not all such factors may be present in every case, and one or more of these or other factors may predominate in a particular case.” *Id.*

Petitioner argues that a person having ordinary skill in the art “would have had (1) a bachelor’s degree in industrial design, fine arts, or a similar field, and (2) at least two years of practical experience in industrial design.” Pet. 11 (citing Ex. 1003 ¶¶ 20–24). Petitioner further argues that “[a]dditional experience can substitute for the level of education, and vice-versa.” *Id.* (citing Ex. 1003 ¶¶ 20–24).

Patent Owner argues that a person having ordinary skill in the art “would have had either (1) a bachelor of science in industrial design or mechanical engineering and three years of experience designing mobile phones or (2) a master of science degree in industrial design or mechanical engineering and two years of experience designing mobile phones.” Prelim. Resp. 10–11 (citing Ex. 2001 ¶ 21). Patent Owner further argues that “[a] person with a different degree but with additional relevant experience could still qualify if the additional experience compensates for the different educational background.” *Id.* at 11 (citing Ex. 2001 ¶ 21). Alternatively, Patent Owner argues that “[a] person with less experience designing mobile phones could still qualify if the person has additional education that compensates for their lesser experience.” *Id.* (citing Ex. 2001 ¶ 21).

Although Patent Owner proposes a different formulation of the person having ordinary skill in the art than Petitioner, Patent Owner argues that it “does not believe the ultimate definition of a [person having ordinary skill in the art] impacts the issues presented herein for the purposes of Institution.” Prelim. Resp. 11 (citing Pet. 11). Accordingly, “Patent Owner does not dispute Petitioner’s definition.” *Id.*

Petitioner’s recitation of the level of ordinary skill is consistent with the invention disclosed in the ’602 patent. It is also not disputed by Patent

Owner at this time. Prelim. Resp. 10. Accordingly, for purposes of this Decision, we adopt Petitioner’s formulation of the person having ordinary skill in the art.<sup>6</sup>

*C. Claim Construction*

We apply the same claim construction standard used in the federal courts, in other words, the claim construction standard that would be used to construe the claims in a civil action under 35 U.S.C. § 282(b), which is articulated in *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc). See 37 C.F.R. § 42.100(b). Under the *Phillips* standard, the “words of a claim ‘are generally given their ordinary and customary meaning,’” which is “the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, i.e., as of the effective filing date of the patent application.” *Phillips*, 415 F.3d at 1312–13.

Petitioner argues that the “[c]laims should be construed according to the ordinary and customary meaning as understood by a” person having ordinary skill in the art. Pet. 11. Petitioner also proposes a construction of the term “housing . . . forming enclosed exterior lateral sides and a rear side.” *Id.* at 12.

“Patent Owner agrees that the claims should be construed according to the ordinary and customary meaning as understood by a” person having

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<sup>6</sup> If Patent Owner disagrees with this formulation of the level of skill in the art, it must raise that disagreement in its Response. If a different level of skill would affect the outcome in this case, the parties must brief that issue as well. The failure of Patent Owner to describe how a different level of skill in the art is determinative will be a forfeiture of that argument. If there is a dispute regarding the level of ordinary skill in the art, then the parties are also encouraged to submit evidence, other than conclusory expert testimony, that supports their position.

ordinary skill in the art. Prelim. Resp. 11. Patent Owner further argues that there is no need to construe the “housing” limitation at this time. *Id.* at 12.

For the purposes of this Decision, we need not expressly construe any claim terms. *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (noting that “we need only construe terms ‘that are in controversy, and only to the extent necessary to resolve the controversy’” (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999))).<sup>7</sup>

*D. Discretionary Denial under 35 U.S.C. § 314(a)*

Institution of an *inter partes* review is discretionary, not mandatory. *See Cuozzo Speed Techs., LLC v. Lee*, 579 U.S. 261, 273 (2016) (“[T]he agency’s decision to deny a petition is a matter committed to the Patent Office’s discretion.”); *Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1367 (Fed. Cir. 2016) (“[T]he PTO is permitted, but never compelled, to institute an IPR proceeding.”).

Pursuant to the Consolidated Trial Practice Guide (*see* CTPG, 59–60), Petitioner filed a document which ranks the petitions in the instant case and IPR2024-00798 and provides an explanation of the material differences between the petitions. Ranking 1–5. Petitioner argues that its petitions challenging the ’602 patent are justified because

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<sup>7</sup> If either party intends to argue a claim construction at trial for any limitation, including what is the plain and ordinary meaning of a term, they should do so in a clearly designated section of their briefing. *See* Patent Trial and Appeal Board Consolidated Trial Practice Guide (“CTPG”) 46, 49 (Nov. 2019) (available at <https://www.uspto.gov/TrialPracticeGuideConsolidated>). Claim construction arguments should not be relegated to patentability arguments on the facts.

[t]he petition in IPR2024-00799 demonstrates invalidity on March 29, 2006, while the petition in IPR2024-00798 relies on an entirely separate set of prior art—without any overlap in references—to demonstrate invalidity as of October 30, 2013 and explains why the claims of the '602 patent are not entitled to an earlier priority date.

*Id.* at 2.

Petitioner also contends “two petitions are necessary because of the large number of challenged claims (36). Even accounting for similar claims, the number of distinc[tive] claim limitations still exceeds twenty. This large number alone justifies multiple petitions.” Ranking 5.

Patent Owner contends “Petitioner’s explanations fail to demonstrate a genuine need to file two petitions against the same claims of the same patent.” Prelim. Resp. 50. According to Patent Owner, “Petitioner has failed to demonstrate that this is one of the rare circumstances requiring the filing of two petitions” because “the only difference Petitioner identifies between the two petitions is that Patent Owner may dispute whether the references in IPR2024-00798 qualify as prior art based on the priority date of the '602 Patent.” *Id.* at 50–51 (citing Ranking 4). Patent Owner contends “Petitioner has not demonstrated anything unique in this case that differentiates Petitioner’s strategic choices from strategic choices faced by all petitioners. A petitioner must always weigh the pros and cons of using art reliant upon a priority challenge, and Patent Owner has a right to challenge prior art.” *Id.* at 51.

In deciding whether to institute *inter partes* review, we consider the guidance in the Consolidated Trial Practice Guide, which sets forth the following:

Parallel Petitions Challenging the Same Patent. Based on the Board's experience, one petition should be sufficient to challenge the claims of a patent in most situations. Two or more petitions filed against the same patent at or about the same time (e.g., before the first preliminary response by the patent owner) may place a substantial and unnecessary burden on the Board and the patent owner and could raise fairness, timing, and efficiency concerns. *See* 35 U.S.C. § 316(b).

CTPG, 59. Nonetheless, the Consolidated Trial Practice Guide recognizes that more than one petition may be necessary “for example, when the patent owner has asserted a large number of claims in litigation or when there is a dispute about priority date requiring arguments under multiple prior art references. In such cases two petitions by a petitioner may be needed, although this should be rare.” *Id.*

The present circumstance is consistent with the exception referenced in the Consolidated Trial Practice Guide. There is a dispute about the effective filing date of the '602 patent (*see* IPR2024-00798), which requires arguments to be made under multiple prior art references. Although Patent Owner cites some non-precedential cases denying multiple petitions when there was a priority dispute (Prelim. Resp. 52), we do not find the reasoning in those cases persuasive. Instead, we find the reasoning in the cases Petitioner cites to be persuasive. *See Medtronic, Inc. v. Teleflex Innovs. S.A.R.L.*, IPR2020-00130, Paper 20 at 11–13 (PTAB June 26, 2020); *NRG Energy, Inc. v. Midwest Energy Emissions Corp.*, IPR2020-00832, Paper 17 at 16–18 (PTAB Oct. 26, 2020). Additionally, we do not believe that considering the two petitions will unduly burden the Board. Moreover, the arguments presented in the Petition regarding the combination of Nguyen, Zadesky, Oda, and Gettemy, based on the current record, are compelling.

See Section II.F.5. Accordingly, we decline to exercise our discretion to deny institution of the Petition.<sup>8</sup>

*E. Discretionary Denial under 35 U.S.C. § 325(d)*

*1. Legal Standard*

Patent Owner argues that we should exercise our discretion to deny institution of trial under 35 U.S.C. § 325(d). Prelim. Resp. 38–49. Under § 325(d), we have discretion to deny a petition that presents the same or substantially the same prior art or arguments as previously presented to the Office. In evaluating whether the factual predicate under § 325(d) is met, we consider a number of non-exclusive factors, as set forth in *Becton, Dickinson & Co. v. B. Braun Melsungen AG*, IPR2017-01586, Paper 8 at 17–18 (PTAB Dec. 15, 2017) (Institution Decision) (precedential as to Section III.C.5, first paragraph) (“*Becton, Dickinson* factors”):

(a) the similarities and material differences between the asserted art and the prior art involved during examination;

(b) the cumulative nature of the asserted art and the prior art evaluated during examination;

(c) the extent to which the asserted art was evaluated during examination, including whether the prior art was the basis for rejection;

(d) the extent of the overlap between the arguments made during examination and the manner in which Petitioner relies on the prior art or Patent Owner distinguishes the prior art;

(e) whether Petitioner has pointed out sufficiently how the Examiner erred in its evaluation of the asserted prior art; and

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<sup>8</sup> We will address the propriety of IPR2024-00798 in its respective proceeding.

(f) the extent to which additional evidence and facts presented in the Petition warrant reconsideration of the prior art or arguments.

*Becton, Dickinson*, IPR2017-01586, Paper 8 at 17–18.

In performing an analysis under § 325(d), the Board uses the following two-part framework:

(1) whether the same or substantially the same art previously was presented to the Office or whether the same or substantially the same arguments previously were presented to the Office; and (2) if either condition of first part of the framework is satisfied, whether the petitioner has demonstrated that the Office erred in a manner material to the patentability of challenged claims. . . . If, after review of [*Becton, Dickinson*] factors (a), (b), and (d), it is determined that the same or substantially the same art or arguments previously were presented to the Office, then factors (c), (e), and (f) relate to whether the petitioner has demonstrated a material error by the Office.

