

No. 17-

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IN THE  
**Supreme Court of the United States**

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B/E AEROSPACE INC.,

*Petitioner,*

*v.*

C&D ZODIAC INC.,

*Respondent.*

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ON PETITION FOR A WRIT OF CERTIORARI TO THE UNITED  
STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

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**PETITION FOR A WRIT OF CERTIORARI**

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**QUESTIONS PRESENTED**

The instant petition for *certiorari* presents the following two questions:

1. Whether inter partes review—an adversarial process used by the Patent and Trademark Office (PTO) to analyze the validity of existing patents—violates the Constitution by extinguishing private property rights through a non-Article III forum without a jury.
2. Whether an obviousness analysis involving objective indicia of non-obviousness is a one-step legal conclusion weighing all *Graham* factors on an equal footing, or a two-step process that includes an initial determination, or *prima facie* case, of obviousness that is only subsequently balanced against the weight of the objective indicia of non-obviousness.

**PARTIES TO THE PROCEEDINGS**

All parties are identified in the caption of this petition. Petitioner here and appellant below is B/E Aerospace, Inc. (“B/E”). Respondent here and cross-appellant below is C&D Zodiac, Inc. (“Zodiac”).

**RULE 29.6 STATEMENT**

All parent corporations and publicly held companies that own 10% or more of Petitioner B/E’s stock: Rockwell Collins, Inc.

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## OPINIONS BELOW

The final decision of the Patent Trial and Appeal Board is available at *C & D Zodiac, Inc. v. B/E Aerospace, Inc.*, IPR2014-00727, 2015 WL 6470951 (P.T.A.B. Oct. 26, 2015). The decision of the Court of Appeals for the Federal Circuit is available at *B/E Aerospace, Inc. v. C & D Zodiac, Inc.*, 709 F. App'x 687 (Fed. Cir. 2017).

## JURISDICTION

The Court of Appeals for the Federal Circuit entered judgment on October 3, 2017. B/E timely filed a petition for rehearing *en banc* on November 2, 2017, which was denied in a *per curiam* order on December 7, 2017. B/E's petition for *certiorari* is thus due on or before March 7, 2018. This Court's jurisdiction is invoked under 28 U.S.C. § 1254(1).

## CONSTITUTIONAL AND STATUTORY PROVISIONS INVOLVED

Article III, Section 1 of the United States Constitution provides:

The judicial Power of the United States, shall be vested in one supreme Court, and in such inferior Courts as the Congress may from time to time ordain and establish. The Judges, both of the supreme and inferior Courts, shall hold their Offices during good Behavior, and shall, at stated Times, receive for their Services a Compensation which shall not be diminished during their Continuance in Office.

The Seventh Amendment of the United States Constitution provides:

In Suits at common law, where the value in controversy shall exceed twenty dollars, the right of trial by jury shall be preserved, and no fact tried by a jury, shall be otherwise reexamined in any Court of the United States, than according to the rules of the common law.

The statutory provisions defining and creating inter partes review are codified as 35 U.S.C. 311-319, set forth in full in Appendix D to this petition.

The statute defining obviousness for the challenged patent is 35 U.S.C.103(a) (pre-AIA), set forth in full below:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

### STATEMENT OF THE CASE

This appeal stems from a long-running dispute between B/E Aerospace, Inc., and Zodiac Aerospace. The dispute relates to B/E's patent on innovative, space-saving aircraft lavatory structures. B/E sued Zodiac for infringement of U.S. Patent 8,590,838 in 2014. Zodiac petitioned for IPR shortly thereafter, resulting in the Board's Final Written Decision on October 26, 2015, invalidating certain claims of B/E's patent and upholding others. B/E appealed portions of the Board's decision that canceled certain claims. On October 3, 2017, a panel of this Court affirmed the Board in all respects. B/E petitioned for rehearing *en banc*, which was denied in a *per curiam* order on December 7, 2018.

### REASONS FOR GRANTING THE PETITION

This case presents the same question that this Court will resolve in *Oil States*: whether adversarial processes, such as IPR, used by the Patent and Trademark Office (PTO) to analyze the validity of issued patents, violate the Constitution by extinguishing private property rights through a non-Article III forum without a jury. Because this Court will shortly address the unconstitutional nature of IPR, this petition should be held pending resolution of that case. Should this Court ultimately agree with B/E and the petitioner in *Oil States*, the Court should grant B/E's petition and reverse the decisions below.

Moreover, substantial confusion persists regarding the proper role of objective evidence of non-obviousness in an obviousness analysis, including in

conflicting panel decisions from the Federal Circuit. This Court has consistently held that objective evidence of non-obviousness must be treated on an equal footing as the other *Graham* obviousness factors. Most Federal Circuit panels have also held that it is error to first reach an initial determination of obviousness, and only subsequently, in a second step, treat the objective evidence as “rebuttal” evidence. Yet, despite these rulings, an improper two-step practice continues at the Federal Circuit and sows confusion in lower courts and the PTO. Indeed, several Federal Circuit judges have noted this important issue, expressly calling for additional review to address it. Here, both the PTAB and the Federal Circuit decision improperly applied a two-step analysis rather than considering objective indicia equally with other obviousness factors. This case therefore presents the opportunity for the Supreme Court to resolve this important issue and provided much needed clarity.

**I. THIS PETITION RAISES THE SAME QUESTION AS *OIL STATES***

**A. The Supreme Court’s decision to grant Certiorari in *Oil States***

On June 12, 2017, the Supreme Court granted certiorari in *Oil States Energy Services, LLC v. Greene’s Energy Group, LLC* to consider whether adversarial proceedings used by the Patent Office to revoke issued patents violate the Constitution by extinguishing private property rights through a non-Article III forum without a jury. 16-00712 QP Report, 137 S. Ct. 2239 (2017). Oral argument was heard before this Court on November 27, 2017. The present case arises from and implicates the same issue as *Oil*

*States*. In the event that this Court determines in *Oil States* that adversarial invalidity proceedings at the Patent Office are unconstitutional, this Court should the grant B/E's petition and reverse the decisions below.

**B. An extra-judicial administrative proceeding, such as IPR, that extinguishes private property rights outside of an Article III forum and without a jury is unconstitutional**

As explained in detail in briefs filed by the petitioner and supporting amici in *Oil States*, the PTO's adversarial invalidity proceedings violate Article III of the Constitution and the Seventh Amendment.

**1. Patents are private property rights**

The Supreme Court long ago established that patent rights are the private property rights of a patent owner. “[A patent] confers upon the patentee an exclusive property in the patented invention which cannot be appropriated or used by the government itself, without just compensation, any more than it can appropriate or use without compensation land which has been patented to a private purchaser.” *Horne v. Dep’t of Agric.*, 135 S. Ct. 2419, 2427 (2015) (quoting *James v. Campbell*, 104 U.S. 356, 358 (1882)); see also *Brown v. Duchesne*, 60 U.S. 183, 197 (1857) (“[B]y the laws of the United States, the rights of a party under a patent are his private property.”) See also, e.g., 35 U.S.C. § 261 (“Subject to the provisions of this title, patents shall have the attributes of personal property.”) Because

patents confer private property rights, a patent cannot be extinguished without the protections of an Article III forum and a jury.

**2. Congress cannot assign adjudication of private rights to a non-Article III forum**

Article III of the U.S. Constitution provides that “[t]he judicial Power of the United States, shall be vested in one supreme Court, and in such inferior Courts as the Congress may from time to time ordain and establish.” U.S. Const. art. III, § 1. In general, the judicial power is exclusive to the judiciary; Congress may not “withdraw from judicial cognizance any matter which, from its nature, is the subject of a suit at the common law, or in equity or admiralty.” *Stern v. Marshall*, 564 U.S. 462, 484 (2011) (quoting *Dem ex dem. Murray v. Hoboken Land & Improvement Co.*, 59 U.S. 272, 284 (1856)). It is the Courts, under Article III, that adjudicate private disputes, not administrative tribunals. Only an “Article III judge[ ] in [an] Article III court[ ]” may exercise the judicial power to decide a case that is the “subject of a suit at the common law, or in equity, or admiralty,” *Stern*, 564 U.S. at 484 (quoting *Murray*, 59 U.S. at 284).

This Court has created a limited exception to that general rule for adjudication of “public rights,” which Congress may assign to administrative tribunals without running afoul of the Constitution. *Northern Pipeline Constr. Co. v. Marathon Pipe Line Co.*, 458 U.S. 50, 69 (1982). But, as the briefs for the petitioner and amici in *Oil States* demonstrate, patent rights are not “public rights” and so do not fall within that narrow exception. The administrative invalidity

proceedings created by the AIA thus violate Article III by wresting the judicial power to nullify private patent rights from the courts and vesting it in the PTO.

**3. The Seventh Amendment guarantees B/E a right to a jury on issues related to its private property rights**

Moreover, the Seventh Amendment provides that “[i]n Suits at common law, where the value in controversy shall exceed twenty dollars, the right of trial by jury shall be preserved.” U.S. Const. amend. VII. Congress thus “lacks the power to strip parties contesting matters of private right of their constitutional right to a trial by jury.” *Granfinanciera, S.A. v. Nordberg*, 492 U.S. 33, 52 (1989). “[T]o hold otherwise would be to permit Congress to eviscerate the Seventh Amendment’s guarantee by assigning to administrative agencies or courts of equity all causes of action not grounded in state law, whether they originate in a newly fashioned regulatory scheme or possess a long line of common-law forebears.” *Id.* at 52.

Accordingly, because the rights granted by a patent are private in nature, IPR proceedings violate the Seventh Amendment by depriving patent owners of their right to a jury trial with respect to patent validity challenges. This is a second, independent basis for finding the IPR process unconstitutional, in addition to the constitutional defect under Article III.

This Court should reverse the PTO’s patentability ruling, since it is an unconstitutional action by an administrative agency outside the presence of a jury.

## II. THIS COURT SHOULD CLARIFY THE PROPER ROLE OF OBJECTIVE INDICIA OF NON-OBVIOUSNESS IN AN OBVIOUSNESS ANALYSIS

In *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1 (1966), this Court set forth the four factors that must be considered in an obviousness analysis. These four factors are: 1) “the scope and content of the prior art;” 2) “differences between the prior art and the claims at issue;” 3) “the level of ordinary skill in the pertinent art;” and 4) “[s]uch secondary considerations as commercial success, long felt but unsolved needs, failure of others, etc.” *Id.* at 17. Indeed, with regard to the fourth factor (often referred to as “secondary considerations” or “objective indicia on nonobviousness”) the Court further explained that “[a]s indicia of obviousness or nonobviousness, these inquiries may have relevancy.” *Id.* at 18. In 2007, this Court again stressed the “objective” nature of the obviousness analysis mandated by the *Graham* factors, stating: “The analysis is objective,” and “the factors continue to define the inquiry that controls.” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 407 (2007). This Court has never suggested that one of its four *Graham* factors carries less weight than any other. Rather, this Court consistently defined each obviousness factor on an equal footing.

Despite many Federal Circuit panel decisions touching on the proper role of the fourth *Graham* factor in an obviousness analysis, the Federal Circuit has never directly addressed the issue *en banc*. This has led to inconsistent decisions from various Federal Circuit panels. This Court should now take up the



question of the proper role of objective indicia to clarify these inconsistent Federal Circuit opinions. Specifically, this Court should rule, consistent with its prior decisions, that objective indicia of non-obviousness stand on an equal footing with the other three *Graham* obviousness factors. As such, it is error to conduct the analysis in two steps, first finding an initial, or *prima facie*, case of obviousness, and only then balancing that *prima facie* case of obviousness against objective indicia as mere rebuttal evidence. Once clarified, this Court should reverse the opinion of the PTAB below, which treated B/E's substantial objective indicia improperly and applied the inappropriate two-step analysis.

**A. In *Apple v. Samsung (Fed. Cir. en banc)*, a concurrence identified that certain panels of the Federal Circuit continue to consider objective indicia as a second step to be considered only after a preliminary obviousness conclusion**

The Federal Circuit's last *en banc* discussion touching on this obviousness issue was *Apple v. Samsung* in 2016. *Apple* was taken up *en banc* to address a different issue, specifically to clarify that the appellate court will limit its review to the facts and arguments presented in the record, with appropriate factual deference. *Apple Inc. v. Samsung Elecs. Co.*, 839 F.3d 1034, 1039 (Fed. Cir. 2016). The *en banc* decision was contentious, resulting in five separate opinions (a majority, a concurrence, and three dissents). In order to reach an ultimate conclusion, the *en banc* Federal Circuit applied

existing obviousness law, and did not resolve inconsistencies in the law noted by the judges because they were not briefed below. *Id.* at 1039 (“The dissents, and Judge Dyk’s dissent in particular, raise big questions about how aspects of the obviousness doctrine ought to operate. But no party—at the panel or the petition for rehearing *en banc* stage—invited this court to consider changing the existing law of obviousness. We did not take this case *en banc* to decide important legal questions about the inner workings of the law of obviousness. We have applied existing obviousness law to the facts of this case.”)

But the majority in *Apple* did tangentially address the role of objective indicia. The majority, stating that it applied existing law, explained: “[a] determination of whether a patent claim is invalid as obvious under § 103 requires consideration of all four Graham factors, and it is error to reach a conclusion of obviousness until all those factors are considered.” *Apple*, 839 F.3d at 1048. “This requirement is in recognition of the fact that each of the *Graham* factors helps inform the ultimate obviousness determination.” *Id.* The majority then considered each of the four *Graham* factors in detail before reaching any obviousness decision; it did not rely on any initial, or *prima facie*, obviousness determination. *Id.* at 1058.

However, a dissenting opinion noted the Federal Circuit’s inconsistent panel decisions and a substantial dispute between the majority and dissents, urging that the issue should be taken up directly: “It seems to me that the court disagrees over the role objective indicia play in the court’s analysis

of the ultimate determination of obviousness. If so, we should candidly address this issue *en banc*.” *Apple*, 839 F.3d at 1089 (Reyna, J., dissenting). This dissenting opinion discussed Federal Circuit panel decisions that supported the majority approach, while acknowledging a separate dissenting opinion that included “forceful argument that secondary considerations of non-obviousness carry little weight where strong evidence of obviousness exists.” *Id.* Another dissenting opinion appeared to approve of the two-step, *prima facie*, approach and would have held that “when the *prima facie* case of obviousness is strong, secondary considerations carry little weight.” *Id.* at 1080 (Dyk, J., dissenting).