*Advanced Bionics, LLC v. MED-EL Elektromedizinische Geräte GmbH*, IPR2019-01469, Paper 6 at 8, 10 (PTAB Feb. 13, 2020) (Institution Decision) (precedential) (footnote omitted). Consequently, we first turn to an analysis of *Becton, Dickinson* factors (a), (b), and (d) to determine whether the same or substantially the same art previously was presented to the Office or whether the same or substantially the same arguments previously were presented to the Office.

## 2. *Part One of the Advanced Bionics Analysis*

*Becton, Dickinson* factors (a), (b), and (d) require us to determine, respectively: (a) “the similarities and material differences between the asserted art and the prior art involved during examination”; (b) “the cumulative nature of the asserted art and the prior art evaluated during examination”; and (d) “the extent of the overlap between the arguments

made during examination and the manner in which Petitioner relies on the prior art or Patent Owner distinguishes the prior art.” *Becton, Dickinson*, IPR2017-01586, Paper 8 at 17.

Patent Owner argues that “Gettemy [is] cumulative of the Palm-related art cited and considered during prosecution, as well as the stacked configurations taught by Hiroshi<sup>9</sup> and Oda US Pub.<sup>10</sup>” Prelim. Resp. 41 (citing Ex. 2003 (Oda US Pub), Ex. 1002, 377–400 (Hoshi) (footnotes added)). Patent Owner further argues that “Gettemy [is], according to Petitioner, directed to Palm devices, and Palm-related art was cited in Information Disclosure Statements by the Applicant and considered by the Examiner during prosecution of the ’602 Patent.” *Id.* at 41–42 (citing Ex. 1002, 11–13, 89–91; Pet. 13, 90, Ex. 2001 ¶ 142). For the reason set forth below, we do not believe that Gettemy is substantially the same as prior art previously considered by the Office.

With regard to Patent Owner’s argument regarding Palm-related art, Patent Owner simply identifies an IDS without pointing to a specific reference as embodying Palm-related art or explaining how Gettemy is substantially the same as the Palm-related art. *See* Prelim. Resp. 41–42. We decline to perform analysis that is missing from the Preliminary Response. *See United States v. Dunkel*, 927 F.2d 955, 956 (7th Cir. 1991) (“Judges are not like pigs, hunting for truffles buried in briefs.”); *DeSilva v. DiLeonardi*, 181 F.3d 865, 866–67 (7th Cir. 1999) (“A brief must make all arguments

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<sup>9</sup> US 2004/0252220 A1, published Dec. 16, 2004 (Ex. 2003).

<sup>10</sup> JP 2002-125031, published Apr. 26, 2002 (Ex. 1002, 377–86). An English translation can be found at Exhibit 1002, 387–400

accessible to the judges, rather than ask them to play archaeologist with the record.”).

We also do not agree that Gettemy is substantially the same as either Oda US Pub or Hoshi. According to Patent Owner, “Gettemy, at best, teach[es] a stacked configuration of engine and battery, and art teaching a stacked configuration of engine and battery was considered and specifically distinguished during prosecution of the ’602 Patent, and are thus even further cumulative of the considered art.” Prelim. Resp. 42 (citing Ex. 2001 ¶ 136). Patent Owner argues that Oda US Pub and Hoshi also teach a “stacked configuration of battery and engine such that the input buttons are not above and adjacent the battery as well as the engine.” Prelim. Resp. 42–44. However, as discussed below in Section II.F.5.f, we do not agree with Patent Owner’s argument that Gettemy teaches a stacked battery and engine. Instead, based on the current record, we determine that Gettemy teaches that “a user input section located above the engine section and a battery” and that “the user input section is located adjacent the battery and the engine section.” *Id.* Because that design materially differs from Oda US Pub and Hoshi, Gettemy is not substantially the same as those references.<sup>11</sup>

### 3. Conclusion

Based on our consideration of *Becton Dickinson* factors (a), (b), and (d), we find that the same or substantially the same art or arguments were not previously presented to the Office. Thus, our analysis ends at this point, and we need not proceed to part two of the *Advanced Bionics*

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<sup>11</sup> Because Gettemy is not substantially the same as a reference that was previously considered by the Office, we need not consider Patent Owner’s remaining arguments regarding other references Petitioner is relying on.

framework. *See Advanced Bionics*, IPR2019-01469, Paper 6 at 8. We therefore decline to exercise our discretion to deny institution based on 35 U.S.C. § 325(d).

*F. Obviousness over Nguyen, Zadesky, Oda, and Gettemy*

Petitioner argues that claims 1–36 would have been obvious over Nguyen, Zadesky, Oda, and Gettemy. Pet. 90–110. Based on the current record, we are sufficiently persuaded that Petitioner has established a reasonable likelihood of prevailing on this asserted obviousness ground with respect to at least claim 1.

*1. Overview of Nguyen*

Nguyen is titled “Housing Configuration for Orientating a Surface Feature on a Handheld Computer” and is directed to “a handheld computer having a housing configuration that orients a surface feature.” Ex. 1004, code (54), ¶ 1. Nguyen describes an embodiment in which “a handheld computer has a housing with a front face and a back face.” *Id.* ¶ 15.

Nguyen explains further that

[a] length of the front face and a length of the back face each extend primarily in a first direction corresponding to a length of the housing. A width of the front face and a width of the back face each extend primarily in a second direction corresponding to a width of the housing. A first surface extends between the front face and the back face. The first surface is acutely angled with respect to at least one of the front face and the back face. A component is disposed at least partially on the front surface. The component is operationally affected by a direction in which the component is oriented.

*Id.*

Nguyen Figure 1 is reproduced on the next page.

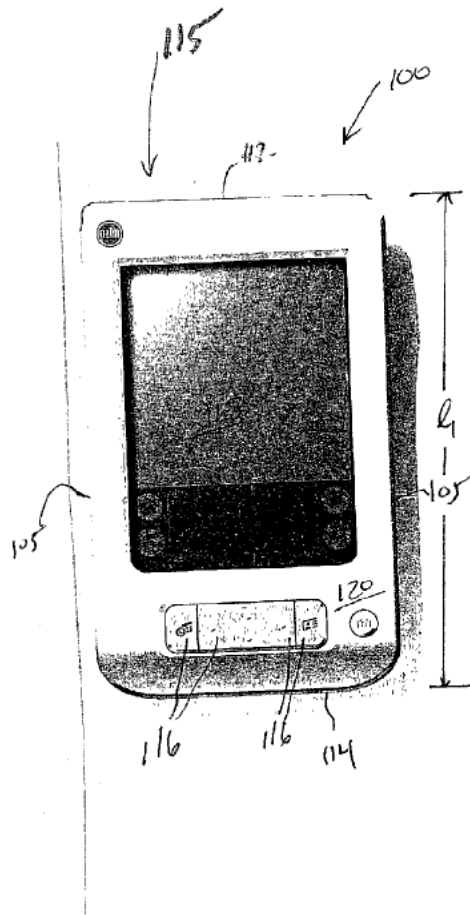


FIG 1

Nguyen Figure 1 depicts “a frontal view of a handheld computer.” Ex. 1004 ¶ 9. Nguyen Figure 1 illustrates handheld device 100 with lateral sides 105, top end 112, bottom end 114, housing 115, buttons 116, and back face 120. *Id.* ¶ 21. Top end 112, bottom end 114, and lateral sides 105 reference a substantially planar front face. *Id.* “A distance between the top edge 112 and the bottom end 114 defines a length (11) of handheld computer 100,” and “[a] distance between lateral sides 105 defines a width of handheld computer 100.” *Id.*

Nguyen Figure 2 is reproduced on the next page.

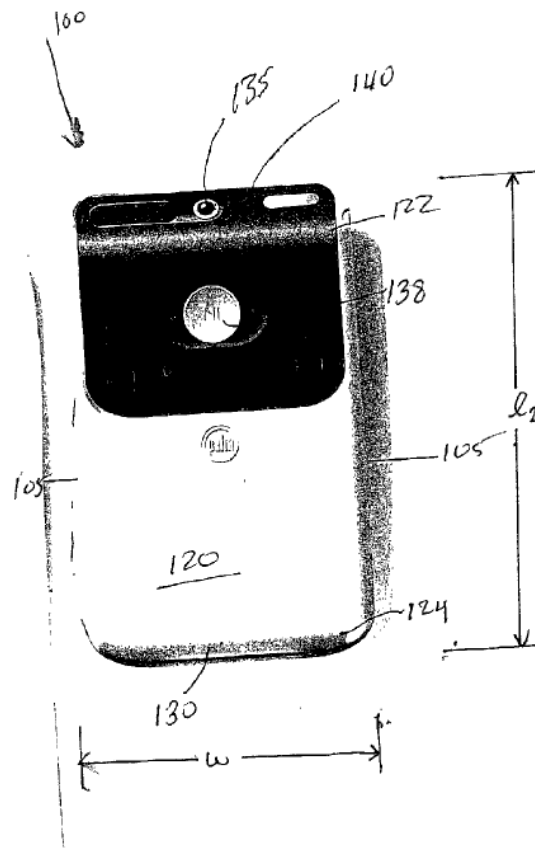


FIG. 2

Nguyen Figure 2 depicts “a back view of a handheld computer.” Ex. 1004

¶ 10. Nguyen Figure 2 illustrates handheld device 100 with lateral sides 105, back face 120, top end 122, bottom end 124, bottom slanted surface 130, lens 135, actuation mechanism 138, and top slanted surface 140. *Id.*

¶¶ 21, 25–28. The back face 120 extends substantially parallel to front face 110 and “may be referenced with respect to a top end 122 and a bottom end 124.” *Id.* ¶ 25. “A length (12) of the back face 120 may extend between top end 122 and bottom end 124,” and “[t]he width of back face 120 may extend between lateral sides 105, so as to be the same as front face 110.” *Id.*

“[T]op slanted surface 140 may extend from back face 120 towards front

face 110” and “may be unitarily formed as part of the housing that includes back face 120.” *Id.* ¶ 26. “[L]ens 135 may be used in conjunction with a processor or other internal components of handheld computer 100 in order to capture images” when actuation mechanism 138 is activated. *Id.* ¶¶ 27–28.

Nguyen Figure 4 is reproduced below.

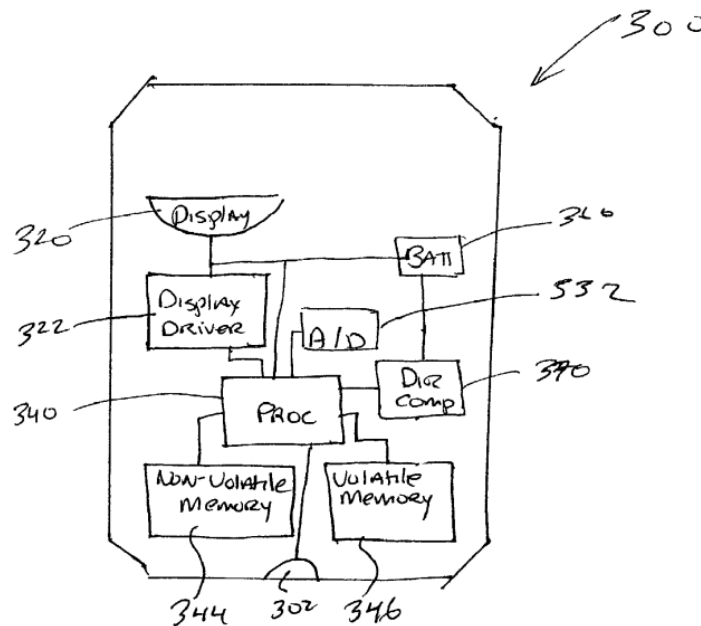


FIG. 4

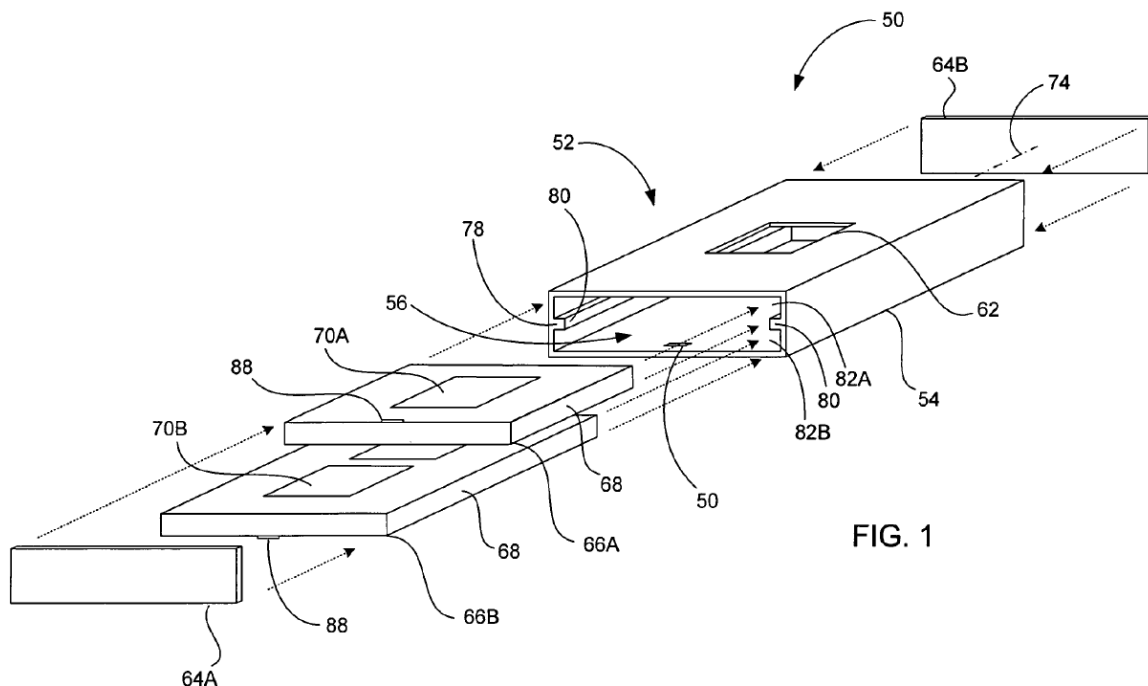
Nguyen Figure 4 “is a block diagram of a handheld computer.” Ex. 1004 ¶ 12. In this diagram, “a handheld computer 300 includes a processor 340 coupled to a first memory 344 (non-volatile) and a second memory 346 (volatile).” *Id.* ¶ 34. “The processor 340 is coupled to a display driver 322” and “combines with display driver 322 to process and signal data for presentation on a display assembly 320.” *Id.*

## 2. Overview of Zadesky

Zadesky is titled “Handheld Computing Device” and “relates to enclosures of portable computing devices and methods of assembling

portable computing devices.” Ex. 1005, code (54), 1:25–27. Zadesky describes aspects of the invention as a “seamless enclosure that includes open ends and internal rails which serve as a guide for slidably assembling the internal components of the portable computing devices through the open ends of the seamless enclosure, as well as positioning and supporting the internal components in their assembled position within the seamless enclosure,” and “a planar retaining plate, which serves as a multi-positional reference surface to various components of the portable computing devices.” *Id.* at 4:41–55. Zadesky explains that the seamless enclosure may be formed via an extrusion process and the retaining plate may “be assembled within the lumen of the seamless enclosure to provide a reference surface to internal and external parts of the portable computing device.” *Id.*

Zadesky Figure 1 is reproduced below.



Zadesky Figure 1 depicts “an exploded perspective diagram of an electronic device.” Ex. 1005, 3:58–60. Zadesky Figure 1 illustrates electronic device

50 with housing 52, end caps 64A and 64B, and subassemblies 66. *Id.* at 5:7–9, 5:16–19, 5:36–37, 6:4–5. Electronic device 50 may be “a computer, media device, telecommunication device and/or the like.” *Id.* at 5:12–14.

Housing 52 “generally includes a main body 54 in the form of an integral tube” or single complete unit, and defines the shape or form of device 50 and “encloses and supports internally various electrical components (including for example integrated circuit chips and other circuitry) to provide computing operations for the device 50.” Ex. 1005, 5:16–23. Zadesky explains that “[b]y being integrally formed, the main body has a substantially seamless appearance, which is unlike conventional housings, which include two parts that are fastened together thereby forming a seam therebetween.” *Id.* at 5:25–28. Main body 54 of housing 52 “defines a cavity 56 therethrough between a first open end 58 and second open end 60 located opposite the first open end 58” and “includes one or more windows 62, which provide access to the electrical components, particularly the user interface elements, when they are assembled inside the cavity 56 of the main body 54.” *Id.* at 5:28–35. End caps 64A and 64B cover the first open end 58 and second open end 60 to form a fully enclosed system. *Id.* at 5:36–39.

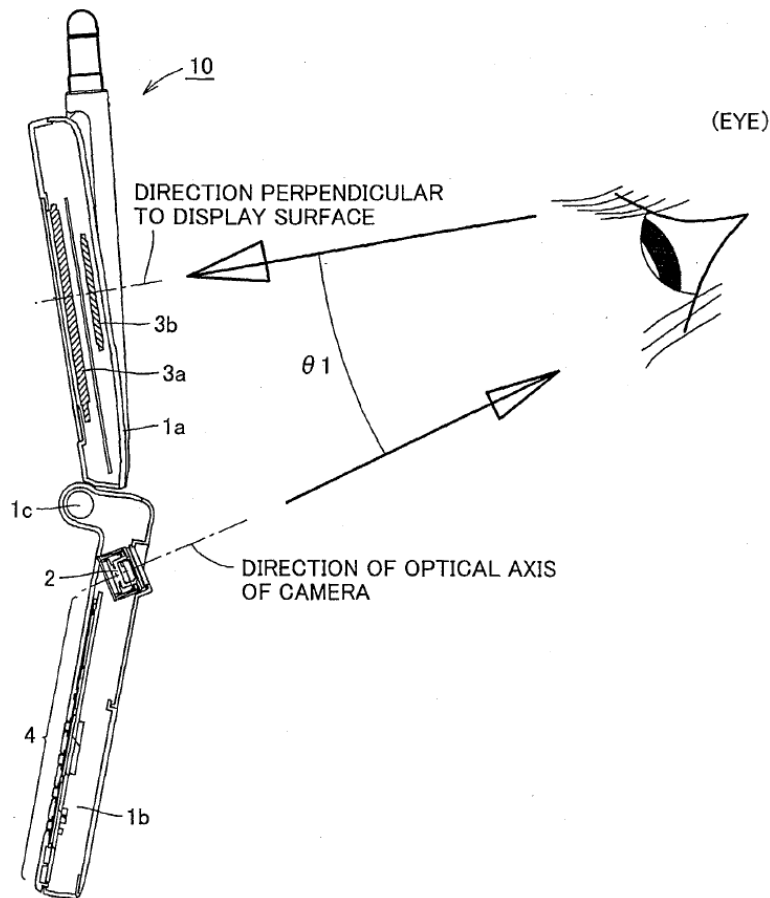
Subassemblies 66 each include a carrier 68 which provides a structure for carrying operational components 70 of the electronic device 50 and supporting them when assembled inside the housing 52. Ex. 1005, 6:5–9. Internal rail system 78 includes opposed rails 80 which receive subassemblies 66 and guide them to their desired positions within main body 54 when the subassemblies 66 are inserted through one of the open ends 58 or 60. *Id.* at 6:45–50, 6:59–64.

### 3. Overview of Oda

Oda is titled “Image Pick-up Device” and relates to “an image pick-up device provided with a display portion displaying taken pictures.” Ex. 1006, code (54), ¶ 1. Oda describes an image pick-up device with “a main body, a camera for taking a picture, and a display device displaying a taken picture and arranged at a surface of the main body on the same side as the camera.” *Id.* ¶ 10. According to Oda, “[t]he camera is fixed to the main body such that an optical axis of the camera extends in a direction different from a direction perpendicular to a display surface of the display device.” *Id.*

Oda Figure 14 is reproduced below.