The *Apple* decision did not attempt to resolve these disagreements, which has led to continued inconsistent and improper analysis of objective indicia and substantial confusion in district and appellate courts, and the PTO. As noted by one of the dissenting opinions, the main issue that remains unresolved is “whether an obviousness analysis involving secondary considerations (or objective indicia of non-obviousness) is a one- or two-step process.” *Id.* at 1089 (Reyna, J., dissenting).

**B. This court should reaffirm its precedent holding that objective indicia of non-obviousness are on an equal footing with the other *Graham* obviousness factors**

This Court, consistent with its prior precedent, should reaffirm the rule that considers objective indicia of non-obviousness at the same time and manner as the other factors. Such a rule comports

with Supreme Court precedent. In *Graham v. John Deere*, 383 U.S. 1, 17 (1966), the United States Supreme Court held that “[s]uch secondary considerations as commercial success, long felt but unsolved needs, failure of others, etc., might be utilized to give light to the circumstances surrounding the origin of the subject matter sought to be patented,” and that these indicia are one of the four factual obviousness inquiries. *Graham*, 383 U.S. at 36.

Indeed, the *Graham* court recognized the danger of hindsight bias and the powerful ability of objective evidence to ameliorate this effect. *Id.* at 18. Citing influential scholarly writings about the dangers of hindsight analysis, the Supreme Court observed that objective considerations serve to “resist the temptation to read into the prior art the teachings of the invention in issue.” 383 U.S. at 36. Accordingly, a fact finder must withhold judgment on an obviousness challenge until it considers all relevant evidence, including that relating to the objective considerations.

Similarly, in *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398 (2007), the Supreme Court described the obviousness inquiry as “expansive and flexible” and noted that *Graham* “invite[s] the courts, where appropriate, to look at any secondary considerations that would prove instructive.” *KSR*, 550 U.S. at 415. Fundamentally, objective indicia of non-obviousness are a significant part of the obviousness analysis, and cannot be relegated to a secondary role.

Consistent with Supreme Court precedent, an oft-cited panel decision of the Federal Circuit has also ruled that objective indicia are not a secondary part

of the obviousness analysis but must be considered on an equal footing as the other three factors. In *In re Cyclobenzaprine*, the Federal Circuit reversed a decision of a district court that had treated objective indicia as mere rebuttal evidence. 676 F.3d at 1080. In doing so, the Court evaluated the propriety of treating objective indicia in an obviousness analysis as “a two-part, burden-shifting inquiry.” *Id.* at 1080 n.7. The Court held that “[s]uch a reading disregards our own precedent and is inconsistent with Supreme Court case law, including very recent case law.” *Id.* at 1080. The Court ruled that “a fact finder must consider all evidence of obviousness and nonobviousness before reaching a determination.” *Id.* at 1077.

Certain Federal Circuit panels have since followed *Cyclobenzaprine*.<sup>1</sup> On the other hand, other Federal Circuit panels, and lower district courts, have continued to apply the improper, two-step obviousness approach.<sup>2</sup> Indeed, “[o]ne commentator

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<sup>1</sup> See, e.g., *In re Magnum Oil Tools Int’l, Ltd.*, 829 F.3d 1364, 1376 (Fed. Cir. 2016) (“Applying a burden-shifting framework here would introduce unnecessary confusion because the ultimate burden of persuasion of obviousness must remain on the patent challenger and ‘a fact finder must consider all evidence of obviousness and nonobviousness before reaching a determination.’”); *InTouch Techs., Inc. v. VGO Commc’ns, Inc.*, 751 F.3d 1327, 1352 (Fed. Cir. 2014); *Leo Pharma. Prods., Ltd. v. Rea*, 726 F.3d 1346, 1357–58 (Fed. Cir. 2013).

<sup>2</sup> See, e.g., *Cubist Pharms., Inc. v. Hospira, Inc.*, 805 F.3d 1112, 1130 (Fed. Cir. 2015) (“We sustain the district court’s determination that the secondary consideration evidence did not overcome the showing of obviousness based on the prior art.”); *Novo Nordisk A/S v. Caraco Pharm. Labs., Ltd.*, 719 F.3d 1346, 1353–54 (Fed. Cir. 2013); *Intercontinental Great Brands LLC v. Kellogg N. Am. Co.*, 869 F.3d 1336, 1356 (Fed. Cir. 2017); *Bayer*

has stated that ‘*Cyclobenzaprine* was unrealistic’ if it intended to ban district courts from making *prima facie* findings of obviousness prior to consideration of objective indicia.” *Intercontinental Great Brands LLC v. Kellogg N. Am. Co.*, 869 F.3d 1336, 1357 (Fed. Cir. 2017) (Reyna, J., Dissenting) (*citing* Chisum on Patents, § 5.05). The PTAB, bound to follow Federal Circuit precedent, also often applies the improper *prima facie* obviousness approach.<sup>3</sup>

Several Federal Circuit judges have opined that legal inconsistencies continue to exist after *Cyclobenzaprine*, which this Court should now resolve. *See, e.g., Intercontinental Great Brands*, 869 F.3d at 1357 (Reyna, J., dissenting) (“Although this court highlighted the dangers associated with the

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*Pharma AG v. Watson Labs., Inc.*, 183 F.Supp.3d 579, 589 (D. Del. 2016) (“Under relevant law, once a *prima facie* case of obviousness has been established, the burden then shifts to the applicant to present evidence of secondary considerations of non-obviousness to overcome this *prima facie* showing.”); *Bristol-Myers Squibb Co. v. Teva Pharms. USA, Inc.*, 923 F.Supp.2d 602, 675 (D. Del. 2013); *Hitkansut LLC v. United States*, 127 Fed.Cl. 101, 113 (2016) (stating that the patent owner “incorrectly assumes that secondary considerations are part of [the alleged infringer’s] burden in proving obviousness. Instead, evidence of secondary considerations is in the nature of rebuttal evidence. . . .”).

<sup>3</sup> *See, e.g., Volkswagen, Inc. v. Emerachem Holdings LLC*, No. IPR2014-01556, paper 57 at 64 (Jan. 22, 2016) (“We decline to give much weight to Patent Owner’s long-felt need and commercial success evidence. When that evidence is weighed vis-à-vis the *prima facie* case of obviousness, we believe the balance favors the *prima facie* case.”); *LKQ Corp. v. Clearlamp, LLC*, No. IPR2013-00020, paper 73 at 30 (Mar. 27, 2014) (“For the foregoing reasons, we conclude that, on balance, the strong evidence of obviousness outweighs the weak evidence of nonobviousness.”)

prima facie framework in *Cyclobenzaprine*, we have not diligently instructed trial courts to abandon the framework altogether. The time to do so has come.”); *Galderma Labs., L.P. v. Tolmar, Inc.*, 737 F.3d 731, 748 (Fed. Cir. 2013) (Newman, J., dissenting) (“[T]he proper analysis of obviousness under 35 U.S.C. § 103 requires that all evidence relevant to obviousness or non-obviousness be considered, and be considered collectively, without resort to presumptions of prima facie obviousness or burden-shifting.”) The present case will allow the Supreme Court to clarify this important legal issue.

**C. The current case presents the question of whether obviousness analysis is a one- or two-step process**

The current case provides the opportunity to resolve this issue because the PTAB and the Federal Circuit both inappropriately considered obviousness as part of a two-step process, failing to give due regard to objective indicia of non-obviousness. Once this Court clarifies the law, it should reverse the decisions below.

Both the Board and the Federal Circuit below applied an improper analysis. Here, the Board reached its obviousness conclusion before considering B/E’s objective evidence. *See, e.g.*, Appendix B (PTAB Decision) at 54-55 (holding claims 9, 21, and 31 obvious before any consideration of the objective evidence); Appendix A (Federal Circuit Decision) at 24 (“In its Final Written Decision, the Board determined that B/E’s evidence of secondary considerations was insufficient to overcome Zodiac’s prima facie case of obviousness in view of Betts and

that the first group of claims would have been obvious in view of Betts”). And the panel decision also accepted the improper, two-step approach, holding “we see no error in the Board’s ultimate determination of obviousness. The Board weighed what it considered the ‘strong evidence of obviousness’ in view of Betts against the ‘moderate’ evidence of industry praise and the ‘weak’ evidence of copying and commercial success before concluding that the claims would have been obvious.” *Id.* at 34. This, in effect, did exactly what *Cyclobenzaprine* instructs that one cannot do: the Board and the Federal Circuit reached a first view of the “evidence of obviousness,” and only then asked if the objective indicia were sufficient to overcome that view.

If B/E’s objective evidence is “weak” or “moderate,” it is hard to imagine a set of facts that could be considered “strong” objective evidence sufficient to “rebut” an already-reached obviousness conclusion. B/E was barely a participant in the aircraft lavatory market before its ’838 patent. But as soon as it released its commercial embodiment, B/E began “taking the industry by storm.” It was awarded an exclusive contract for all lavatories on all new Boeing 737 aircraft, displacing an entrenched incumbent supplier. The contract is valued at nearly a billion dollars, which is an objectively large number in any context. And only after losing this valuable contract to B/E did Zodiac begin to sell its copycat product. The objective evidence makes clear that B/E’s ’838 patent caused a sea-change in the lavatory market, and Zodiac itself rode the wave.

The Board’s and Federal Circuit’s improper approach led to an improper obviousness conclusion,



as explained at length in B/E's appeal papers, which should be reversed under the correct legal framework for obviousness.

It is imperative that the Courts provide consistent guidance on how to conduct a proper obviousness analysis. Indeed "the notion that objective criteria are considered after a legal prima facie showing is made has taken root like a spreading vine." *Intercontinental Great Brands*, 869 F.3d at 1358 (Reyna, J., dissenting). This vine continues to grow and obscure the proper *Graham* obviousness analysis, leaving confusion and inconsistencies in its wake. This confusion is detrimental to patent owners and the public, and should be clarified. At least one Federal Circuit judge has opined that "[w]e should finish what *Cyclobenzaprine* started and prohibit prima facie findings of obviousness prior to consideration of objective indicia of non-obviousness." *Id.* at 1359 (Reyna, J., Dissenting).

### CONCLUSION

For the foregoing reasons, B/E respectfully submits that its petition for certiorari should be granted. First, B/E's patents were invalidated by an unconstitutional process. If this Court rules in *Oil States* that IPR is unconstitutional, then the decisions below must be reversed. Second, when properly applied, B/E's objective evidence of non-obviousness makes clear that the '838 patent is not obvious.

Dated: March 6, 2018

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**APPENDIX**

**APPENDIX A – Court of Appeals Decision**

NOTE: This disposition is nonprecedential.

**United States Court of Appeals  
for the Federal Circuit**

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**B/E AEROSPACE, INC.,**  
Appellant

v.

**C&D ZODIAC, INC.,**  
Cross-Appellant

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2016-1496, 2016-1497

Appeals from the United States Patent and  
Trademark Office, Patent Trial and Appeal Board in No.  
IPR2014-00727.

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Decided: October 3, 2017

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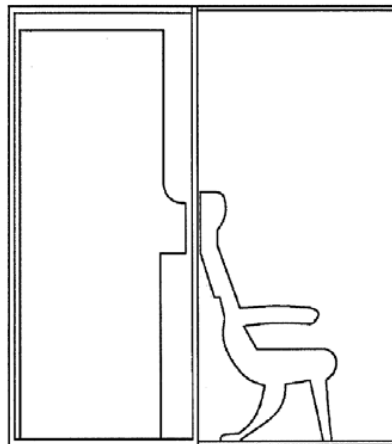
Before WALLACH, CHEN and STOLL, *Circuit Judges*.

STOLL, Circuit Judge.

The present appeal and cross-appeal stem from the Patent Trial and Appeal Board's invalidation of some, but not all, of the challenged claims of B/E Aerospace, Inc.'s U.S. Patent No. 8,590,838 as obvious in an inter partes review proceeding filed by C&D Zodiac, Inc. On appeal, B/E challenges the Board's conclusion that claims 1, 3–7, 9, 10, 12–14, 16–19, 21, 22, 24–29, 31, and 33–37 would have been obvious, and Zodiac cross-appeals the Board's determination that claims 8, 20, 30, and 38 were patentable. We affirm the Board's Final Written Decision in its entirety.

#### BACKGROUND

The '838 patent relates to a space-saving design for aircraft enclosures—including lavatories, closets, and galleys—that increases the value of an aircraft by “allow[ing] the installation of an increased number of passenger seats.” '838 patent col. 2 ll. 6–7, 13–22. In the prior art, an aircraft enclosure's forward wall was typically flat. This configuration is shown in Figure 1, with the lavatory's flat forward wall touching the back of the passenger seat:



**FIG. 1**  
(Prior Art)

The back of the passenger seat abutting the flat forward wall, however, was often not flat, which created a “significant volume[]” of unusable space on the aircraft between the wall and the seat. *Id.* at col. 1 ll. 22–28.

The '838 patent sought to reduce the unusable space by altering the shape of the enclosure's forward wall without meaningfully shrinking the size of the enclosure. This new design is depicted below in Figure 2:

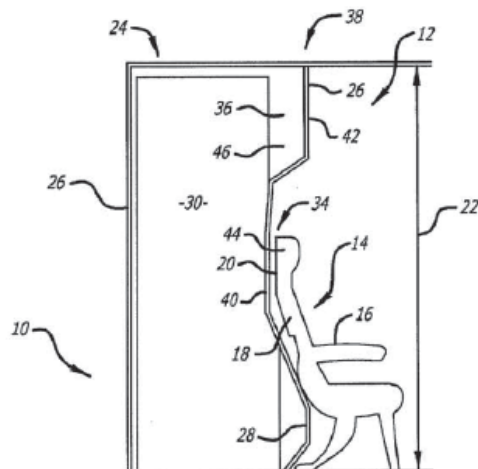


FIG. 2

As can be seen from Figure 2, “[t]he forward wall portion [of enclosure 10] has a shape that is substantially not flat in the vertical plane, and preferably is shaped to include a recess 34 such that the forward wall portion substantially conforms to the shape of the exterior aft surface of the aircraft cabin structure [passenger seat 16].” *Id.* at col. 4 ll. 25–29. The back of the passenger seat can nestle into the recess created by the non-flat wall, thereby permitting the seat to be moved backwards. Airlines can then use the space created by shifting the seat to provide more spacious seating or to increase the number of seats on the plane. J.A. 3630–31 ¶¶ 77–78.