FIG.14



Oda Figure 14 depicts a view showing a positional relationship between a display portion of the camera-equipped portable device and an eye of an operator of the camera. Ex. 1006, 6:38–43. Oda Figure 14 illustrates camera-equipped portable device 10 with first body 1a, second body 1b, hinge portion 1c, camera 2, main display portion 3a, sub-display portion 3b, and input buttons 4. *Id.* ¶¶ 39, 77–78. Camera 2 is arranged on the rear surface of second body 1b “such that the optical axis of camera 2 extends in a direction different from the direction perpendicular to the display surface of sub-display portion 3b” and “is inclined toward first body 1a or hinge portion 1c with respect to the normal to the display surface of sub-display portion 3b.” *Id.* ¶¶ 77–78.

#### *4. Overview of Gettemy*

Gettemy is titled “Selectively Relocatable and Universal Interface Module with Circuitry for a Display Screen” and “relates to a relocatable and universal interface module for a display device that can be installed in different portable computer system designs.” Ex. 1007, code (54), 1:10–13. Gettemy describes “[a] portable computer system (e.g., a palmtop or hand-held computer system) with a universal interface module containing circuitry needed to connect with and operate a device such as a display device.” *Id.* at code (57). According to Gettemy, “[t]he interface module is coupled between the display device and a printed circuit board (e.g., a central processing unit)” and “can be coupled to the display device using a flexible circuit” such that “the interface module is pivotable about the flexible circuit so that it can be positioned in different locations within the computer system, depending on space availability and the constraints of a particular computer system design.” *Id.*

Gettemy Figure 4 is reproduced below.

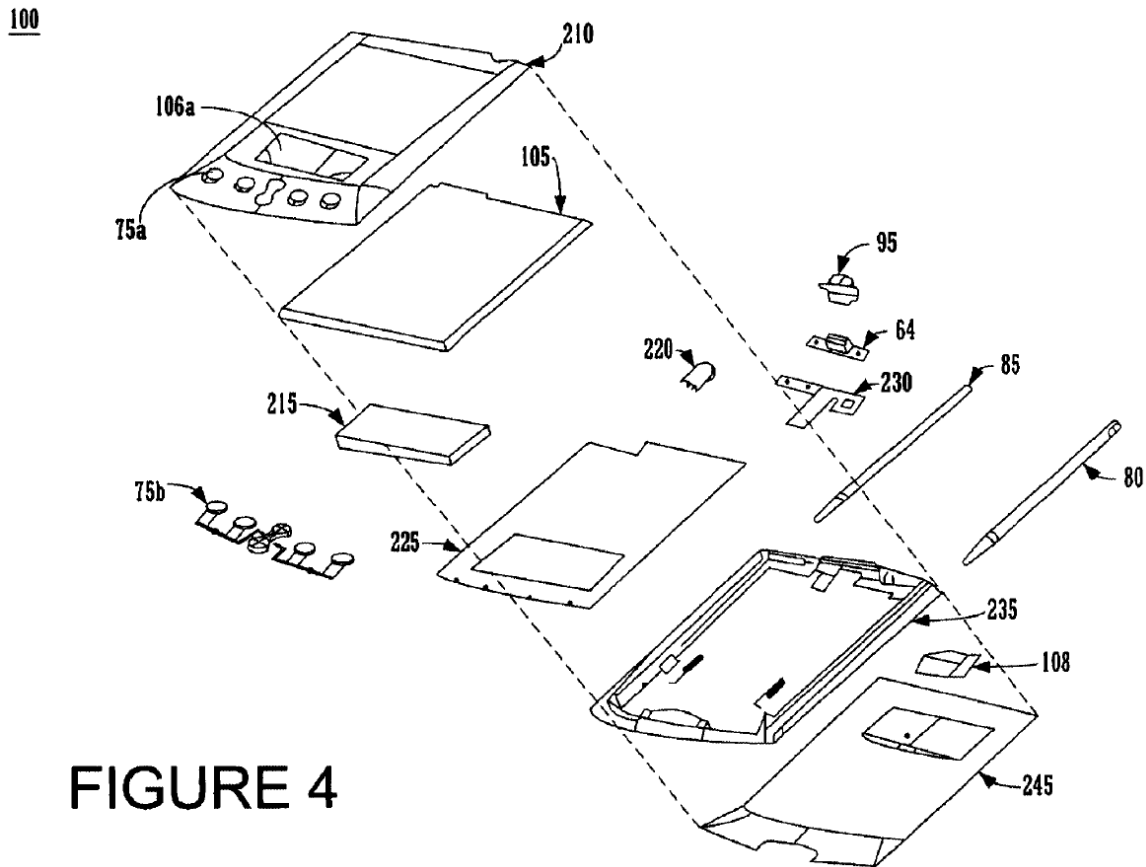


**FIGURE 4**

Gettemy Figure 4 depicts an exploded view of the components of an embodiment of a portable computer system. Ex. 1007, 3:27–28. Gettemy Figure 4 illustrates portable computer system 100 with back cover 245, front cover 210, midframe 235, flat panel display device 105, battery 215, contrast adjustment (potentiometer) 220, on/off button 95, flexible circuit 230, printed circuit (PC) board 225, stylus 80, position-adjustable antenna 85, and receiver/transmitter device 108. *Id.* at 5:36–59. Front cover 210 fits flat panel display device 105, has an outline of alpha-numeric input device 106, and has holes 75a for receiving buttons 75b. *Id.* at 5:36–41. Receiver/transmitter device 108 is coupled to position-adjustable antenna 85 and PC board 225. *Id.* at 5:59–61.

5. *Analysis of Claim 1*

a) *Limitation 1pre: The Preamble*

The preamble of claim 1 recites “[a] portable electronic device comprising.” Ex. 1001, 6:21. Petitioner argues that Nguyen teaches the preamble. See Pet. 15–16, 37, 93; *see also* Ex. 1003 ¶¶ 39–41.

After reviewing Petitioner’s arguments and information regarding the preamble, including the Visser Declaration, which are not addressed by Patent Owner at this stage, we are persuaded that Petitioner sufficiently demonstrates, for purposes of this Decision, that Nguyen teaches the preamble of claim 1.<sup>12</sup> Our specific preliminary findings are set forth below.

Nguyen teaches a handheld computer. Ex. 1004, code (57), ¶¶ 1, 13, 15. A person having ordinary skill in the art would have recognized that a handheld computer is a type of portable electronic device. Ex. 1002 ¶ 40.

b) *Limitation 1a: One Piece Housing*

Claim 1 further recites “a one piece housing forming enclosed exterior lateral sides and a rear side.” Ex. 1001, 6:22–23. Petitioner argues that both Nguyen and Zadesky teach limitation 1a. See Pet. 16–18, 38–43, 93; Ex. 1003 ¶¶ 42–45, 110–127.

After reviewing Petitioner’s arguments and information regarding limitation 1a, including the Visser Declaration, which are not addressed by Patent Owner at this stage, we are persuaded that Petitioner sufficiently

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<sup>12</sup> Because Petitioner has sufficiently shown that the prior art discloses the preamble, we need not determine at this time whether the preamble is limiting. See *Nidec*, 868 F.3d at 1017. If Patent Owner contends that the preamble is limiting, it must do so in the claim construction section of the Patent Owner’s Response.

demonstrates, for purposes of this Decision, that Nguyen teaches limitation 1a. Our specific preliminary findings are set forth below.

Nguyen teaches a housing with “a front face and a *back face*.” Ex. 1004 ¶ 15 (emphasis added); *see also* Ex. 1003 ¶ 42. That housing also has “lateral sides 105,” and “[t]he width of back face 120 may extend between lateral sides 105, so as to be the same as front face 110.” Ex. 1004 ¶¶ 21 (first quotation), 25 (second quotation); *see also* Ex. 1003 ¶ 42. “This housing forms a tray-like shape, with raised edges, that houses the components of the handheld computer.” Ex. 1003 ¶ 43. A person having ordinary skill in the art would have understood that Nguyen teaches or suggests having a unitary or one-piece housing. Ex. 1003 ¶ 44 (citing Ex. 1004 ¶¶ 7, 26–27, Figs. 2–3).<sup>13</sup>

*c) Limitation 1b: Rear Side Cut Out*

Claim 1 further recites “a cut out in the rear side of said housing.” Ex. 1001, 6:24. Petitioner argues that both Nguyen and Oda teach limitation 1b. *See* Pet. 18–19, 43–44, 93.

After reviewing Petitioner’s arguments and information regarding limitation 1b, including the Visser Declaration, which are not addressed by Patent Owner at this stage, we are persuaded that Petitioner sufficiently demonstrates, for purposes of this Decision, that Nguyen teaches limitation 1b. Our specific preliminary findings are set forth below.

Nguyen teaches that a “directional surface feature . . . may be provided on the top slanted surface 140.” Ex. 1004 ¶ 27. This can include “lens 135” which can be used to “capture images.” *Id.* A person having

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<sup>13</sup> Because we find that Nguyen teaches this limitation, we do not need to address whether Zadesky also teaches the limitation.

ordinary skill in the art would have understood “that the camera optics are provided through an opening in the housing.” Ex. 1003 ¶ 46. In other words, there is “a cut out in the rear side of the housing to allow for the rear-facing camera’s optics.” *Id.*<sup>14</sup>

d) *Limitation 1c: A Camera*

Claim 1 further recites “a camera located in said housing and extending to said cut out at said rear side.” Ex. 1001, 6:25–26. Petitioner argues that Nguyen teaches limitation 1c. *See* Pet. 19–20, 44–47.

After reviewing Petitioner’s arguments and information regarding limitation 1c, including the Visser Declaration, which are not addressed by Patent Owner at this stage, we are persuaded that Petitioner sufficiently demonstrates, for purposes of this Decision, that Nguyen teaches limitation 1c. Our specific preliminary findings are set forth below.

As discussed above for limitation 1b, Nguyen teaches a backwards-facing camera and a cut out at the rear side for the camera. Nguyen further teaches that camera “lens 135 may be used in conjunction with *a processor or other internal components* of handheld computer 100 in order to capture images.” Ex. 1004 ¶ 27 (emphasis added). A person having ordinary skill in the art would understand that the processor and other internal components would be located within the housing. Ex. 1003 ¶ 48. A person having ordinary skill in the art would further understand that the lens portion of the camera (lens 135) would extend to the cut out in the rear side of the housing. *Id.*

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<sup>14</sup> Because we find that Nguyen teaches this limitation, we do not need to address whether Oda also teaches the limitation.

e) *Limitation 1d: The Engine*

Claim 1 further recites “an engine section comprising a printed circuit board, a transceiver, a processor and a memory.” Ex. 1001, 6:27–28.

Petitioner argues that Nguyen, Oda, and Gettemy each teach limitation 1d. *See* Pet. 20–21, 48, 93–96. For the reasons set forth below, we are sufficiently persuaded by Petitioner’s argument and evidence that Nguyen and Gettemy each teach limitation 1d. We are also sufficiently persuaded that a person having ordinary skill in the art would have combined the teachings of Nguyen and Gettemy with a reasonable expectation of success.

Nguyen teaches that handheld computers have a printed circuit board. Ex. 1004 ¶ 5. Nguyen further teaches that the handheld computer may also have “a wireless communication transmitter,” “a wireless communication receiver,” a processor, and a memory. Ex. 1004 ¶¶ 34, 39; *see also* Ex. 1003 ¶¶ 50–51. A person having ordinary skill in the art would have understood that those elements comprise an engine section. Ex. 1003 ¶¶ 50–51.

Alternatively, Gettemy teaches a printed circuit board that contains various electronic components: “A flexible circuit 230 is shown along with a printed circuit (PC) board 225 containing electronics and logic (e.g., memory, communication bus, processor, etc.) for implementing computer system functionality.” Ex. 1007, 5:48–51. The device can also include a transceiver which is coupled to communicate with PC board 225. *Id.* at 4:5–8, 4:55–67; Ex. 1003 ¶ 287. A person having ordinary skill in the art would have understood those elements to comprise an engine, which is shown in Gettemy Figure 4. Ex. 1003 ¶¶ 286–288.

Additionally, a person having ordinary skill in the art would have been motivated to combine the relevant teachings of Nguyen and Gettemy.

*See* Ex. 1003 ¶¶ 289–290. Both Nguyen and Gettemy teach similar elements of an engine section. While Nguyen teaches a block diagram illustrating the various elements, a person having ordinary skill in the art would have turned to Gettemy for the actual internal arrangement of elements, such as shown in Gettemy Figure 4. *Id.* ¶ 289. Such a modification “would have amounted to the use of known technique to improve a similar system in the same way.” *Id.* Additionally, a person having ordinary skill in the art would have had a reasonable expectation of success when combining the teachings of Nguyen and Gettemy. *Id.* ¶ 291.<sup>15</sup>

Patent Owner argues that Petitioner has not sufficiently shown why Nguyen’s transceiver would be part of the engine section. Prelim. Resp. 25–26. Specifically, Patent Owner argues that Nguyen teaches “any ‘wireless communication transmitter’ or ‘wireless communication receiver’ is located on one of the slanted surfaces of the device, and the slanted surfaces are on the exterior of the Nguyen device.” *Id.* at 25 (citing Ex. 1004 ¶ 39, claims 1, 3; Ex. 2001 ¶ 101). According to Patent Owner, “[n]either Petitioner nor Dr. Visser explains why a person of ordinary skill in the art would have concluded that the wireless communication transmitter or wireless communication receiver, which would be disposed at least partially on an exterior surface of the device, would be part of any alleged ‘engine section.’” *Id.* at 26.

We do not agree with Patent Owner. Contrary to Patent Owner’s argument, Dr. Visser sufficiently explains for purposes of institution why the transceiver is part of the engine section. *See* Ex. 1003 ¶¶ 50–51. For

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<sup>15</sup> Because we find that Nguyen and Gettemy teach this limitation, we do not need to address whether Oda also teaches the limitation.

example, Dr. Visser relies on the block diagram of Nguyen Figure 4 to support his conclusion that a person having ordinary skill in the art would have considered Nguyen's transceiver part of the engine section. *See* Ex. 1003 ¶ 51. Although Patent Owner may disagree with that conclusion and is free to present evidence challenging it at trial, Dr. Vesser provides both an opinion and evidentiary support for that opinion. *See id.*

Moreover, we do not see the significance as to the location of the transceiver. Based on the current record, we see nothing in the words of the claims that prevents the engine section from including components found on the surface of the housing. Patent Owner has not offered a definition of the term "engine section." If Patent Owner believes that limitation imposes a spatial limitation on the location of the components of the engine section, then Patent Owner needs to provide a claim construction, with sufficient evidentiary support, in its Response.

Additionally, we note that we rely not only on Nguyen, but also Gettemy to teach this limitation. Patent Owner does not argue that Gettemy does not teach limitation 1d. *See* Prelim. Resp. 32–38. Thus, even if Patent Owner was correct that Nguyen does not teach or suggest limitation 1d, Patent Owner's argument is inapposite as there is no dispute that Gettemy teaches it.

f) *Limitation 1e: User Input Section*

Claim 1 further recites "a user input section located above the engine section and a battery, wherein the user input section is located adjacent the battery and the engine section." Ex. 1001, 6:29–31. Petitioner argues that Nguyen, Zadesky, and Gettemy each teach limitation 1e. *See* Pet. 22–24, 48–51, 96–100.

For the reasons set forth below, we are sufficiently persuaded by Petitioner’s argument and evidence that Gettemy teaches limitation 1e. We are also sufficiently persuaded that a person having ordinary skill in the art would have combined the teachings of Nguyen and Gettemy with a reasonable expectation of success.

Gettemy teaches a user input section which includes a touch screen, an alphanumeric input area, and programable buttons. Ex. 1007, 5:1–25; Ex. 1003 ¶ 298. Gettemy Figure 2, as annotated by Petitioner (Pet. 99), is reproduced below.

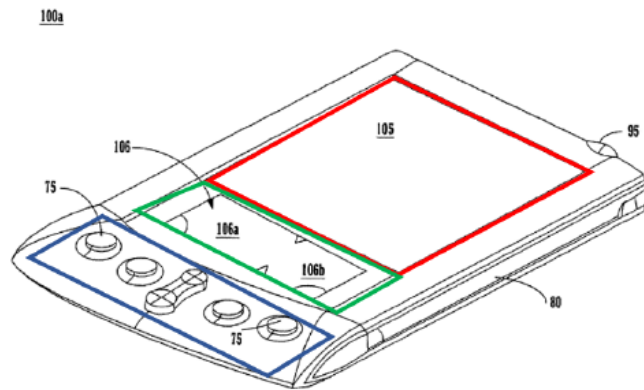


FIGURE 2

Gettemy Figure 2 “is a top side perspective view of an exemplary portable computer system.” Ex. 1007, 3:21–22. Gettemy Figure 2 has been annotated to identify a touch screen (highlighted in red), an alphanumeric input area (highlighted in green), and application buttons (highlighted in blue). Ex. 1003 ¶ 298.

Gettemy further teaches that the user input section is located adjacent to both battery 215 (battery section) and PC board 225 (engine section).

Ex. 1007, Figs. 4, 8A; Ex. 1003 ¶ 295. Gettemy Figure 4, as annotated by Petitioner (Pet. 97; Ex. 1003 ¶ 295), is reproduced below.

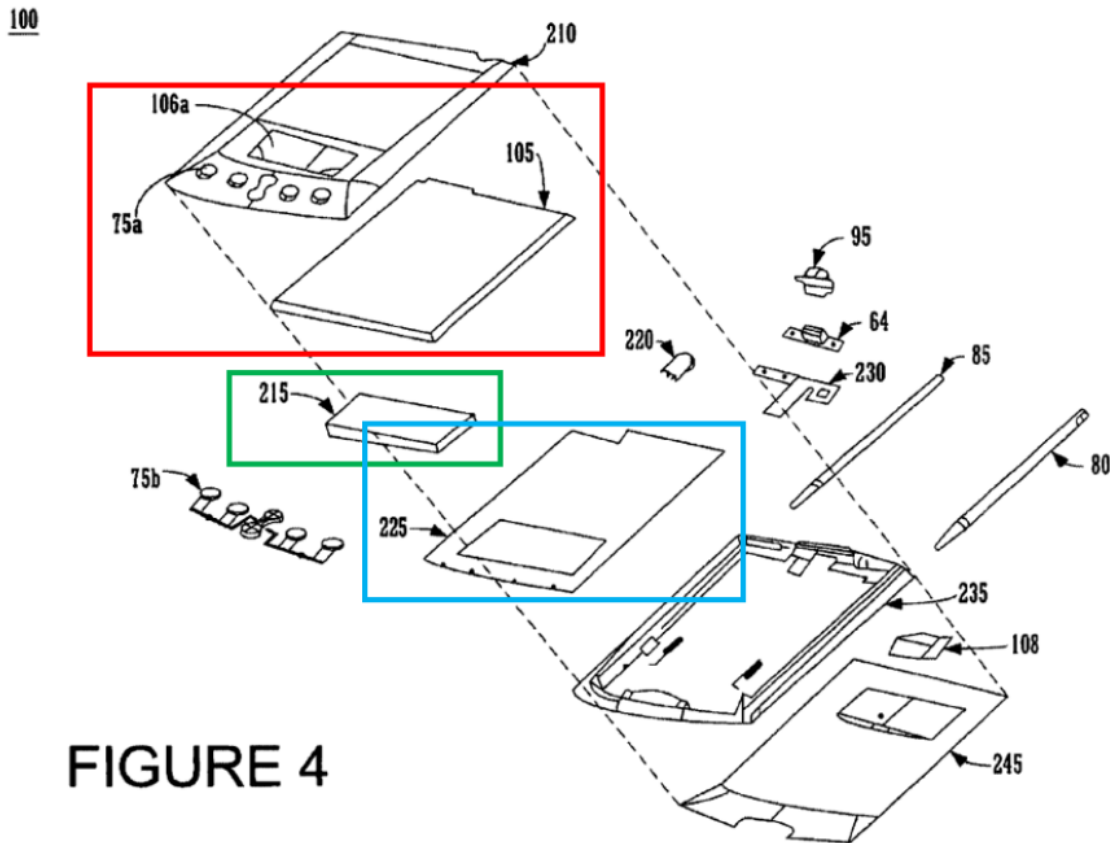


**FIGURE 4**

Gettemy Figure 4 “is an exploded view of the components of the portable computer system of FIG. 2.” Ex. 1007, 3:26–27. Petitioner annotated Gettemy Figure 4 to identify the user input section (highlighted in red), battery 215 (highlighted in green), and PC board 225 (highlighted in blue). As shown in Gettemy Figure 4, the user input section is adjacent to both battery 215 and PCB 225.