Independent claim 1 and dependent claim 8 recite these improvements:

1. A lavatory for a cabin of an aircraft, the cabin including a passenger seat having an aft portion that is substantially not flat in a vertical plane, the lavatory comprising:

a lavatory stall unit having at least one wall having a forward wall portion, said at least one wall defining an interior lavatory space, and said forward wall portion being configured to be disposed immediately aft of and adjacent to an aircraft cabin passenger seat having an aft portion with an exterior aft surface having a shape that is substantially not flat in a vertical plane; and

wherein said forward wall portion is shaped to substantially conform to the shape of the exterior aft surface of the aft portion of the aircraft cabin passenger seat, and said forward wall portion includes an aft-extending recess in said forward wall portion configured to receive the aft portion of the aircraft cabin passenger seat therein.

....

8. The lavatory of claim 1, wherein said lavatory stall unit has a top, a bottom, a height therebetween, and a middle therebetween, said lavatory stall unit has varying lengths along the height of the lavatory stall unit, and said lavatory stall unit is longer at the top of the lavatory stall unit than at the bottom of the lavatory stall unit.

*Id.* at col. 4 l. 54 – col. 5 l. 3, col. 5 ll. 31–36.



Zodiac petitioned for IPR of claims 1, 3–10, 12–14, 16–22, 24–31, and 33–38. The Board instituted review for all challenged claims but divided them into two groups: 1) obviousness of claims 1, 3–7, 9, 10, 12–14, 16–19, 21, 22, 24–29, 31, and 33–37 in view of U.S. Patent No. 3,738,497 (“Betts”); and 2) obviousness of claims 8, 20, 30, and 38 in view of Betts and the McDonnell Douglas DC-10 Customer Configuration Summary (“Orange Book”). See *C & D Zodiac, Inc. v. B/E Aerospace, Inc.*, IPR2014-727, 2015 WL 6470951, at \*1 (PTAB Oct. 26, 2015) (“Board Decision”). Claim 1 is representative of the first group of claims, and claim 8 is representative of the second group. In its Final Written Decision, the Board determined that B/E’s evidence of secondary considerations was insufficient to overcome Zodiac’s prima facie case of obviousness in view of Betts and that the first group of claims would have been obvious in view of Betts. The Board concluded that the second group of claims was not unpatentable in view of Betts and the Orange Book because Zodiac failed to establish that the Orange Book was a printed publication.

B/E appeals from the Board’s Final Written Decision invalidating the claims in the first group as obvious. Zodiac cross-appeals from the Board’s conclusion that the Orange Book did not qualify as a printed publication. We have jurisdiction pursuant to 35 U.S.C. § 141(c) and 28 U.S.C. § 1295(a)(4)(A).

#### DISCUSSION

On appeal, the parties present four main arguments for our review. B/E’s appeal alleges three errors by the Board in its decision invalidating claims

1, 3–7, 9, 10, 12–14, 16–19, 21, 22, 24–29, 31, and 33–37 in view of Betts.

Zodiac’s cross-appeal argues that the Board erred in concluding that the Orange Book was not a printed publication. We address each argument in turn.

### I.

B/E first alleges that the Board erred in its constructions of “substantially not flat in a vertical plane,” “enclosure unit,” and “lavatory stall unit.” Second, B/E contends that the Board was incorrect in finding claims 1, 3–7, 9, 10, 12–14, 16–19, 21, 22, 24–29, 31, and 33–37 obvious over Betts. Third, B/E claims that the Board failed to appropriately consider its evidence of secondary considerations.

### A.

When construing claims, the Board must apply the broadest reasonable construction in light of the patent’s specification. *Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 2131, 2142 (2016). “We review intrinsic evidence and the ultimate construction of the claim de novo.” *SightSound Techs., LLC v. Apple Inc.*, 809 F.3d 1307, 1316 (Fed. Cir. 2015).

Zodiac’s petition did not provide constructions for “substantially not flat in a vertical plane,” “enclosure unit,” or “lavatory stall unit.” Nonetheless, the Board rejected B/E’s proposed constructions for these three terms in its Final Written Decision, which B/E challenges on appeal.

The Board concluded that the broadest reasonable construction of “a passenger seat having an aft portion that is substantially not flat in a vertical plane” included an aft portion of a passenger seat

“that has a flat shape but which is not within a vertical plane.” *Board Decision*, 2015 WL 6470951, at \*3–4. B/E contends instead that the term should be construed to mean “a back side shape with a back exterior surface that is contoured or substantially non planar in an upright position.” Appellant Br. 19. According to B/E, the Board disregarded the term’s requirement that the shape is “not flat” and only applied the descriptor “not” to the phrase “in a vertical plane.” We disagree. Under the broadest reasonable construction, “not” modifies the entire phrase “flat in a vertical plane.” Thus, the seat’s aft portion must be substantially not flat in a vertical plane, as the rest of the claim term instructs. See, e.g., ’838 patent col. 4 ll. 54–56. Accordingly, the Board correctly concluded that the aft portion of the seat can have a flat shape so long as it is substantially not flat in a vertical plane. We see no error in the Board’s construction.

Next, the Board determined that the terms “enclosure unit” and “enclosure” encompass “lavatories, aircraft closets, and aircraft galleys” and declined to construe “enclosure unit” further. *Board Decision*, 2015 WL 6470951, at \*3. According to B/E, attributing the same meaning to both “enclosure” and “enclosure unit” renders the word “unit” superfluous. To give meaning to the word “unit,” B/E urges us to construe “enclosure unit” as a “single functional space, enclosed on all sides.” Appellant Br. 24.

We decline B/E’s invitation. The Summary of the Invention section explains that the “enclosure unit” can be “a lavatory, an aircraft closet, or an aircraft galley.” ’838 patent col. 2 ll. 27–28. As the Board noted, aircraft galleys can serve multiple functions

and are not necessarily enclosed on all sides. *Board Decision*, 2015 WL 6470951, at \*3 (citing U.S. Patent Application Publication No. 2007/0228216). Nothing else in the claims or the specification supports limiting the “enclosure unit” to a single function or requiring that it be enclosed on all sides. The Board did not err in its construction.

Finally, the Board rejected B/E’s claim construction arguments for “lavatory stall unit,” but declined to provide an express construction in light of the invalidity grounds Zodiac raised in its IPR petition. For reasons similar to those discussed for the “enclosure unit” term, B/E argues that “lavatory stall unit” should be construed as “a single room, enclosed on all sides, having a toilet and washbasin and large enough to fit a person inside.” Appellant Br. 30. Moreover, B/E claims there is a fundamental dispute between the parties regarding the scope of the term and argues that it was error for the Board not to provide an express construction.

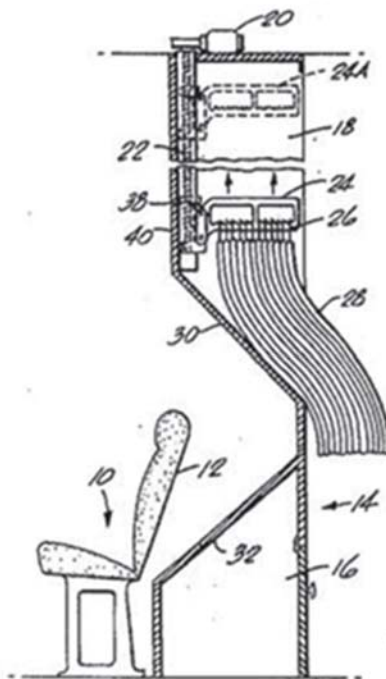
We agree with the Board that the plain and ordinary meaning is sufficient here. The ’838 patent does not ascribe a special definition to a “lavatory stall unit” other than the plain and ordinary meaning. And, although the parties certainly dispute the scope of the claims, Zodiac does not rely on any lavatory prior art. Instead, its obviousness position is based on applying the concepts taught by Betts to a lavatory stall unit, not modifying the lavatory stall unit in a certain way. Therefore, the Board did not err in ascribing the plain and ordinary meaning to “lavatory stall unit.”

A claim is unpatentable as obvious “if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art.” 35 U.S.C. § 103.<sup>4</sup> We review the Board’s ultimate obviousness determination de novo and underlying factual findings for substantial evidence. *Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1363 (Fed. Cir. 2016). Substantial evidence “means such relevant evidence as a reasonable mind might accept as adequate to support a conclusion.” *Consol. Edison Co. v. NLRB*, 305 U.S. 197, 229 (1938). Factual findings underlying the obviousness inquiry include the scope and content of the prior art, the differences between the prior art and the claimed invention, whether there is a motivation to combine prior art references, the level of ordinary skill in the art, and relevant secondary considerations. *Merck & Cie v. Gnosis S.P.A.*, 808 F.3d 829, 833 (Fed. Cir. 2015), *cert. denied*, 137 S. Ct. 297 (2016).

The Board held each of claims 1, 3–7, 9, 10, 12–14, 16–19, 21, 22, 24–29, 31, and 33–37 unpatentable in light of Betts, which discloses an elevated coat closet having a recessed forward wall that does not interfere with the tiltable passenger seat positioned in front of it. Figure 1 of Betts is shown below:

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<sup>4</sup> Given the effective filing date of the claims of the ’838 patent, the version of 35 U.S.C. § 103 that applies here is that in force preceding the changes made by the America Invents Act. See Leahy–Smith America Invents Act, Pub. L. No. 112-29, § 3(n), 125 Stat. 284, 293 (2011).



Betts's coat closet purports to use space in the aircraft more efficiently by elevating the garments 28 for storage after they have been hung on coat rack 24. Betts col. 1 ll. 5-7, col. 2 ll. 7-32. The coat closet 14 contains a luggage storage space 16 and an overhead coat compartment 18. *Id.* at col. 2 ll. 11-14. Walls 30 and 32 slant rearwardly to allow the occupant to recline seatback 12 of passenger seat 10. *Id.* at col. 2 ll. 7-24.

The Board found that Betts taught every feature of claim 1 except the "lavatory-specific limitations." *Board Decision*, 2015 WL 6470951, at \*6. To fill this gap, the Board relied on the testimony of Zodiac's expert, Alan Anderson, to establish that a person of ordinary skill at the time of the invention would have

considered it obvious “to apply the recessed design of the forward wall of Betts to other aircraft enclosures, including lavatories.” *Id.* (citing J.A. 1500–01 ¶¶ 65–68). The Board credited Mr. Anderson’s testimony that Betts would have motivated an ordinarily skilled artisan to use space on an aircraft efficiently and that Betts teaches the space efficiency that can be gained by using a recessed forward wall configuration instead of a flat forward wall configuration. *Id.* For support, Mr. Anderson cited the Betts patent, which states that it elevated the coat rack “so that it will be out of the way and provide more room for passengers in an aircraft.” J.A. 1500 ¶ 65 (citing Betts col. 1 ll. 6–7). Based on this understanding, the Board agreed with Mr. Anderson that a person of ordinary skill would have been motivated to apply the recessed forward wall configuration of Betts to lavatories and other aircraft enclosures.

B/E raises two main arguments on appeal. First, B/E argues that Betts teaches only a flat, tiltable seatback and not a contoured forward wall that is shaped to receive a contoured seatback. As explained above, although Betts’s seatback is flat, it is not flat in a vertical plane. Therefore, it falls within the broadest reasonable construction of “substantially not flat in a vertical plane.” And B/E’s argument that the ’838 patent requires a contoured forward wall and seatback finds no support in the claims. Claim 1, for example, requires a seatback “having a shape that is substantially not flat in a vertical plane” and a forward wall that is “shaped to substantially conform to the shape of the exterior aft surface of the aft portion of the aircraft cabin passenger seat.” ’838 patent col. 4 ll. 62–66. The word “contoured” is not mentioned in the claims. In fact, it only appears in

the Background of the Invention section of the '838 patent. See *id.* at col. 1 ll. 24–35.

Second, B/E argues that Betts discloses neither an enclosure unit nor a lavatory stall *unit* because it contains two separate storage compartments—luggage storage space 16 and overhead coat compartment 18—divided by the tilting seatback 12. B/E claims that an enclosure unit cannot be subdivided, and a lavatory stall unit must contain all of the numerous complex systems required for a functioning lavatory, i.e., plumbing, faucets, electricity, etc.

The Board previously rejected these arguments, and its conclusion is supported by substantial evidence. As the Board explained, B/E's arguments miss the thrust of Zodiac's obviousness position. Zodiac contends that applying the recessed forward wall of Betts to lavatories and other aircraft enclosures would have been obvious based on Betts's teachings and the knowledge of an ordinarily skilled artisan. Zodiac never asserted that Betts's coat closet could be modified to obtain a functioning lavatory, so the fact that Betts has divided compartments and lacks the complex lavatory systems is irrelevant. *Board Decision*, 2015 WL 6470951, at \*7. Instead, Zodiac relies on Betts's recessed forward wall and desire for increased efficiency in the use of space on an aircraft to motivate one of ordinary skill in the art to modify an existing lavatory (or other enclosure) by applying Betts's recessed forward wall to that conventional lavatory.<sup>5</sup> This obviousness argument is

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<sup>5</sup> Although it was not relied on by the Board, Betts defines its coat closet 14 to include both the storage space 16 and the coat compartment 18. See Betts col. 2 ll. 11–14; see also



independent of whether the Betts closet contains one or two storage compartments, and B/E's contrary contentions do not undermine the substantial evidence on which the Board's conclusion rests.

C.