This relative location of the elements is confirmed by Gettemy Figure 8A. See Ex. 1007, Fig. 8A; Ex. 1003 ¶ 296. Gettemy Figure 8A, as annotated by Petitioner (Pet. 98; Ex. 1003 ¶ 296), is reproduced below.

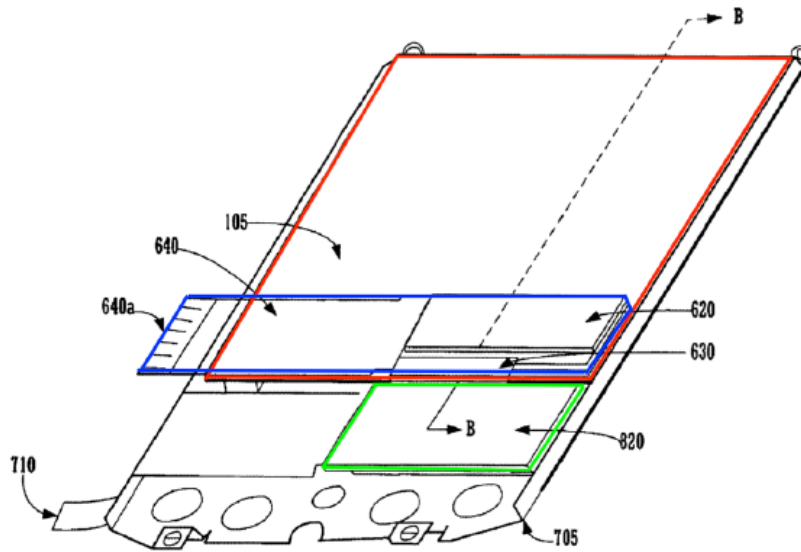
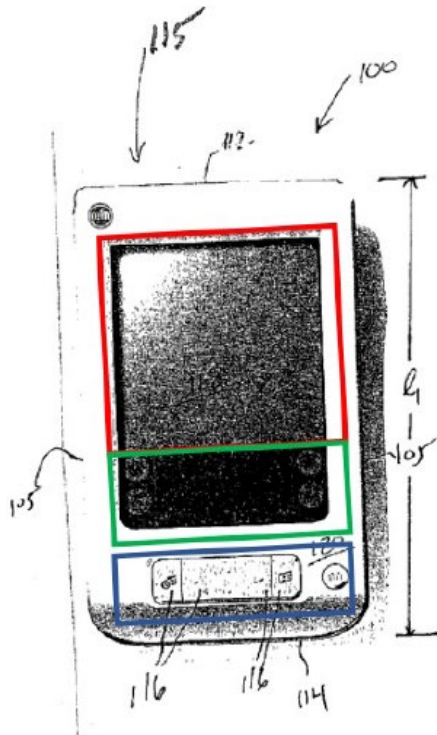


**FIGURE 8A**

Gettemy Figure 8A is a “perspective view[] of a portable computer system.” Ex. 1007, 3:41–44; *see also id.* at 9:10–34. Specifically, Gettemy Figure 8A “shows the back (or bottom) side of bracket 705 and of display device 105.” *Id.* at 9:18–20. “[I]nterface module 620 is positioned in a location behind (below) display device 105 and coupled to interface module 620 using first flexible circuit 630.” *Id.* at 9:21–24. “A second flexible circuit 640 can be used to couple interface module 620 to PC board 225.” *Id.* at 9:28–30. “PC board 225 (not shown) is mounted behind, (underneath) bracket 705. Thus, the second flexible circuit 640 (specifically, the portion labeled 640a) is folded back toward bracket 705 to enable a connection with PC board 225.” *Id.* at 9:42–47. Petitioner has annotated the user input section (red), the battery 820 (green), the interface module (blue), which a person having ordinary skill in the art would have understood to be part of the engine section. Ex. 1003 ¶¶ 296–297. Although battery 820 (green) appears to be

located adjacent to the end of touch screen 105, Figure 8A also shows alphanumeric input area 106(a) (not annotated) above and adjacent to battery 820. Ex. 1007, Figs. 4, 8A. Because alphanumeric input area 106(a) is a portion of the user input section (Ex. 1003 ¶ 294), at least a portion of the user input section is located above and adjacent to the battery section (*see id.* at ¶ 296).

A person having ordinary skill in the art would have combined the relevant teachings of Nguyen and Gettemy. *See* Ex. 1003 ¶¶ 298–299. “Nguyen and Gettemy teach substantially similar user input sections.” *Id.* ¶ 299. Specifically, Nguyen teaches a user input section consisting of three parts: a contact sensitive display, an alphanumeric input area, and application buttons. Ex. 1004 ¶ 22; Ex. 1003 ¶¶ 53–54. Nguyen Figure 1 as annotated by Petitioner (Pet. 23) is reproduced below.



Nguyen Figure 1 “is a frontal view of a handheld computer.” Ex. 1004 ¶ 9. Nguyen Figure 1 above has been annotated to identify “a touch screen (highlighted in red), an alphanumeric input area (highlighted in green), and application buttons (highlighted in blue).” Ex. 1003 ¶ 55.

The similarity between Nguyen and Gettemy can be seen by comparing the annotated versions of Nguyen Figure 1 and Gettemy Figure 2 discussed above (Ex. 1003 ¶ 298), which are reproduced below.<sup>16</sup>

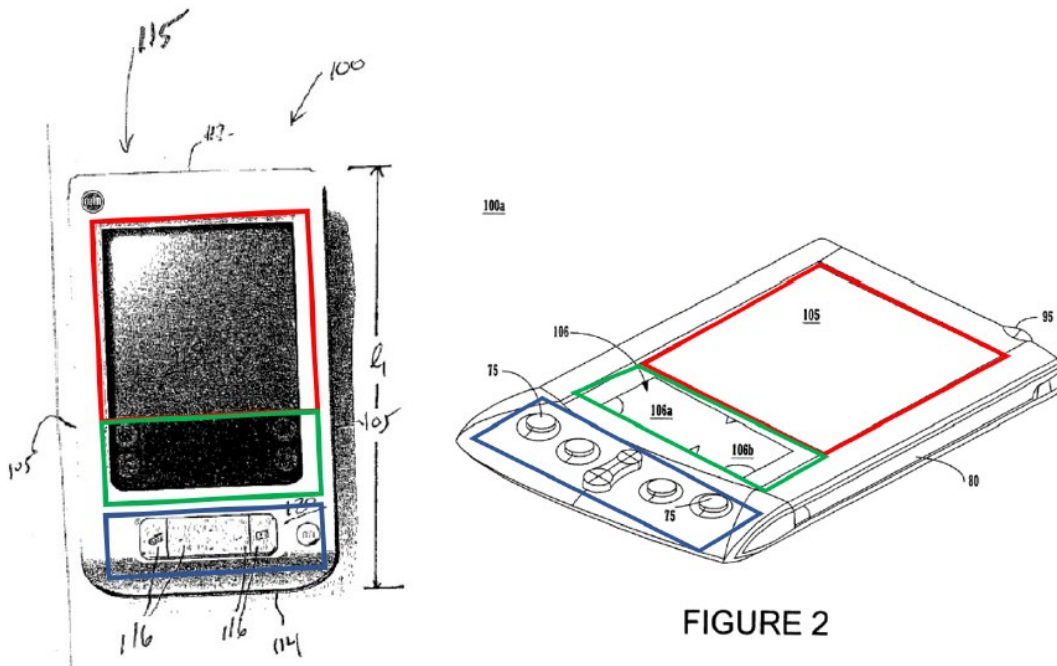


FIGURE 2

<sup>16</sup> Nguyen Figure 1 “is a frontal view of a handheld computer.” Ex. 1004 ¶ 9. Figure 1 above has been annotated to identify “a touch screen (highlighted in red), an alphanumeric input area (highlighted in green), and application buttons (highlighted in blue).” Ex. 1003 ¶ 55. Gettemy Figure 2 “is a top side perspective view of an exemplary portable computer system.” Ex. 1007, 3:21–22. As with the annotated figure from Nguyen above, Figure 2 above has been annotated to identify “a touch screen (highlighted in red), an alphanumeric input area (highlighted in green), and application buttons (highlighted in blue).” Ex. 1003 ¶ 298.

A person having ordinary skill in the art would also have appreciated that “Gettemy’s teaching regarding the arrangement of the user input section and internal electronic components would not have changed the principle of operation for Gettemy [or] Nguyen . . . , particularly when Nguyen already taught those same components for a similar Palm form factor.” *Id.* ¶ 299. Specifically, a person having ordinary skill in the art would have appreciated that combining Gettemy’s internal structure with Nguyen’s design “would not impact the overall form factor or the exterior input section.” *Id.* Therefore, consistent with the reasoning in Section II.F.5.e, which is hereby incorporated by reference, a person having ordinary skill in the art would have combined the teachings of Nguyen and Gettemy with a reasonable expectation of success.<sup>17</sup>

Patent Owner argues that Gettemy<sup>18</sup> does not teach the arrangement of sections set forth in limitation 1e; instead, according to Patent Owner, “Gettemy, at best, teaches a stacked configuration of engine and battery.” Prelim. Resp. 33–38. Specifically, Patent Owner argues that, as illustrated in Gettemy Figure 4, Gettemy teaches a stacked arrangement in which display device 105 is not located above the battery. *Id.* at 33–34. According to Patent Owner, that is different than the claims of the ’602 patent which

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<sup>17</sup> Because we find that Nguyen and Gettemy teach this limitation, we do not need to address whether Zadesky also teaches the limitation.