B/E also insists that the Board erred in finding its evidence of secondary considerations insufficient to overcome Zodiac's prima facie case of obviousness. Secondary considerations are an important part of the obviousness analysis and must, when present, be considered. *See Transocean Offshore Deepwater Drilling, Inc. v. Maersk Drilling USA, Inc.*, 699 F.3d 1340, 1349 (Fed. Cir. 2012). The Board considered and weighed B/E's evidence of industry praise, commercial success, and copying. Substantial evidence supports the Board's conclusions on each of these secondary considerations.

At the outset, we note that the Board did not address the nexus between B/E's secondary considerations evidence and the claimed features of the '838 patent. "For objective [evidence of secondary considerations] to be accorded substantial weight, its proponent must establish a nexus between the evidence and the merits of the claimed invention." *Wyers v. Master Lock Co.*, 616 F.3d 1231, 1246 (Fed. Cir. 2010) (alteration and emphasis in original) (quoting *In re GPAC Inc.*, 57 F.3d 1573, 1580 (Fed. Cir. 1995)). For purposes of our analysis on appeal, we assume that a nexus exists, although it is not

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J.A. 3373–74 (explaining that, according to Zodiac's expert, Mr. Anderson, "the enclosure [in Betts] is the sum of the pieces located behind the seat," and that Betts's upper enclosure and lower enclosure, taken together, "form an enclosure unit").

without some reservation. For example, one of the articles proffered by B/E to demonstrate industry praise highlights the “[a]ntimicrobial coatings on the interior surfaces” of B/E’s new lavatory, which provides a cleaner, more hygienic lavatory, as well the fact that the “toilet even uses less water when flushing.” J.A. 3195; *see also* J.A. 3183 (noting that B/E’s lavatory will “integrate B/E’s ‘Aircraft Ecosystems’ vacuum toilet, LED lighting and B/E Aerospace tamper proof, lavatory oxygen system”). The cleaner surfaces, new lighting, and improved toilet could have played some role in the commercial success of, and industry praise for, B/E’s new lavatory. This, however, is not for us to decide on appeal.

With respect to commercial success, the Board viewed B/E’s contract to be the exclusive manufacturer of modular lavatory systems for the next generation of Boeing’s 737 airplanes—valued at approximately \$800 million—as weak evidence. Although the contract’s *estimated* value is large, the Board found it lacked the requisite context to evaluate this evidence. The Board wanted to know, for example, the number of years over which the contract is spread; the amount that other competitors in the same market will make over this period; the global market sales revenue for aircraft lavatories; and the percentage of that market belonging to B/E. *Board Decision*, 2015 WL 6470951, at \*10. B/E is correct that our precedent does not require answers to each of these questions in every case. But we cannot say that the Board’s assessment of B/E’s evidence was legally erroneous or unsupported by substantial evidence. The Board did not wholly disregard the evidence of commercial success due to

the lack of context. Instead, the Board found that B/E's contract with Boeing should be afforded minimal weight because the bare dollar value did "not provide a frame of reference against which [the Board could] make an informed judgment of the evidentiary value of the \$800 million figure" and left the Board with "many unanswered questions with respect to the dollar figure provided by [the] Patent Owner." *Id.* Without the introduction of contextual evidence, substantial evidence supports the Board's conclusion that the estimated value of the contract, in a vacuum, was weak evidence of commercial success.

The Board also found B/E's evidence of copying to be weak because it was limited to mere allegations of copying by Zodiac without supporting evidence other than allegations of infringement. Because B/E had not proven that any Zodiac product infringes the '838 patent, and because infringement alone cannot establish copying, the Board allocated little weight to this evidence. *Id.* at \*11; *Iron Grip Barbell Co. v. USA Sports, Inc.*, 392 F.3d 1317, 1325 (Fed. Cir. 2004) ("Not every competing product that arguably falls within the scope of a patent is evidence of copying. . . . Rather, copying requires the replication of a specific product."). B/E argues on appeal that Zodiac produced only flat-walled lavatories until Boeing awarded a contract to B/E for its Spacewall product and that Zodiac's expert, Mr. Anderson, admitted to being familiar with the Spacewall. Although Mr. Anderson said he was familiar with B/E's Spacewall, he also explained that he had not worked on any lavatories for Zodiac. This falls short of the type of copying evidence we have found sufficient in the past: internal documents that indicate copying, "direct evidence such as

disassembling a patented prototype, photographing its features, and using the photograph as a blueprint to build a virtually identical replica,” or “access to, and substantial similarity to, the patented product.” *Iron Grip*, 392 F.3d at 1325. The Board found that B/E had not offered any evidence of this sort here. *Board Decision*, 2015 WL 6470951, at \*11. Substantial evidence thus supports the Board’s decision to give this evidence minimal weight.

The Board also considered B/E’s evidence of industry praise, including that B/E’s Spacewall lavatory product won the Crystal Cabin Award. B/E claims its Spacewall product is a commercial embodiment of the ’838 patent, and the Crystal Cabin Award is viewed in the industry as “a seal of quality, known and coveted around the world.” J.A. 3201. B/E also provided several newspaper articles containing complimentary reviews of B/E’s Spacewall. *See, e.g.*, J.A. 3192–97. The Board acknowledged B/E’s evidence of industry praise and characterized it as “moderate.” *Board Decision*, 2015 WL 6470951, at \*11. While a fact finder could have reasonably found receipt of the prestigious Crystal Cabin Award and the favorable media reviews more probative of nonobviousness than “moderate[ly]” probative, we cannot say that the Board’s fact finding was unsupported by substantial evidence. The substantial evidence standard is a deferential one, requiring only “such relevant evidence as a reasonable mind might accept as adequate to support a conclusion.” *Consol. Edison Co.*, 305 U.S. at 229. We have explained that it “is something less than the weight of the evidence but more than a mere scintilla of evidence.” *In re Kahn*, 441 F.3d 977, 985 (Fed. Cir. 2006).

Finally, we see no error in the Board’s ultimate determination of obviousness. The Board weighed the “strong evidence of obviousness” in view of Betts against the “moderate” evidence of industry praise and the “weak” evidence of copying and commercial success before concluding that the claims would have been obvious over Betts when combined with the knowledge of an ordinarily skilled artisan. *Board Decision*, 2015 WL 6470951, at \*11. We agree.

## II.

In its cross-appeal, Zodiac argues that the Board erred in concluding that the Orange Book was not a printed publication and therefore did not qualify as a prior art reference for purposes of the IPR proceeding. According to Zodiac, the Orange Book discloses an elevated coatrack that is longer at the top of the unit than at the bottom, as required by dependent claims 8, 20, 30, and 38.

Section 311(b) of the Patent Act confines the universe of prior art available for use in IPR proceedings to “patents or printed publications.” 35 U.S.C. § 311(b). Determining whether a reference constitutes a printed publication is a legal conclusion based on underlying factual determinations. *Cf. Cooper Cameron Corp. v. Kvaerner Oilfield Prods., Inc.*, 291 F.3d 1317, 1321 (Fed. Cir. 2002). We review the Board’s legal conclusions de novo and its factual determinations for substantial evidence. *In re Lister*, 583 F.3d 1307, 1311 (Fed. Cir. 2009).

Public accessibility is the “touchstone in determining whether a reference constitutes a ‘printed publication.’” *In re Hall*, 781 F.2d 897, 899 (Fed. Cir. 1986). “A reference is considered publicly accessible if it was ‘disseminated or otherwise made

available to the extent that persons interested and ordinarily skilled in the subject matter or art exercising reasonable diligence, can locate it.” *In re Lister*, 583 F.3d at 1311 (quoting *Kyocera Wireless Corp. v. Int’l Trade Comm’n*, 545 F.3d 1340, 1350 (Fed. Cir. 2008)); *Constant v. Advanced Micro-Devices, Inc.*, 848 F.2d 1560, 1569 (Fed. Cir. 1988) (“Accessibility goes to the issue of whether interested members of the relevant public could obtain the information if they wanted to.”). Public accessibility presents a case-by-case inquiry based on the “facts and circumstances surrounding the reference’s disclosure to members of the public.” *In re Lister*, 583 F.3d at 1311 (quoting *In re Klopfenstein*, 380 F.3d 1345, 1350 (Fed. Cir. 2004)).

McDonnell Douglas Corporation is a predecessor to Boeing, and it manufactured a passenger airplane called the DC-10. In connection with the DC-10, McDonnell Douglas created a customer configuration summary called the Orange Book. The Orange Book contains floor plans and drawings of cabin interiors for the DC-10. McDonnell Douglas allegedly distributed the Orange Book to potential airline customers to provide them with customization options for the cabin interior.

The Orange Book is a three-ring binder of loose-leaf paper. Pages can be added or removed as updates or revisions are made to the Orange Book. The version in the record has pages indicating revision and issue dates ranging from 1975 to 1978. J.A. 1066, 1070, 1072, 1078, 1111. Of particular importance is page 5.3 of the version of the Orange Book in the record, dated October 1978, which shows an elevated coatrack purporting to meet the

limitations of dependent claims 8, 20, 30, and 38. *See* J.A. 1191. The Orange Book’s format highlights the crucial question: whether the version of the Orange Book with the specific schematic on which Zodiac relies was publically accessible before the critical date of the ’838 patent—April 20, 2009—such that the Orange Book in the record constitutes a prior art printed publication.

To establish public accessibility, Zodiac offered declarations from Jarold Newkirk and John Schoenberg. In his declaration, Mr. Newkirk stated that he was a former McDonnell Douglas employee and had personal knowledge of McDonnell Douglas’s publication and distribution of the Orange Book to its airline customers in 1978. But, as the Board recognized, Mr. Newkirk conceded during his deposition that he lacked personal knowledge regarding whether the version of the Orange Book in the record was identical to the version that was allegedly published and distributed in 1978. *See Board Decision*, 2015 WL 6470951, at \*12–13; J.A. 3479–80. Moreover, Mr. Newkirk’s statement that the copy of the Orange Book he reviewed was identical to the versions allegedly published and distributed in 1978 was based on his belief that the copy he reviewed came from Mr. Schoenberg, and Mr. Schoenberg said he was given that copy of the Orange Book by McDonnell Douglas. *Board Decision*, 2015 WL 6470951, at \*12–13 (citing J.A. 3479–80) (“[W]hether or not it was exactly that, I have no knowledge.” (emphasis omitted)). Mr. Newkirk also could not “unequivocally say” that he distributed the specific version of the Orange Book in evidence to customers in 1978. *See* J.A. 3478–79.

Mr. Schoenberg's testimony was similarly vague. He explained in his declaration that he obtained the Orange Book "possibly from [his employer's] marketing department in 1981 or perhaps later" when he was in charge of Zodiac's efforts to develop ceiling panels for the DC-10 aircraft. J.A. 2138–39 ¶ 5 (emphasis added). As the Board pointed out, this testimony was "not definitive of what was published and by when." *Board Decision*, 2015 WL 6470951, at \*13. Moreover, the Board was not convinced that Mr. Schoenberg's testimony "relate[d] specifically to the version of the Orange Book on which [Zodiac] relies" because he was unable to confirm that the copy provided to him during his deposition was the same as the copy previously in his possession. *Id.* (citing J.A. 3542). And when asked by the Board how it could be sure "that the specific page that [Zodiac is] relying on was part of the Orange Book back in that relevant time frame," Zodiac's counsel admitted that Zodiac did not "have testimony that that specific page was in that specific Orange Book." *Id.* (citing J.A. 700).

Based on this record, we conclude that substantial evidence supports the Board's determination that Zodiac did not satisfy its burden of establishing that the version of the Orange Book in the record was publically accessible. The nature of the Orange Book focuses our inquiry on whether the version of the Orange Book containing the relevant schematic was publically accessible. The Board found the testimony of Messrs. Newkirk and Schoenberg deficient in this regard. Specifically, the Board discounted the testimony of Mr. Newkirk because he demonstrated a lack of personal knowledge regarding whether the Orange Book version in evidence was published and



distributed during the relevant time period. Mr. Schoenberg's deposition exposed similar inadequacies; the Board found his testimony about the Orange Book might not even relate to the version in evidence. This is substantial evidence to support the Board's conclusion that Zodiac did not establish public accessibility of the Orange Book containing the pertinent schematic. In short, nothing in the record demonstrates that "persons interested and ordinarily skilled in the subject matter or art exercising reasonable diligence" could have located the relevant version of the Orange Book before the priority date. See *In re Lister*, 583 F.3d at 1311.

#### CONCLUSION

We have considered the parties' remaining arguments and find them unpersuasive. For the reasons stated above, neither the Board's claim constructions nor its obviousness determination was erroneous. We also detect no error in the Board's fact findings and legal conclusions regarding public accessibility of the Orange Book. Accordingly, we affirm.

#### AFFIRMED

#### COSTS

No costs.

**APPENDIX B – Patent Office Decision**

UNITED STATES PATENT AND  
TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND  
APPEAL BOARD

C&D ZODIAC, INC.,  
PETITIONER,

v.

B/E AEROSPACE, INC.,  
PATENT OWNER.

Case IPR2014-00727  
Patent 8,590,838 B2

Before MICHAEL J. FITZPATRICK, SCOTT A.  
DANIELS, and CARL M. DEFRANCO,  
*Administrative Patent Judges.*

FITZPATRICK, *Administrative Patent Judge.*

FINAL WRITTEN DECISION  
*35 U.S.C. § 318; 37 C.F.R. § 42.73*

## I. INTRODUCTION

Petitioner, C&D Zodiac, Inc., filed a corrected Petition for an *inter partes* review of claims 1, 3-10, 12-14, 16-22, 24-31, and 33-38 of U.S. Patent No. 8,590,838 B2 ("the '838 patent"). Paper 4 ("Pet."). Patent Owner, B/E Aerospace, Inc., filed a Preliminary Response pursuant to 35 U.S.C. § 313. Paper 12 ("Prelim. Resp."). In an October 29, 2014, Decision, we instituted trial on all challenged claims as follows:

(1) claims 1, 3-7, 9, 10, 12-14, 16-19, 21, 22, 24-29, 31, and 33-37 as asserted to be unpatentable under 35 U.S.C. § 103(a)<sup>6</sup> in view of Betts (Ex. 1003)<sup>7</sup>; and

(2) claims 8, 20, 30, and 38 as asserted to be unpatentable under 35 U.S.C. § 103(a) in view of Betts and the Orange Book (Ex. 1004)<sup>8</sup>.

Paper 15 ("Inst. Dec.").

After institution, Patent Owner filed a Second Corrected Patent Owner Response (Paper 31, "PO Resp."), Petitioner filed a Reply (Paper 41, "Pet.

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<sup>6</sup> The Leahy-Smith America Invents Act ("AIA"), Pub. L. No. 112-29, took effect on March 18, 2013. Because the application from which the '838 patent issued was filed before that date, our citations to Title 35 are to its pre-AIA version.

<sup>7</sup> U.S. Patent No. 3,738,497 (June 12, 1973).

<sup>8</sup> McDonnell Douglas DC-10 Customer Configuration Summary (Oct. 1978), which is commonly referred to as the "Orange Book" (Ex. 1008 | 4), presumably because its cover is colored orange. See Ex. 1004, 1.

Reply"), and an oral hearing was held on June 30, 2015<sup>9</sup>.

As discussed below, Petitioner has shown by a preponderance of the evidence that claims 1, 3-7, 9, 10, 12-14, 16-19, 21, 22, 24-29, 31, and 33-37 of the '838 patent are unpatentable as obvious over Betts. But, Petitioner has *not* shown by a preponderance of the evidence that claims 8, 20, 30, and 38 are unpatentable as obvious in view of Betts and the Orange Book, as Petitioner has not established that the evidence relied upon within the Orange Book is a printed publication.

#### A. Related Proceedings

Patent Owner asserted the '838 patent against Petitioner in *B/E Aerospace, Inc. v. Zodiac Aerospace, Inc.*, No. 2:14-cv-210 (E.D. Tex.). Pet. 1; Paper 7, 2. The lawsuit was unilaterally terminated by Patent Owner on June 19, 2014, via a Notice Of Voluntary Dismissal Of Complaint Without Prejudice.

#### B. The '838 Patent

The '838 patent relates to space-saving aircraft enclosures, including lavatories, closets, and galleys. Ex. 1001, 1:14-19, 2:18-22. Figure 2 of the '838 patent is reproduced below.

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<sup>9</sup> A transcript of the oral hearing is included in the record under seal. Paper 63. A public version of the transcript with redactions to portions of a single sentence is also included in the record. Paper 64 ("Tr.").

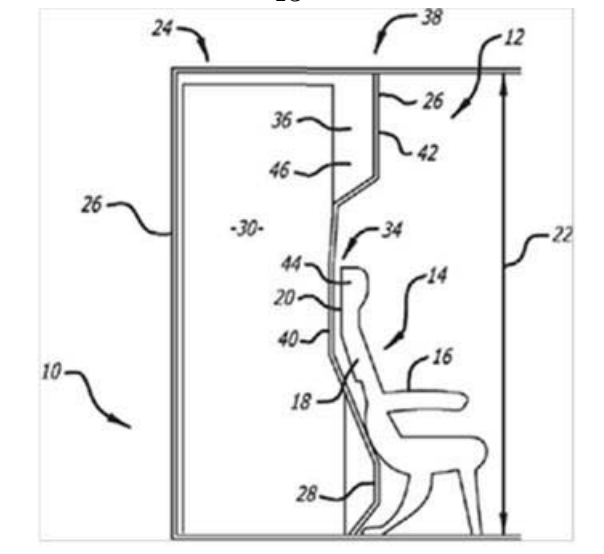
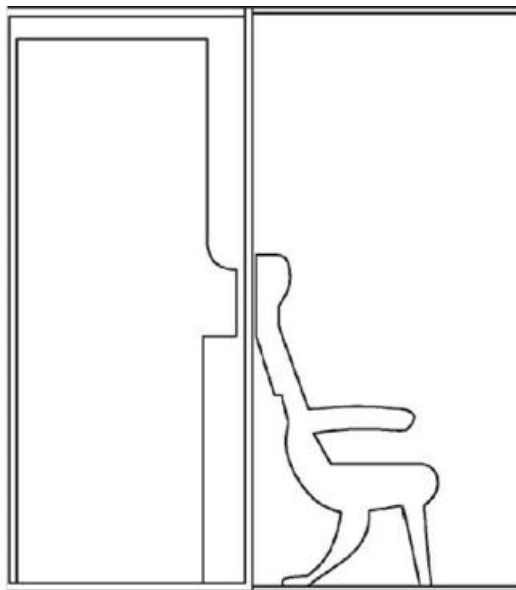


FIG. 2

Figure 2, reproduced above, illustrates enclosure 10, such as a lavatory, positioned aft of aircraft cabin 12. *Ex. 1001*, 4:8-13. The lavatory has walls that define interior lavatory space 30. *Id.* at 4:20-25. Forward wall 28 of the lavatory is described as "substantially not flat in a vertical plane" and "disposed immediately aft of and adjacent to or abutting the exterior aft surface of" passenger seat 16. *Id.* at 4:14-26. In particular, the forward wall includes recess 34, which accommodates the partially-reclined backrest of the passenger seat, as shown in Figure 2. *Id.* at 4:25-29.

The '838 patent contrasts the embodiment of Figure 2 with a prior art configuration shown in Figure 1, which is reproduced below.



*FIG. 1*  
*(Prior Art)*

Figure 1, reproduced above, illustrates “a prior art installation of an aircraft lavatory immediately aft of and adjacent to an aircraft passenger seat.” Ex. 1001, 3:65–67. In the depiction of the prior art, a forward wall of the lavatory (double-lined structure immediately aft of seat) is flat in the vertical plane.

### C. Illustrative Claims

Independent claim 1 and dependent claim 8 are illustrative and reproduced as follows:

1. A lavatory for a cabin of an aircraft, the cabin including a passenger seat having an aft portion that is substantially not flat in a vertical plane, the lavatory comprising:

a lavatory stall unit having at least one wall having a forward wall portion, said at least one wall defining an interior lavatory space, and said forward wall portion being configured to be disposed immediately aft of and adjacent to an aircraft cabin passenger seat having an aft portion with an exterior aft surface having a shape that is substantially not flat in a vertical plane; and

wherein said forward wall portion is shaped to substantially conform to the shape of the exterior aft surface of the aft portion of the aircraft cabin passenger seat, and said forward wall portion includes an aft-extending recess in said forward wall portion configured to receive the aft portion of the aircraft cabin passenger seat therein.

8. The lavatory of claim 1, wherein said lavatory stall unit has a top, a bottom, a height therebetween, and a middle therebetween, said lavatory stall unit has varying lengths along the height of the lavatory stall unit, and said lavatory stall unit is longer at the top of the lavatory stall unit than at the bottom of the lavatory stall unit.

## II. ANALYSIS

### A. Claim Construction

A claim in an unexpired patent shall be given its broadest reasonable construction in light of the specification of the patent in which it appears." 37 C.F.R. § 42.100(b). That construction must be consistent with the specification, and the claim language should be read in light of the specification as it would be interpreted by one of ordinary skill in the art. *In re Suitco Surface, Inc.*, 603 F.3d 1255, 1260 (Fed. Cir. 2010). Thus, we give claim terms their ordinary and customary meaning. *See In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007) ("The ordinary and customary meaning is the meaning that the term would have to a person of ordinary skill in the art in question." (internal quotation marks omitted)).

Petitioner did not propose an express construction of any claim term. Pet. 7. Patent Owner proposed an express construction for several claim terms. PO Resp. 8-19.

#### 1. "enclosure unit"

Independent claim 9, for example, recites "enclosure unit." Patent Owner proposes it be construed as "a single functional space, enclosed on all sides." PO Resp. 8. In doing so, Patent Owner asserts that the doctrine of claim differentiation supports its position because "enclosure unit" must be narrower than "enclosure." PO Resp. 8 (citing *Phillips v. AWH Corp.*, 415 F.3d 1303, 1314-15 (Fed. Cir. 2005) (en banc)). But, Patent Owner is mistaken that



claim differentiation applies, given the evidence Patent Owner presents. In that regard, Patent Owner instructs us to compare "Ex. 1001, 5:37 *with* 5:41." PO Resp. 8. Line 37 of column 5 is part of the preamble of independent claim 9 and recites, in relevant part, "[a]n aircraft enclosure." Ex. 1001, 5:37. Line 41 of column 5 is part of the body of the *same claim* and recites, in relevant part, "an enclosure unit." *Id.* at 5:41. These are parts of the same claim. Thus, even if the preamble were limiting, the doctrine of claim differentiation would not apply here. *See Phillips*, 415 F.3d at 1314-15 ("Differences among claims can also be a useful guide in understanding the meaning of particular claim terms. For example, the presence of a dependent claim that adds a particular limitation gives rise to a presumption that the limitation in question is not present in the independent claim.") (internal citations omitted).

Patent Owner does cite a case that is relevant to the use of different terms within the same claim. PO Resp. 9 (citing *Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111 (Fed. Cir. 2004)). In that case, the Court of Appeals held that "when an applicant uses different terms in a claim *it is permissible* to infer that he intended his choice of different terms to reflect a differentiation in the meaning of those terms." *Innova*, 381 F.3d at 1119-20 (emphasis added). *Innova* thus does not *require* different constructions be given to "enclosure unit" and "enclosure." In light of the specification, which uses the terms extremely similarly, we see no reason to give them different constructions. *Compare* Ex. 1001, 1:14-17 ("The present invention relates

generally to aircraft enclosures, and more particularly relates to an aircraft cabin enclosure, such as a lavatory, an aircraft closet, or an aircraft galley, for example."), *with* 2:27-28 ("The enclosure unit can be a lavatory, an aircraft closet, or an aircraft galley, for example."). Both terms are inclusive of lavatories, aircraft closets, and aircraft galleys.

The specific construction proposed by Patent Owner for "enclosure unit"—that it be "a single functional space, enclosed on all sides"—is not supported by the intrinsic evidence. As just discussed, the '838 patent states that "enclosure unit" includes an aircraft galley. Ex. 1001, 2:27-28. An aircraft galley is not necessarily enclosed on all sides, and it may serve multiple functions. Ex. 1020 | 3 ("Galleys incorporate features such as storage areas, ovens, sinks, coffee makers, and the like, and are usually built up from individual panels, commonly referred to as modules.").

The term "enclosure unit" encompasses lavatories, aircraft closets, and aircraft galleys. Given the grounds of unpatentability that Petitioner raises, there is no need to further construe this term.

## 2. *"lavatory stall unit"*

Whereas independent claim 1 recites "enclosure unit," independent claim 9 recites "lavatory stall unit." Patent Owner proposes the latter be construed as "a single room, enclosed on all sides, having a toilet and washbasin and large enough to fit a person inside." PO Resp. 12. For reasons similar to those with respect to "enclosure unit," we reject Patent

Owner's proposed construction of "lavatory stall unit."

3. *"substantially not flat in a vertical plane"*

Independent claim 1 recites (with emphasis added) "a passenger seat having *an aft portion that is substantially not flat in a vertical plane*" Patent Owner proposes that the italicized language be construed as "a back side shape that is contoured or substantially non-planar in an upright position." PO Resp. 13.

Similar to claim 1, each of independent claims 9, 21, and 31 recites (with emphasis added) a "passenger seat having *an aft portion with an exterior aft surface having a shape that is substantially not flat in a vertical plane*" Patent Owner proposes that the italicized language be construed as "a back side shape with a back exterior surface that is contoured or substantially non-planar in an upright position." PO Resp. 13–14.

These proposed constructions would render the claim language "in a vertical plane" meaningless because tilting a seatback between an upright position and another position would have no effect on the shape of the aft surface of the seatback. Therefore, we do not adopt them. *See Cardiac Pacemakers, Inc. v. St. Jude Med., Inc.*, 296 F.3d 1106, 1115 (Fed. Cir. 2002) (proposed construction that rendered a portion of the claim language meaningless held improper). Rather, we construe "in a vertical plane" according to its ordinary and customary meaning and consistent with the specification, which contrasts a forward wall in a vertical plane (*see* Fig. 1—the prior art) against a

recessed forward wall (*see* Fig. 2—an embodiment of the claimed invention).

In sum, the full limitation at issue encompasses an aft portion (in the case of claim 1) and an aft portion with an exterior aft surface (in the case of claims 9, 21, and 31) that has a flat shape but which is not within a vertical plane. This is within the broadest reasonable construction in light of the Specification, which discloses a substantially conforming recessed forward wall positioned behind the seat (*see* Ex. 1001, Fig. 2), as opposed to a wall that is flat in a vertical plane (*see id.* at Fig. 1).

4. *“forward wall portion is shaped to substantially conform to the shape of the exterior aft surface of the aft portion of the . . . passenger seat”*

In its Preliminary Response, Patent Owner had proposed that this term be construed to require that “the forward wall portion is shaped to generally match or coincide with the shape of the exterior back surface of the back of the . . . passenger seat.” Prelim. Resp. 14. In instituting this *inter partes* review, we adopted Patent Owner’s proposed construction because it was the broadest reasonable construction in light of the Specification as it would be interpreted by one of ordinary skill in the art. Inst. Dec. 8.

In offering a construction for the instant limitation, Patent Owner now further argues the following:

Notably, in each claim, it is a very specific forward wall portion that must have this conforming shape. [Ex. 2027 ¶¶ 121–123.] The

forward wall in question must be one that is “defining an interior [enclosure/lavatory space]” of the same “[lavatory stall/enclosure] unit” referenced throughout the claims. *Id.* Separate walls defining separate spaces for separate enclosures could not be the root for the claimed “forward wall portion,” even if such separate walls were shaped in the requisite manner. *Id.*

PO Resp. 19. Without saying so, Patent Owner is advancing a construction of different limitations of the independent claims, namely the forward wall “defining an interior lavatory space” in claims 1 and 31 and “defining an interior enclosure space” in claims 9 and 21. Confusingly, this is after Patent Owner proposed an express construction for these very terms. See PO Resp. 13 (proposing that these terms be construed to mean “forming a boundary or shape of the interior of the [lavatory/enclosure].”) (bracketed material not added).