<sup>18</sup> Patent Owner also argues that Nguyen, Zadesky, and Oda also do not teach limitation 1e. Prelim. Resp. 14–25, 28–32. Because we only rely on Gettemy for the relative placement of the user input section, the battery section, and the engine section, we do not address those arguments at this time. However, we discuss those arguments below in Sections II.G. and II.H.

require “a user input section that is located both *above* and *adjacent* both a battery and an engine section.” *Id.* at 34–35 (citing Ex. 2001 ¶ 129). A drawing from the Preliminary Response (*id.* at 35 (citing Ex. 2001 ¶ 129)) showing Patent Owner’s argument is reproduced below.



On the left is a block diagram labeled '602 Patent and showing a “User Input Section” above both an “Engine” (lower left) and “Battery” (lower right). On the right is a block diagram labeled Gettemy FIG. 4 which has “Display 105” (upper left) next to “Battery” (upper right) and beneath both of them is the “Engine.” *See id.*

Patent Owner also points to Gettemy Figure 8A, which Patent Owner argues does not show the arrangement set forth in limitation 1e:

As in Figure 4, the example in Figure 8A does not show the alleged user input section (touch screen 105, highlighted in red by Petitioner in Figure 8A above), to be located both *above* and *adjacent* both a battery (highlighted in green by Petitioner in Figure 8A above) and any alleged engine section (highlighted in blue by Petitioner in Figure 8A above). Ex. 2001, ¶ 133. Instead, Figure 8A depicts that the alleged user input section 105 is not located both *above* and *adjacent* the battery 820. Ex. 2001, ¶ 133. Indeed, Petitioner’s annotation of Figure 8A clearly shows that the alleged user input section (red) is not both *above* and *adjacent* the battery (green). *Id.*

Prelim. Resp. 36–37. A drawing from the Preliminary Response (*id.* at 37 (citing Ex. 2001 ¶ 134)) showing Patent Owner’s argument is reproduced below.



On the left is a block diagram labeled '602 Patent and showing a “User Input Section” on above both an “Engine” (lower left) and “Battery” (lower right). On the right is a block diagram labeled Gettemy FIG. 8A which has “Display 105” (upper left) next to “Battery” (upper right) and a “Flexible Circuit” beneath only “Display 105.” *See id.*

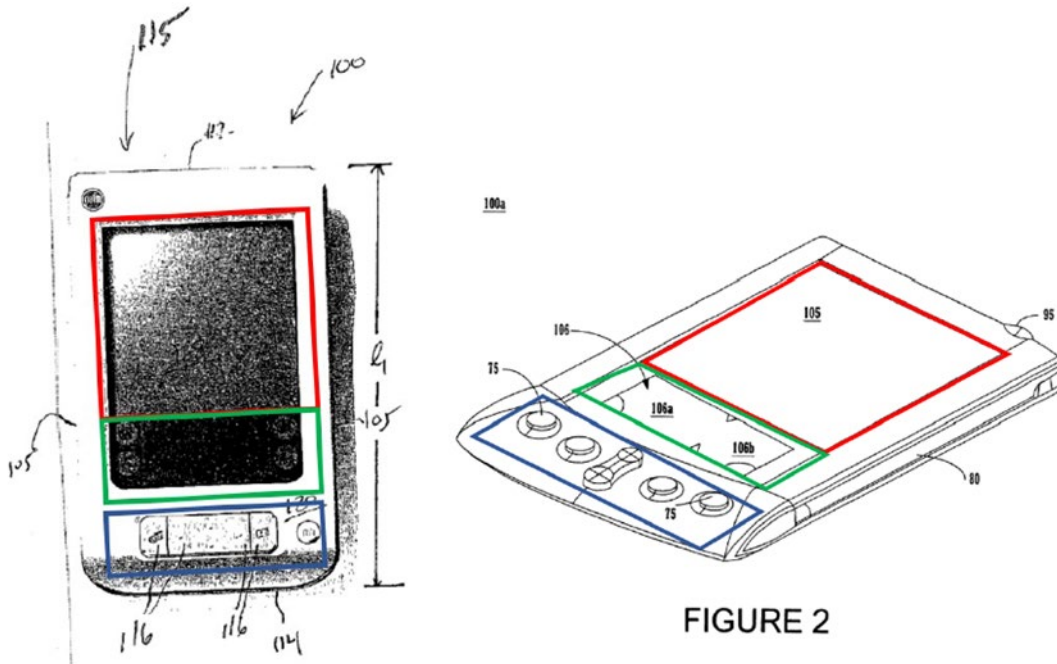
We agree that Patent Owner has accurately described the placement of “display device 105” in both Gettemy Figure 4 and Gettemy Figure 8A. And if Petitioner had mapped *only* display device 105 to the user input section, Patent Owner would have rebutted Petitioner’s argument. However, Petitioner did not argue that the user input section is made up of only display device 105. Instead, Petitioner persuasively argues that the user input section includes not only display device 105, but also the alphanumeric input area and the programable buttons:

Gettemy teaches a user input section that is substantially similar to Nguyen’s user input section, including a touch screen, an alphanumeric input area (e.g., a handwriting recognition pad), and programmable buttons. Ex-1007, 5:1-25; Visser, ¶ 294.

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For example, Nguyen and Gettemy teach substantially similar user input sections. Nguyen teaches a contact sensitive display, an alphanumeric input area (e.g., a handwriting recognition area), and application buttons. Ex-1004, ¶ 22. Similarly, Gettemy teaches a touch screen, an alphanumeric input area (e.g., a handwriting recognition pad), and programmable buttons. Ex-1007, 5:1-25. Below, the touch

screens in both devices are highlighted in red, alphanumeric input areas in green, and buttons in blue. Visser, ¶ 298.



Pet. 96, 98–99. The quotation above includes the annotated version of Nguyen Figure 1 and Gettemy Figure 2 described above.<sup>19</sup> And, as discussed above, when considering the entirety of the user input section, including alphanumeric input area 106, Gettemy teaches the specific arrangement set forth in limitation 1e.

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<sup>19</sup> Nguyen Figure 1 “is a frontal view of a handheld computer.” Ex. 1004 ¶ 9. Figure 1 above has been annotated to identify “a touch screen (highlighted in red), an alphanumeric input area (highlighted in green), and application buttons (highlighted in blue).” Ex. 1003 ¶ 55. Gettemy Figure 2 “is a top side perspective view of an exemplary portable computer system.” Ex. 1007, 3:21–22. As with the annotated figure from Nguyen above, Figure 2 above has been annotated to identify a touch screen (highlighted in red), an alphanumeric input area (highlighted in green), and application buttons (highlighted in blue). Ex. 1003 ¶ 298.

There are some places where Petitioner focused only on the display device 105 portion of the user input section. *See, e.g., id.* at 96–97. However, that does not erase the clear arguments mapping the user input section to display screen 105, alpha numeric input area 106, **and** the programable buttons 75. Patent Owner’s arguments do not address that mapping.

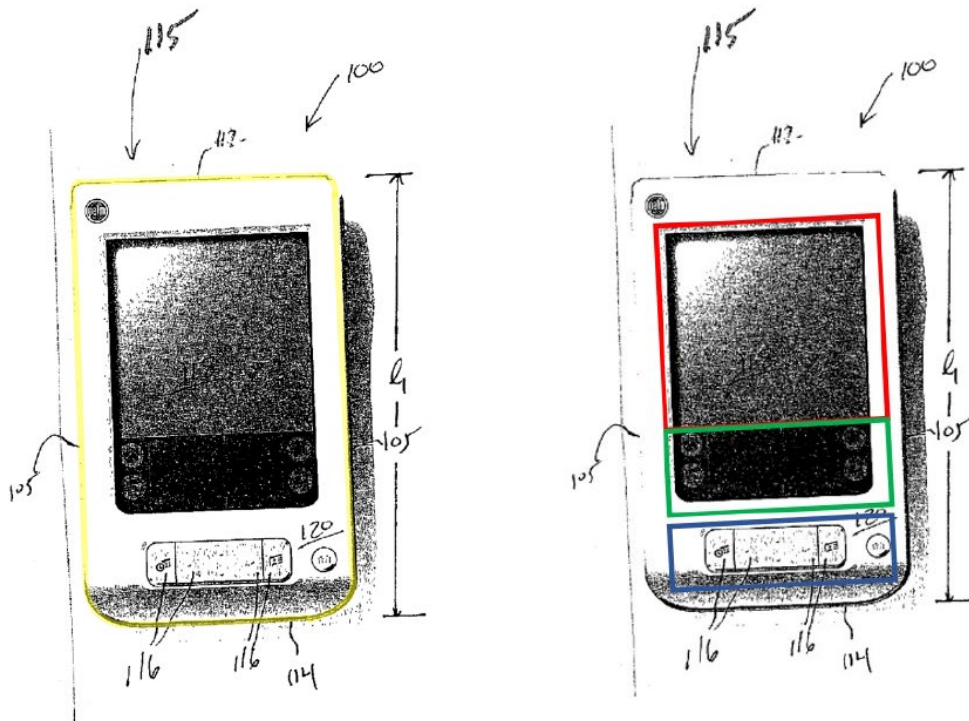
g) *Limitation 1f: Battery and Engine Section Housed in the Housing*

Claim 1 further recites “wherein the battery and engine section are housed in the housing and the user input is located in an opening between said exterior lateral sides of said one piece housing of the portable electronic device.” Ex. 1001, 6:32–35. Petitioner argues that Nguyen, Zadesky, and Gettemy teach limitation 1f. *See* Pet. 24–27, 51–53, 100.

After reviewing Petitioner’s arguments and information regarding limitation 1f, including the Visser Declaration, which are not addressed by Patent Owner at this stage, we are persuaded that Petitioner sufficiently demonstrates, for purposes of this Decision, that Nguyen and the combination of Nguyen and Gettemy teach limitation 1f. Our specific preliminary findings are set forth below.

Nguyen teaches that the internal components, such as the battery and the engine portion, are housed inside the housing. *See* Ex. 1004 ¶ 27; Ex. 1003 ¶ 60. Those components require protection, and a person having ordinary skill in the art would have placed them within the housing in order to achieve the necessary protection. *See* Ex. 1003 ¶ 60. That is also consistent with Gettemy, which shows the battery and engine portion within the housing. Ex. 1007, Fig. 4; Ex. 1003 ¶ 302.