The forward wall “defining an entire . . . space” does not mean fully enclosing the space, because the limitation is in reference to a *forward* wall. Hence, the forward wall is required to define merely the forward side of the space. Nothing more is required of that particular claim language. Patent Owner does not provide persuasive evidence, intrinsic or extrinsic, to support a construction of the forward wall that would exclude a wall that defines the forward side of two spaces instead of one.

Patent Owner’s construction clearly is designed to avoid Betts, which teaches a wall forward of both an overhead coat compartment and floor luggage space.

But, the ground of unpatentability at issue is not anticipation by Betts but obviousness in view of Betts. Thus, even if we were to adopt Patent Owner's overly narrow construction, it would not save the claims because, as discussed below, Petitioner has shown that it would have been obvious to apply the recessed forward wall design of Betts to other enclosures, including single-spaced lavatories.

5. *“immediately aft of and adjacent to . . . passenger seat”*

Patent Owner proposes that this term, which is recited in all of the independent claims, be construed to mean “located behind and closely proximate to . . . passenger seat without intervening cabin structures.” PO Resp. 17. Thus, Patent Owner's construction effectively would replace “aft” with “behind” and “adjacent” with “closely proximate . . . without intervening cabin structures.” The claim term, however, does not need an express construction. Its plain and ordinary meaning is readily apparent.

B. Obviousness in View of Betts

In assessing obviousness, “the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved.” *Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966). Additionally, secondary considerations such as “commercial success, long felt but unsolved needs, failure of others, etc., might be utilized to give light to the circumstances surrounding the origin of the subject matter sought to be patented. As indicia of obviousness or

nonobviousness, these inquiries may have relevancy.”  
Id. at 17–18.

Petitioner asserts that the subject matter of claims 1, 3–7, 9, 10, 12–14, 16–19, 21, 22, 24–29, 31, and 33–37 would have been obvious over Betts. Pet. 18–32.<sup>10</sup> For reasons explained below, Petitioner has established this assertion by a preponderance of the evidence.

1. *Disclosure of Betts*

Figure 1 of Betts is reproduced below.

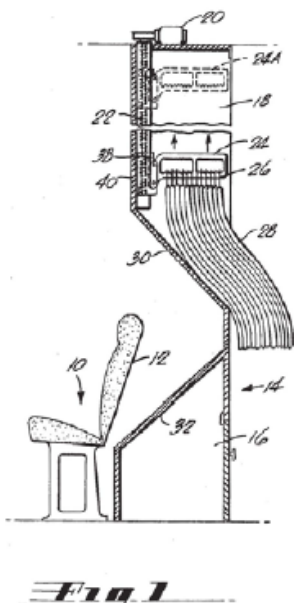


Figure 1 discloses airplane passenger seat 10 having tiltable backrest 12. Ex. 1003, 2:8-9. Behind

<sup>10</sup> Petitioner asserted that the subject matter of claims 8, 20, 30, and 38 also would have been obvious over Betts, but we did not institute on this ground with respect to those additional claims. Inst. Dec. 25.

the seat is coat closet 14, which has luggage space 16 along the floor and overhead coat compartment 18. *Id.* at 2:9-14. "The lower portion 30 of the coat compartment 18 slants rearwardly to provide a space for seatback 12 to be tilted rearwardly as desired by the occupant. The top 32 of storage space 16 also slants rearwardly so as not to interfere with seatback 12 when tilted." *Id.* at 2:19-24. Thus, together slanting wall portions 30 and 32 form a recess in the forward wall of the overhead coat compartment/floor luggage space.

2. *Independent Claims*

a. *Independent Claim 1*

Betts discloses all of the features of claim 1 except for the lavatory-specific limitations. Ex. 1003, Fig. 1. Petitioner offers testimony from Alan Anderson that it would have been obvious to a person of ordinary skill in the art<sup>11</sup> at the time of the invention to apply the recessed design of the forward wall of Betts to other aircraft enclosures, including lavatories. Ex. 1009 ¶¶ 65–68. In particular, Mr. Anderson testifies that a person of ordinary skill in the art would have been motivated to efficiently use space on an aircraft,

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<sup>11</sup> Mr. Anderson opines that a person of ordinary skill in the art would be someone having "a bachelor's degree in mechanical engineering, industrial design, or a similar discipline, or the equivalent experience, with at least two years of experience in the field of aircraft interior design." Ex. 1009 ¶ 30. Adam Dershowitz opines, on behalf of the Patent Owner, that the person of ordinary skill in the art would have had the same or similar education background but a few more years of experience in the field. Ex. 2027 ¶ 43. Our legal conclusions of obviousness in this Decision are supported by either level of skill.



as evidenced by Betts, “to provide more room for passengers.” *Id.* ¶ 65 (quoting Ex. 1003, 1:6–7). Mr. Anderson further testifies that Betts teaches the person of ordinary skill in the art a recessed forward wall configuration that uses space more efficiently than a flat configuration, and that a person of ordinary skill in the art would have been motivated to apply the recessed configuration to other aircraft enclosures, including lavatories.

Patent Owner argues that a person of ordinary skill in the art “would have been discouraged from attempting to tailor Betts’ divided space design to any lavatory stall unit (or any other enclosure unit) because Betts required separate enclosures divided both functionally and spatially.” PO Resp. 29. But, Petitioner’s ground of unpatentability is not premised on whether it would have been practical or possible to convert Bett’s “divided space” (i.e., its overhead coat compartment and floor luggage space) into a lavatory. Rather, Petitioner argues that it would have been obvious to apply Bett’s recessed forward wall design to other aircraft enclosures, including a lavatory. Pet. 19 (“One of ordinary skill in the art would recognize that the teachings of the McDonnell Douglas patent [i.e., Betts] are equally applicable to the forward walls of other enclosure units, such as lavatories or galleys.”) (citing Ex. 1009 ¶¶ 65–68); *cf. In re Etter*, 756 F.2d 852, 859 (Fed. Cir. 1985) (en banc) (“Etter’s assertions that Azure cannot be incorporated in Ambrosio are basically irrelevant, the criterion being not whether the references could be physically combined but whether the claimed inventions are rendered obvious by the teachings of the prior art as a whole.”); *In re Keller*, 642 F.2d 413, 425 (CCPA

1981) (“The test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art.”).

Patent Owner argues that the aft portion of the seat in Betts does not meet the "substantially not flat in a vertical plane" limitation because it is flat. PO Resp. 31. That argument is premised on an erroneously narrow construction of the limitation, which we rejected above. Although the aft portion of the Betts seatback is flat, it is not flat in a vertical plane.

Patent Owner argues that Betts does not disclose positioning a forward wall "immediately aft of and adjacent to" an aircraft passenger seat. PO Resp. 27-29. But, Betts depicts the seat immediately in front of the lowest portion of the forward wall (i.e., the vertical wall portion below lower slanting wall 32). Ex. 1003, Fig. 1. This alone meets the limitation in question. Further, Betts expressly teaches that the backrest is tiltable toward lower slanting wall 32, the slanting of which is meant to accommodate the tilting. *Id.* at 2:19-24.

Finally, Patent Owner presents arguments concerning purported distinctions between Betts and the challenged claims. In particular, Patent Owner argues that Betts requires two separate compartments behind its forward wall and also machinery for its coat compartment. PO Resp. 22-27.

None of these arguments addresses the obviousness ground raised by Petitioner, which is not premised on modifying the existing structure of the Betts embodiment illustrated in Figure 1, but rather on applying its space-saving recessed forward wall design to other enclosure units, such as lavatories or galleys. *See, e.g.*, Pet. 19.

*b. Independent Claims 9, 21, and 31*

The remaining independent claims are of similar scope to claim 1. Independent claim 9 is similar to claim 1, with the primary difference being that, whereas claim 1 recites “a lavatory stall unit,” claim 9 recites “an enclosure unit that is taller than the passenger seat.” Independent claim 21 is similar to claim 9, with the primary difference being that claim 21 recites “an aircraft cabin passenger seat” as part of the claimed apparatus. Independent claim 31 is similar to claim 1, with the primary difference being that claim 31 recites “an aircraft cabin passenger seat” as part of the claimed apparatus. Applying the recessed forward wall design of Betts to an aircraft lavatory, which a person of ordinary skill in the art would have been motivated to do as discussed above with respect to claim 1, also renders obvious the subject matter of claims 9, 21, and 31.

*3. The Dependent Claims*

*a. Claims 14 and 25*

Claims 14 and 25 depend from claims 9 and 21, respectively, and additionally recite that the “enclosure unit comprises a lavatory stall, and said at least one wall defines an interior lavatory space.” This limitation is met by the asserted prior art

because, as discussed above in connection with claim 1, it would have been obvious to apply the space-saving recessed forward wall design of Betts to other enclosure units, including lavatories.

*b. Claims 10 and 22*

Claim 10 depends from claim 9 and additionally recites that “the passenger seat is installed immediately forward of said enclosure unit.” Claim 22 depends from claim 21 and additionally recites that “the aircraft cabin passenger seat is installed immediately forward of said aircraft enclosure unit.” These limitations are taught by Betts, as discussed above in connection with claim 1. *See Ex. 1003, Fig. 1.*

*c. Claims 3, 12, 16, 24, and 33*

Claim 3 depends from claim 1 and additionally recites that the “forward wall portion includes a forward projection configured to project over an aft portion of the seat back of the aircraft cabin passenger seat immediately forward of the lavatory stall unit.” Claims 12, 16, 24, and 33 recite similar limitations. To meet these limitations, Petitioner relies on Figure 1 of Betts, which shows upper slanting wall 30 forming a forward projection above a portion of seatback 12. *Pet. 22* (citing *Ex. 1003, 2:7–11, 2:19–22, Fig. 1*). Wall 30 projects partly above the seatback even in the non-reclined configuration shown in Figure 1. When the seat is reclined, wall 30 projects above even more of the seatback. *See Ex. 1003, 2:22–24* (discussing tilting of the seatback). We are persuaded that the prior art, as asserted by Petitioner, meets the additional limitations of these dependent claims.

*d. Claims 4, 13, 26, and 34*

Claim 4 depends from claim 3 and additionally recites that the “forward wall portion defines a secondary space in said interior lavatory space in an area forward of an aft-most portion of the forward wall portion above the seat back of the aircraft cabin passenger seat.” Claims 13, 26, and 34 recite similar limitations. To meet these limitations, Petitioner relies on Figure 1, which shows upper slanting wall 30 defining a space above the backrest of the Betts seat and forward of the aft-most portion of the forward wall of the coat closet. Pet. 22 (citing Ex. 1003, 2:11–14, Fig. 1; Ex. 1009 ¶¶ 67–68). Patent Owner argues that the coat closet is a primary space in Betts, not a secondary space. PO Resp. 30. That argument, however, addresses Betts in isolation, whereas the asserted ground of unpatentability is based on a person of ordinary skill in the art applying the recessed forward wall design of Betts (which forms a space above the seatback) to other enclosure units, including lavatories. *Cf. In re Merck & Co.*, 800 F.2d 1091, 1097 (Fed. Cir. 1986) (“Non-obviousness cannot be established by attacking references individually where the rejection is based upon the teachings of a combination of references.”).

The ’838 patent specification uses the term “secondary space” broadly and without providing much detail. For example, the specification provides the following:

In another presently preferred aspect, the forward wall portion defines a secondary space 36 in the interior lavatory space in an area 38 forward of

an aft-most portion 40 of the forward wall portion, and the forward wall portion includes a forward projection 42 configured to project over the aft portion of the adjacent passenger seat back 44 immediately forward of the lavatory stall unit. The secondary space can include an amenity stowage space 46 inside the lavatory stall unit in the area forward of the aft-most portion of the forward wall portion, and the secondary space can include design elements providing visual space, such as a visual perception of space, inside the lavatory in the area forward of an aft-most portion of the forward wall portion.

Ex. 1001, 4:33–45. In Figure 2, the '838 patent illustrates a secondary space 36. Other than its location, the Figure does not illustrate any details regarding the secondary space. *Id.* at Fig. 2, ref. 36. As set forth above, the specification does state that the “secondary space can include an amenity stowage space 46,” but it is not a requirement of a secondary space. *Id.* at 4:39–40.

We are persuaded that the prior art, as asserted by Petitioner, meets the “secondary space” limitation within the broadest reasonable construction of that term as read in light of the specification as it would be interpreted by one of ordinary skill in the art.

*e. Claims 5, 17, 27, and 35*

Claim 5 depends from claim 1 and additionally recites that the “forward wall portion includes a

lower portion that extends under the aft portion of the aircraft cabin passenger seat.” Claims 17, 27, and 35 recite similar limitations. To meet these limitations, Petitioner relies on Figure 1 of Betts, which shows lower slanting wall 32 extending under the backrest. Pet. 23 (citing Ex. 1003, 2:7–11, 2:22–24, Fig. 1). We are persuaded that the prior art, as asserted by Petitioner, meets the additional limitations of these dependent claims.

*f. Claims 6, 18, 28, and 36*

Claim 6 depends from claim 1 and additionally recites that the “aft-extending recess in said forward wall portion is disposed between a forward-extending upper wall portion and a forward-extending lower wall portion.” Claims 18, 28, and 36 recite similar limitations. To meet these limitations, Petitioner relies on Figure 1 of Betts, which shows an aft-extending recess formed by the slanting upper and lower walls 30, 32. Pet. 23 (citing Ex. 1003, 2:19–24, Fig. 1). We are persuaded that the prior art, as asserted by Petitioner, meets the additional limitations of these dependent claims.

*g. Claims 7, 19, 29, and 37*

Claim 7 depends from claim 1 and additionally recites that the “aft-extending recess in said forward wall portion extends along substantially a full width of said forward wall portion.” Claims 19, 29, and 37 recite similar limitations. To meet these limitations, Petitioner relies, in part, on Figure 1 of Betts. Pet. 24 (citing Ex. 1003, Fig. 1). Patent Owner argues that Betts does not disclose such a feature. PO Resp. 53. However, Petitioner’s declarant, Mr. Anderson, points out that Figure 1 of Betts is a side elevation view and

testifies that one of ordinary skill would have understood that the depicted recess extends the full width of the forward wall. Ex. 1009 ¶ 62. Mr. Anderson further testifies that, regardless of what is depicted, one of ordinary skill would have been motivated to extend the recess the full width of the forward wall in order to accommodate a full row of seats installed immediately forward of the wall. *Id.* ¶ 63. We agree with Petitioner that Figure 1 depicts a recess extending along the full width of the forward wall. We additionally find persuasive Mr. Anderson's testimony that, even if Betts did not disclose such a configuration, it would have been obvious to one of ordinary skill in the art to extend the recess along the full width of the forward wall.