Additionally, Nguyen teaches an opening located between the lateral sides of the housing. Ex. 1004, Figs. 1–2; Ex. 1003 ¶ 61. This is shown in the annotated versions of Nguyen Figure 1 (Ex. 1003 ¶ 61) reproduced below.



Nguyen Figure 1 “is a frontal view of a handheld computer configured under an embodiment of the invention” (Ex. 1004 ¶ 9), and the drawing above is of two different annotated versions of Nguyen Figure 1. The left figure has been annotated in yellow to show that opening between the exterior lateral sides. Ex. 1003 ¶ 61. The figure on the right has been annotated to show the touch screen (red), alphanumeric input area (green), and buttons (blue), which combined form the user input section.<sup>20</sup>

<sup>20</sup> Because we find that Nguyen and Gettemy teach this limitation, we do not need to address whether Zadesky also teaches the limitation.

h) *Conclusion Regarding Claim 1*

Based on the current record there is a reasonable likelihood that Petitioner will prevail in determining claim 1 is unpatentable as obvious in view of Nguyen, Zadesky, Oda, and Gettemy.

6. *Analysis of Claims 2–36*

Because Petitioner demonstrates a reasonable likelihood of success in proving that at least one claim of the '602 patent is unpatentable, we institute on all grounds and all claims raised in the Petition. *See* 37 C.F.R.

§ 42.108(a). Therefore, at this stage of the proceeding, it is not necessary for us to provide an assessment of every challenge raised by Petitioner, especially, as in this case, when Patent Owner does not provide separate arguments as to those claims. Those challenges, in our view, are best left for trial after full development of the record.

G. *Obviousness over Nguyen*

Petitioner argues that claims 1, 11, 12, and 15 would have been obvious over Nguyen. Pet. 13–32. Because Petitioner demonstrates a reasonable likelihood of success in proving that at least one claim of the '602 patent is unpatentable, we institute on all grounds and all claims raised in the Petition. *See* 37 C.F.R. § 42.108(a). Therefore, at this stage of the proceeding, it is not necessary for us to provide an assessment of every challenge raised by Petitioner. However, in order to provide guidance to the parties, we address Patent Owner's arguments regarding Nguyen that were not previously addressed above in Section II.F.<sup>21</sup>

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<sup>21</sup> We addressed Patent Owner's argument regarding limitation 1d in Section II.F.5.e, *supra*.

Specifically, Petitioner argues that limitation 1e would have been obvious to a person having ordinary skill in the art over Nguyen. *See* Pet. 22–24. According to Petitioner, Nguyen teaches that the user interface section is both adjacent to and above the engine section and the battery section. *Id.* at 23–24. Specifically, Petitioner argues that “Nguyen teaches that the user input section, including the touchscreen, alphanumeric input area, and buttons, are located on the front face (Ex-1004, ¶¶ 21-22, Fig. 1) above and adjacent to the internal components of the device, which include the engine section and battery (Ex-1004, ¶¶ 34-35, Fig. 4); [Ex. 1003] ¶¶ 56-57.” *Id.* at 23. Petitioner further argues that

it would have been obvious for the input section to be located above and adjacent to the engine section and battery because Nguyen teaches a compact form factor for its handheld device, where the internal components such as the engine and battery would have been in close proximity to the user input section on the front face.

*Id.* at 23–24 (citing Ex. 1004 ¶ 6; Ex. 1003 ¶¶ 58–59).

Based on the current record, we question the sufficiency of Petitioner’s evidence. Nguyen paragraphs 34 and 35 describe Nguyen Figure 4, which is a “block diagram of a handheld computer.” Ex. 1004 ¶¶ 12, 34; *see also id.* ¶ 35. Based on the current record, nothing in those paragraphs suggests that the block diagram is intended to show the relative placement of the components. *See* Ex. 1004 ¶¶ 34–35; Ex. 2001 ¶ 81. To the contrary, an examination of what is shown in Nguyen Figure 4, which is reproduced below, demonstrates that the figure is not intended to be a representation of the relative position of the components; instead, it is simply a conceptual drawing that includes various components. *See* Ex. 2001 ¶ 82.

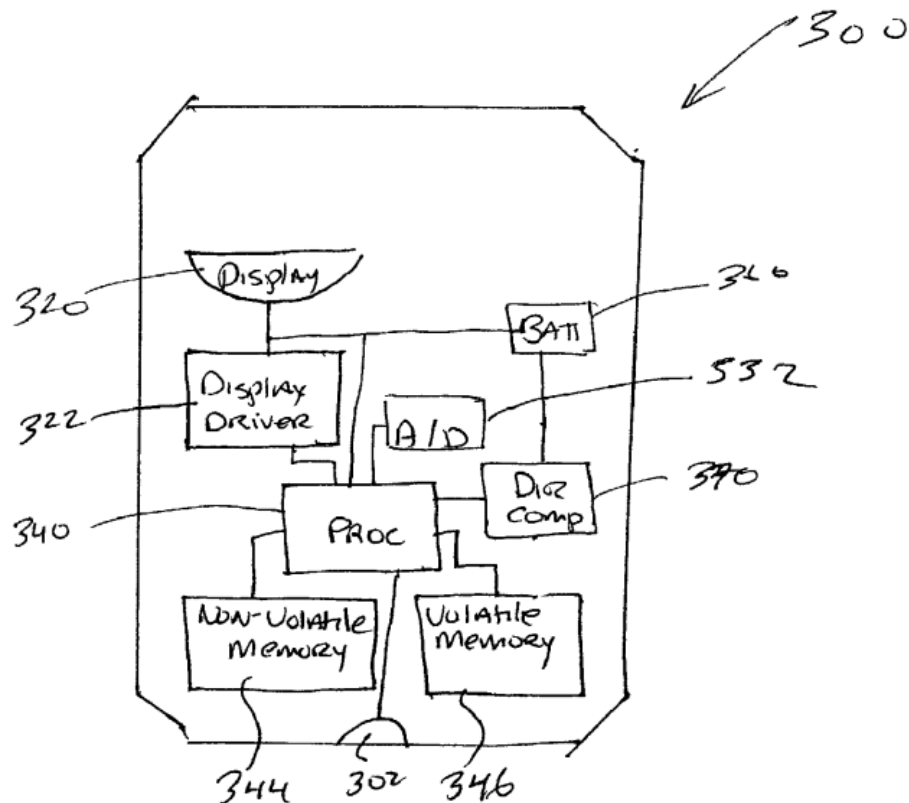


FIG. 4

Nguyen Figure 4 is a “block diagram of a handheld computer.” Ex. 1004 ¶¶ 12, 34. Nguyen Figure 4 shows various components including display 320, processor 340, and battery 360. Ex. 1004 ¶¶ 34–35, Fig. 4. At most, Nguyen Figure 4 shows how various components are connected to each other; but it does not show their relative placement, including whether components are adjacent or above each other.

We further question whether the limitation would have been obvious over the teachings of Nguyen. For this proposition, Petitioner relies solely on Nguyen paragraph 6 and the testimony of Dr. Visser. *See* Pet. 23–24. Nguyen paragraph 6 states as follows:

With technological advancements, handheld computers and devices are increasingly integrating functions that used to be

performed by entirely different devices. *The small size of the handheld computers are required to accommodate additional hardware components that provide the additional functionalities.*

Ex. 1004 ¶ 6 (emphasis added). And Dr. Visser testifies as follows:

58. Additionally, it would have been obvious for the input section to be located above and adjacent to the engine section and battery because Nguyen teaches a compact form factor for its handheld device, where the internal components such as the engine and battery would have been in close proximity to the user input section on the front face. *See* Ex-1004, ¶ 6. Given the tight space constraints of a handheld device and the fact that Nguyen shows and describes a device with an input section covering nearly all of the front surface, it is obvious that the user input section is located above and adjacent to engine section and battery.

59. Therefore, Nguyen teaches limitation [1e].

Ex. 1003 ¶¶ 58–59.

Although Nguyen teaches the need for all of the components to fit within a handheld computer, it is silent as to how the components should be placed. And Dr. Visser’s testimony is conclusory without sufficiently explaining his logical leap from the need to have components in close proximity to a teaching of the specific arrangement recited in limitation 1e. *See* Ex. 1003 ¶ 58. We question whether simply identifying a problem and an *ipse dixit* solution to that problem is sufficient to show obviousness.

#### *H. Obviousness over Nguyen, Zadesky, and Oda*

Petitioner argues that claims 1–7, 9–13, 15–28, 30–34, and 36 would have been obvious over Nguyen, Zadesky, and Oda. Pet. 33–89. As discussed above in Section II.G., in order to provide guidance to the parties, we address Patent Owner’s arguments that were not previously addressed above in Section II.F.

Petitioner argues that Zadesky reinforces Nguyen’s teaching regarding limitation 1e. *See* Pet. 48–50. Based on the argument, it appears that Petitioner’s arguments are directed solely to the use of touch screens and buttons located on the front surface of the device. *See id.* at 49. Petitioner does not discuss how the various internal components in Zadesky are arranged. *Id.* at 48–50. That is, the Petition is silent as to the location of an engine portion and a battery portion. *Id.* Accordingly, based on the current record, we question whether Zadesky provides any teaching that the user input section would be both above and adjacent to both the battery section and the engine section.

### III. CONCLUSION

Following § 314, we have determined that the totality of the information presented at this stage shows there is a reasonable likelihood that Petitioner would prevail with respect to at least one of the claims challenged in the Petition, and we institute on all grounds raised and all claims challenged in the Petition.

Our factual findings, conclusions of law, and determinations at this stage of the proceeding are preliminary, and based on the evidentiary record developed thus far. This is not a final decision as to the patentability of claims for which *inter partes* review is instituted. Our final decision will be based on the record as fully developed during trial.

### IV. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that, pursuant to 35 U.S.C. § 314(a), an *inter partes* review is instituted for claims 1–36 of the ’602 patent on the unpatentability grounds asserted in the Petition; and

IPR2024-00799  
Patent 9,473,602 B2

FURTHER ORDERED that pursuant to 35 U.S.C. § 314(c) and 37 C.F.R. § 42.4, notice is hereby given of the institution of a trial, which commences on the entry date of this decision.

IPR2024-00799  
Patent 9,473,602 B2

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