#### 4. *Secondary Considerations*

As the Court of Appeals has "repeatedly held, 'evidence rising out of the so-called 'secondary considerations' must always when present be considered en route to a determination of obviousness.'" *Transocean Offshore Deepwater Drilling, Inc. v. MaerskDrilling USA, Inc.*, 699 F.3d 1340, 1349 (Fed. Cir. 2012) (quoting *Stratoflex, Inc. v. Aeroquip Corp.*, 713 F.2d 1530, 1538 (Fed. Cir. 1983)). Thus, we turn now to the evidence of secondary considerations that Patent Owner has offered as purportedly demonstrating non-obviousness of the independent claims (and, thus, also the dependent claims). *See* PO Resp. 55-61.

In particular, Patent Owner asserts that its claimed invention has received industry praise and commercial success and has been copied. *Id.*



For evidence of industry praise, Patent Owner points to its Spacewall lavatory product ("Spacewall"), which Patent Owner asserts "is a commercial embodiment of the '838 patent."<sup>12</sup> PO Resp. 56. Patent Owner presents evidence that Spacewall received the Crystal Cabin Award, which Patent Owner asserts is "the premier international honor bestowed for excellence in aircraft interior design." *Id.* at 58 (citing Ex. 2033 | 25). Other evidence cited by Patent Owner reveals that there are seven such awards annually, one in each of seven categories. Ex. 2010, 1-2. Patent Owner also presents evidence of complimentary remarks about Spacewall that appeared in the *Wall Street Journal*, Barron's, and *APEX* blog. PO Resp. 59 (citing Ex. 2033 H 21-24; Exs. 2006-2009).

Patent Owner's evidence of commercial success consists of a contract "to be the exclusive manufacturer of modular lavatory systems for Boeing's 737 Next-Generation family of airplanes, as well as the upcoming 737 MAX." PO Resp. 57. The contract is reportedly valued at \$800 million or more. Ex. 2004, 2. Although such a figure may sound impressive in vacuum, Patent Owner does not provide a frame of reference against which we can make an informed judgment of the evidentiary value of the \$800 million figure.

We are left with many unanswered questions with respect to the dollar figure provided by Patent Owner. For example, Patent Owner does not tell us:

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<sup>12</sup> Patent Owner does not specify which claims of the '838 patent read on Spacewall.

how many years over which the \$800 million is spread; how much revenue Patent Owner's competitors estimate they will make off aircraft lavatory manufacturing over the same period; how much Patent Owner has made over prior spans of the same number of years (in constant dollars); what the global market sales revenue is for aircraft lavatories each year and what share of that belongs to Patent Owner; or whether the share has changed since Patent Owner introduced Spacewall and by how much. Because questions like these are unanswered, the \$800 million figure does not compel a conclusion of commercial success. *See Vandenberg v. Dairy Equip. Co.*, 740 F.2d 1560, 1567 (Fed. Cir. 1984) ("appellants failed to show how sales of the patented device compared to sales of their previous model, or what percentage of the market their new model commanded").

Patent Owner's evidence of copying is limited to alleged copying by Petitioner, and not by any additional, third parties. PO Resp. 59-61. In that regard, Patent Owner argues that Petitioner has a product that allegedly "practices the '838 patent claims." *Id.* at 60. Even it were true that claims of the '838 patent read on Petitioner's product—and we make no determination either way in that regard—such evidence alone is insufficient to establish copying as objective evidence of non-obviousness. *See Iron Grip Barbell Co. v. USA Sports, Inc.*, 392 F.3d 1317, 1325 (Fed. Cir. 2004) ("Not every competing product that arguably [falls] within the scope of a patent is evidence of copying. Otherwise every infringement suit would automatically confirm the nonobviousness of the patent."). "Rather, copying

requires the replication of a specific product." *Id.* The Court of Appeals in *Iron Grip* listed specific examples of the types of evidence that can establish copying, none of which is present here. *See id.*

Considering all the evidence presented, including the strong evidence of obviousness in view of Betts, the moderate evidence of industry praise, and the weak evidence of copying and commercial success, we determine that claims 1, 3-7, 9, 10, 12-14, 16-19, 21, 22, 24-29, 31, and 33-37 would have been obvious over Betts to a person of ordinary skill in the art.

C. Obviousness in View of Betts and the Orange Book

Petitioner asserts that the subject matter of claims 8, 20, 30, and 38 would have been obvious over Betts in view of the Orange Book. Pet. 38-39, 43, 47, 49, 52.<sup>13</sup>

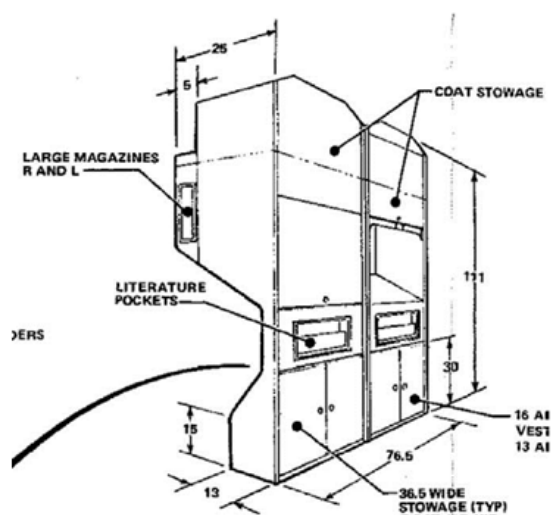
Claim 8 depends from claim 1 and additionally recites that the "lavatory stall unit has a top, a bottom, a height therebetween, and a middle therebetween, said lavatory stall unit has varying lengths along the height of the lavatory stall unit, and said lavatory stall unit is longer at the top of the lavatory stall unit than at the bottom of the lavatory stall unit." Claims 20, 30, and 38 recite similar limitations. Figure 1 of Betts appears to disclose equal lengths at the top and bottom. Ex. 1001, Fig. 1. Petitioner relies on McDonnell Douglas DC-10

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<sup>13</sup> Petitioner also challenged other claims as obvious over Betts in view of the Orange Book, but we instituted on this ground only with respect to claims 8, 20, 30, and 38. Inst. Dec. 25.

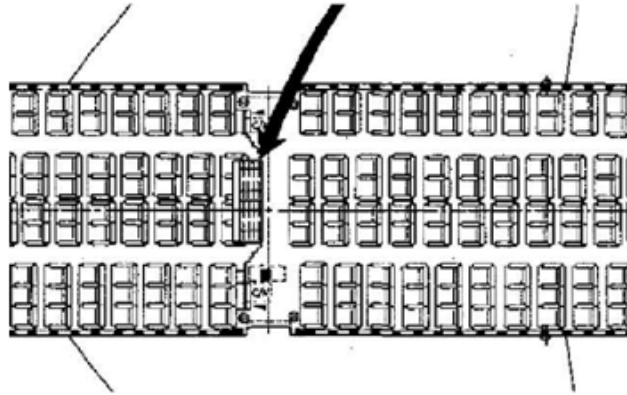
Customer Configuration Summary (October 1978), also known as the Orange Book, to meet this limitation.

An illustration of the embodiment from page 5.3 of the Orange Book version in evidence here, and on which Petitioner relies, is reproduced below.



The illustration above shows an elevated coatroom having a recessed forward wall. Ex. 1004, 5.3. The forward wall has a greater length at the top (i.e., 20 inches) than at the bottom (i.e., 13 inches) of its elevated coatroom. Ex. 1004, 5.3.

Petitioner also relies on a related illustration from the same page of the Orange Book, depicting the location of the elevated coatroom within a passenger airplane, as reproduced below.



The illustration above shows placement of the elevated coatroom overlapping the aft portion of the last row of seats in a cabin portion. Petitioner offers testimony from Mr. Anderson that it would have been obvious to a person of ordinary skill in the art at the time of the invention to apply the recessed design of the forward wall of the elevated coatroom of the Orange Book (with its forward extension at the top being greater than at the bottom) to other aircraft enclosures, including lavatories, because Betts teaches that person to make efficient use of space in the aircraft interior cabin. Ex. 1009 || 93-96.

Patent Owner argues, among other things, that the Orange Book is not a printed publication and, thus, cannot serve as a basis of holding any claim unpatentable in this *inter partes* review. PO Resp. 33; *see also* 35 U.S.C. § 311(b) ("A petitioner in an *inter partes* review may request to cancel as unpatentable 1 or more claims of a patent only on a ground that could be raised under section 102 or 103 and *only on the basis of prior art consisting of patents or printed publications.*") (emphasis added).

Public accessibility is the touchstone for determining whether a printed document is a publication for prior art purposes. *In re Bayer*, 568 F.2d 1357, 1359

(CCPA 1978).

A document is publicly accessible if it "has been disseminated or otherwise made available to the extent that persons interested and ordinarily skilled in the subject matter or art, exercising reasonable diligence, can locate it and recognize and comprehend therefrom the essentials of the claimed invention without need of further research or experimentation."

*Cordis Corp. v. Boston Sci. Corp.*, 561 F.3d 1319, 1333 (Fed. Cir. 2009) (quoting *In re Wyer*, 655 F.2d 221, 226 (CCPA 1981)).

Petitioner presented declaration testimony from Jarold Newkirk regarding publication of the Orange Book. In particular, Mr. Newkirk testified that he was an employee of McDonnell Douglas Corporation (and its predecessor Douglas Aircraft Corporation) from 1962-2002, and that, in 1973, he joined the company's commercial aircraft division, where his responsibilities included interior design and customer engineering. Ex. 1008 | 3. Mr. Newkirk testified to having personal knowledge of the publication and distribution of the Orange Book to airline customers to provide those customers with customization options for interior cabins for the DC-10 aircraft. *Id.* Tffl 5-6. In fact, Mr. Newkirk initially testified that

"[t]he copy of the Orange Book attached hereto as Exhibit A [i.e., Ex. 1004 in this proceeding<sup>14</sup>] is a true and correct copy of the Orange Book *as it appeared when published and distributed publicly in October 1978.*" Ex. 1008 | 8 (emphasis added).

Patent Owner points out that the Orange Book is actually a three-ringed binder of loose-leaf pages that can be inserted or removed, for example, when updating the Orange Book. PO Resp. 33 (citing Ex. 2025; Ex. 2026); *see also* Ex. 1008 | 7 (Mr. Newkirk testifying that McDonnell Douglas published "[u]pdated versions of the Orange Book"). This is significant because, on cross-examination, Mr. Newkirk admitted that he lacked personal knowledge of whether the version of the Orange Book submitted as Exhibit 1004 was actually published in October 1978.

Q. How do you know the particular copy you reviewed is exactly as it was published and distributed in October 1978?

A. Well, the way it was presented to me was that the person that had had it was given the book by McDonnell Douglas. And so based on that, I felt that it was, you know, an accurate book that was published at that time, based

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<sup>14</sup> Compare Ex. 1008, "Exhibit A", with Ex. 1004. (Petitioner should not have filed a duplicate of the Orange Book as an exhibit to Mr. Newkirk's declaration. *See* 37 C.F.R. § 42.6(d). Instead, it should have directed Mr. Newkirk to refer to Exhibit 1004.)

on the revision dates that were in the book. *I mean, whether or not it was exactly that, I have no knowledge.*

Q. And when you say "the person that had had it," who are you referring to?

A. John Schoenberg.

Q. And who specifically gave to you the copy that you reviewed in preparing your declaration?

A. Well, it was someone in our Legal department.

Q. Okay. Have you spoken with John Schoenberg about the Orange Book?

A. I have not.

Q. Did you ever get a copy of the Orange Book directly from John Schoenberg?

A. I did not. I had no contact with him.

Ex. 2023, 45:20-46:17 (emphasis added).

Petitioner submitted a declaration by John Schoenberg. Ex. 1019. In it, Mr. Schoenberg testified that he worked for a company called Fairchild Stratos ("Fairchild") from at least the late 1960s until 1981 when he went to work for "C&D Plastics, later re-



named C&D Aerospace, then C&D Zodiac" (i.e., Petitioner). *Id.* | 4. He then testified to the following:

I am familiar with the McDonnell Douglas DC-10 Customer Configuration Summary, commonly referred to as the "Orange Book." The so-called Orange Book (Ex. 1004) came into my possession *possibly from the Fairchild marketing department in 1981 or perhaps later* when at C&D I was in charge of developing the OEM ceiling panels for all DC-10 and MD-11 aircraft.

*Id.* | 5 (emphasis added). This testimony is not definitive of what was published and by when. It lacks an affirmative statement that Exhibit 1004 is a true and accurate copy of the version of the Orange Book that he says came into his possession. Also, it does not establish that any Orange Book ever came into Mr. Schoenberg's possession prior to the critical date of the '838 patent.<sup>15</sup> Mr. Schoenberg says "possibly" and "perhaps." Ex. 1019 | 5.

On cross-examination, Mr. Schoenberg testified that he believed his copy of the Orange Book was in his possession (at his office at Petitioner C&D Zodiac) before he retired, which was in 1997 and before the critical date. But this testimony does not establish how the Orange Book came into his possession.

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<sup>15</sup> Petitioner asserted the Orange Book as prior art under 35 U.S.C. § 102(b), but not under § 102(a). Pet. 14. The earliest possible filing date of the '838 patent is April 20, 2010. Ex. 1001, at [60]. The earliest possible critical date is therefore April 20, 2009. 35 U.S.C. § 102(b).

Moreover, we are not persuaded that Mr. Schoenberg's testimony regarding the Orange Book relates specifically to the version of the Orange Book on which Petitioner relies. Indeed, at his deposition, he could not say whether the copy of the Orange Book that was placed in front of him was the same copy he had once possessed. Ex. 2024, 22:2-5; *see also* Tr. 81:3-9 (Trial Board: "How do we know that the specific page that you're relying on was part of the Orange Book back in that relevant time frame?" / Counsel for Petitioner: "John [Schoenberg] showed me - so, we have testimony that those are the pages of the Orange Book. We don't have testimony that that specific page was in that specific Orange Book.").

Petitioner has not shown, by a preponderance of the evidence, that Exhibit 1004 was published prior to the critical date of the '838 patent.

### III. MOTIONS TO EXCLUDE

Petitioner filed a Motion to Exclude Exhibits 2004, 2018, 2019, 2034-2036, and portions of Exhibit 2022 (evidence pertaining to secondary considerations of non-obviousness) and Exhibit 2027 (Mr. Dershowitz's declaration pertaining to patentability of the claims). Paper 48. Because we do not rely on any of that evidence in a manner ultimately adverse to Petitioner, we dismiss the Motion as moot.

Patent Owner filed a Motion to Exclude Exhibit 1029, which is a declaration by Gary L. Frazier challenging Patent Owner's commercial success

evidence. Paper 50. Because we do not rely on Exhibit 1029 in any manner, we dismiss the Motion as moot.

#### IV. CONCLUSION

Petitioner has shown by a preponderance of the evidence that claims 1, 3-7, 9, 10, 12-14, 16-19, 21, 22, 24-29, 31, and 33-37 of the '838 patent are unpatentable as obvious over Betts.

Petitioner has *not* shown by a preponderance that claims 8, 20, 30, and 38 are unpatentable as obvious in view of Betts and the Orange Book.

#### V. ORDER

Accordingly, it is

ORDERED that claims 1, 3-7, 9, 10, 12-14, 16-19, 21, 22, 24-29, 31, and 33-37 of U.S. Patent No. 8,590,838 B2 are held unpatentable; and

FURTHER ORDERED that, because this Decision is final, a party to the proceeding seeking judicial review of the Decision must comply with the notice and service requirements of 37 C.F.R. § 90.2.

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**APPENDIX C – Order on Rehearing Petition**

NOTE: This order is nonprecedential.

United States Court of Appeals  
for the Federal Circuit

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**B/E AEROSPACE, INC.,**

*Appellant*

v.

**C&D ZODIAC, INC,**

*Cross-Appellant*

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2016-1496, 2016-1497

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Appeals from the United States Patent and Trade-mark Office, Patent Trial and Appeal Board in No. IPR2014-00727.

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**ON PETITION FOR REHEARING EN BANC**

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Before PROST, *Chief Judge*, NEWMAN, LOURIE, DYK, MOORE, O'MALLEY, REYNA, WALLACH, TARANTO, CHEN, HUGHES, and STOLL, *Circuit Judges*.

PER CURIAM.

**O R D E R**

Appellant B/E Aerospace, Inc. filed a petition for re-hearing en banc. The petition was first referred as a petition for rehearing to the panel that heard the appeal, and thereafter the petition for rehearing en banc was referred to the circuit judges who are in regular active service.

Upon consideration thereof,

IT IS ORDERED THAT:

The petition for panel rehearing is denied.

The petition for rehearing en banc is denied.

The mandate of the court will issue on December 14, 2017.

FOR THE COURT

December 7, 2017

Date

/s/ Peter R. Marksteiner

Peter R. Marksteiner  
Clerk of Court

**APPENDIX D – IPR Statutory Provisions****35 U.S.C. 311:****(a) In General.—**

Subject to the provisions of this chapter, a person who is not the owner of a patent may file with the Office a petition to institute an inter partes review of the patent. The Director shall establish, by regulation, fees to be paid by the person requesting the review, in such amounts as the Director determines to be reasonable, considering the aggregate costs of the review.

**(b) Scope.—**

A petitioner in an inter partes review may request to cancel as unpatentable 1 or more claims of a patent only on a ground that could be raised under section 102 or 103 and only on the basis of prior art consisting of patents or printed publications.

**(c) Filing Deadline.—**A petition for inter partes review shall be filed after the later of either—

(1) the date that is 9 months after the grant of a patent; or

(2) if a post-grant review is instituted under chapter 32, the date of the termination of such post-grant review.

**35 U.S.C. 312:**

**(a) Requirements of Petition.—**A petition filed under section 311 may be considered only if—

(1) the petition is accompanied by payment of the fee established by the Director under section 311;

(2) the petition identifies all real parties in interest;

(3) the petition identifies, in writing and with particularity, each claim challenged, the grounds on which the challenge to each claim is based, and the evidence that supports the grounds for the challenge to each claim, including—

(A) copies of patents and printed publications that the petitioner relies upon in support of the petition; and

(B) affidavits or declarations of supporting evidence and opinions, if the petitioner relies on expert opinions;

(4) the petition provides such other information as the Director may require by regulation; and

(5) the petitioner provides copies of any of the documents required under paragraphs (2), (3), and (4) to the patent owner or, if applicable, the designated representative of the patent owner.

**35 U.S.C. 313:**

If an inter partes review petition is filed under section 311, the patent owner shall have the right to file a preliminary response to the petition, within a time period set by the Director, that sets forth reasons why no inter partes review should be instituted based upon the failure of the petition to meet any requirement of this chapter.

**35 U.S.C. 314:**

(a)Threshold.—

The Director may not authorize an inter partes review to be instituted unless the Director



determines that 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.

(b)Timing.—The Director shall determine whether to institute an inter partes review under this chapter pursuant to a petition filed under section 311 within 3 months after—

(1) receiving a preliminary response to the petition under section 313; or

(2) if no such preliminary response is filed, the last date on which such response may be filed.

(c)Notice.—

The Director shall notify the petitioner and patent owner, in writing, of the Director's determination under subsection (a), and shall make such notice available to the public as soon as is practicable. Such notice shall include the date on which the review shall commence.

(d)No Appeal.—

The determination by the Director whether to institute an inter partes review under this section shall be final and nonappealable.

**35 U.S.C. 315:**

(a) Infringer's Civil Action.—

(1)Inter partes review barred by civil action.—

An inter partes review may not be instituted if, before the date on which the petition for such a review is filed, the petitioner or real party in interest

filed a civil action challenging the validity of a claim of the patent.

(2)Stay of civil action.—If the petitioner or real party in interest files a civil action challenging the validity of a claim of the patent on or after the date on which the petitioner files a petition for inter partes review of the patent, that civil action shall be automatically stayed until either—

(A) the patent owner moves the court to lift the stay;

(B) the patent owner files a civil action or counterclaim alleging that the petitioner or real party in interest has infringed the patent; or

(C) the petitioner or real party in interest moves the court to dismiss the civil action.

(3)Treatment of counterclaim.—

A counterclaim challenging the validity of a claim of a patent does not constitute a civil action challenging the validity of a claim of a patent for purposes of this subsection.

(b)Patent Owner's Action.—

An inter partes review may not be instituted if the petition requesting the proceeding is filed more than 1 year after the date on which the petitioner, real party in interest, or privy of the petitioner is served with a complaint alleging infringement of the patent. The time limitation set forth in the preceding sentence shall not apply to a request for joinder under subsection (c).

(c)Joinder.—

If the Director institutes an inter partes review, the Director, in his or her discretion, may join as a party to that inter partes review any person who properly files a petition under section 311 that the Director, after receiving a preliminary response under section 313 or the expiration of the time for filing such a response, determines warrants the institution of an inter partes review under section 314.

(d) Multiple Proceedings.—

Notwithstanding sections 135(a), 251, and 252, and chapter 30, during the pendency of an inter partes review, if another proceeding or matter involving the patent is before the Office, the Director may determine the manner in which the inter partes review or other proceeding or matter may proceed, including providing for stay, transfer, consolidation, or termination of any such matter or proceeding.

(e) Estoppel.—

(1) Proceedings before the office.—

The petitioner in an inter partes review of a claim in a patent under this chapter that results in a final written decision under section 318(a), or the real party in interest or privy of the petitioner, may not request or maintain a proceeding before the Office with respect to that claim on any ground that the petitioner raised or reasonably could have raised during that inter partes review.

(2) Civil actions and other proceedings.—

The petitioner in an inter partes review of a claim in a patent under this chapter that results in a final written decision under section 318(a), or the real

party in interest or privy of the petitioner, may not assert either in a civil action arising in whole or in part under section 1338 of title 28 or in a proceeding before the International Trade Commission under section 337 of the Tariff Act of 1930 that the claim is invalid on any ground that the petitioner raised or reasonably could have raised during that inter partes review.

**35 U.S.C. 316:**

(a) Regulations.—The Director shall prescribe regulations—

(1) providing that the file of any proceeding under this chapter shall be made available to the public, except that any petition or document filed with the intent that it be sealed shall, if accompanied by a motion to seal, be treated as sealed pending the outcome of the ruling on the motion;

(2) setting forth the standards for the showing of sufficient grounds to institute a review under section 314(a);

(3) establishing procedures for the submission of supplemental information after the petition is filed;

(4) establishing and governing inter partes review under this chapter and the relationship of such review to other proceedings under this title;

(5) setting forth standards and procedures for discovery of relevant evidence, including that such discovery shall be limited to—

(A) the deposition of witnesses submitting affidavits or declarations; and

(B) what is otherwise necessary in the interest of justice;

(6) prescribing sanctions for abuse of discovery, abuse of process, or any other improper use of the proceeding, such as to harass or to cause unnecessary delay or an unnecessary increase in the cost of the proceeding;

(7) providing for protective orders governing the exchange and submission of confidential information;

(8) providing for the filing by the patent owner of a response to the petition under section 313 after an inter partes review has been instituted, and requiring that the patent owner file with such response, through affidavits or declarations, any additional factual evidence and expert opinions on which the patent owner relies in support of the response;

(9) setting forth standards and procedures for allowing the patent owner to move to amend the patent under subsection (d) to cancel a challenged claim or propose a reasonable number of substitute claims, and ensuring that any information submitted by the patent owner in support of any amendment entered under subsection (d) is made available to the public as part of the prosecution history of the patent;

(10) providing either party with the right to an oral hearing as part of the proceeding;

(11) requiring that the final determination in an inter partes review be issued not later than 1 year after the date on which the Director notices the institution of a review under this chapter, except that the Director may, for good cause shown, extend the 1-year period by not more than 6 months, and may

adjust the time periods in this paragraph in the case of joinder under section 315(c);

(12) setting a time period for requesting joinder under section 315(c); and

(13) providing the petitioner with at least 1 opportunity to file written comments within a time period established by the Director.

(b) Considerations.—

In prescribing regulations under this section, the Director shall consider the effect of any such regulation on the economy, the integrity of the patent system, the efficient administration of the Office, and the ability of the Office to timely complete proceedings instituted under this chapter.

(c) Patent Trial and Appeal Board.—

The Patent Trial and Appeal Board shall, in accordance with section 6, conduct each inter partes review instituted under this chapter.

(d) Amendment of the Patent.—

(1) In general.—During an inter partes review instituted under this chapter, the patent owner may file 1 motion to amend the patent in 1 or more of the following ways:

(A) Cancel any challenged patent claim.

(B) For each challenged claim, propose a reasonable number of substitute claims.

(2) Additional motions.—

Additional motions to amend may be permitted upon the joint request of the petitioner and the patent owner to materially advance the settlement of

a proceeding under section 317, or as permitted by regulations prescribed by the Director.

(3)Scope of claims.—

An amendment under this subsection may not enlarge the scope of the claims of the patent or introduce new matter.

(e)Evidentiary Standards.—

In an inter partes review instituted under this chapter, the petitioner shall have the burden of proving a proposition of unpatentability by a preponderance of the evidence.

**35 U.S.C. 317:**

(a)In General.—

An inter partes review instituted under this chapter shall be terminated with respect to any petitioner upon the joint request of the petitioner and the patent owner, unless the Office has decided the merits of the proceeding before the request for termination is filed. If the inter partes review is terminated with respect to a petitioner under this section, no estoppel under section 315(e) shall attach to the petitioner, or to the real party in interest or privy of the petitioner, on the basis of that petitioner's institution of that inter partes review. If no petitioner remains in the inter partes review, the Office may terminate the review or proceed to a final written decision under section 318(a).

(b)Agreements in Writing.—

Any agreement or understanding between the patent owner and a petitioner, including any collateral agreements referred to in such agreement

or understanding, made in connection with, or in contemplation of, the termination of an inter partes review under this section shall be in writing and a true copy of such agreement or understanding shall be filed in the Office before the termination of the inter partes review as between the parties. At the request of a party to the proceeding, the agreement or understanding shall be treated as business confidential information, shall be kept separate from the file of the involved patents, and shall be made available only to Federal Government agencies on written request, or to any person on a showing of good cause.

**35 U.S.C. 318:**

(a)Final Written Decision.—

If an inter partes review is instituted and not dismissed under this chapter, the Patent Trial and Appeal Board shall issue a final written decision with respect to the patentability of any patent claim challenged by the petitioner and any new claim added under section 316(d).

(b)Certificate.—

If the Patent Trial and Appeal Board issues a final written decision under subsection (a) and the time for appeal has expired or any appeal has terminated, the Director shall issue and publish a certificate canceling any claim of the patent finally determined to be unpatentable, confirming any claim of the patent determined to be patentable, and incorporating in the patent by operation of the certificate any new or amended claim determined to be patentable.

(c)Intervening Rights.—



Any proposed amended or new claim determined to be patentable and incorporated into a patent following an inter partes review under this chapter shall have the same effect as that specified in section 252 for reissued patents on the right of any person who made, purchased, or used within the United States, or imported into the United States, anything patented by such proposed amended or new claim, or who made substantial preparation therefor, before the issuance of a certificate under subsection (b).

(d) Data on Length of Review.—

The Office shall make available to the public data describing the length of time between the institution of, and the issuance of a final written decision under subsection (a) for, each inter partes review.

**35 U.S.C. 319:**

A party dissatisfied with the final written decision of the Patent Trial and Appeal Board under section 318(a) may appeal the decision pursuant to sections 141 through 144. Any party to the inter partes review shall have the right to be a party to the appeal.