

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

FACEBOOK, INC.,
Petitioner,

v.

EXPRESS MOBILE, INC.,
Patent Owner.

IPR2021-01224
Patent 6,546,397 B1

Before JEFFREY S. SMITH, DANIEL J. GALLIGAN, and
KRISTIL R. SAWERT, *Administrative Patent Judges*.

GALLIGAN, *Administrative Patent Judge*.

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

I. INTRODUCTION

A. Background

Facebook, Inc. (“Petitioner”) filed a Petition requesting *inter partes* review of claim 1 of U.S. Patent No. 6,546,397 B1 (“the ’397 patent,” Ex. 1001). Paper 1 (“Pet.”). Express Mobile, Inc. (“Patent Owner”) filed a Preliminary Response. Paper 6 (“Prelim. Resp.”). With our authorization Petitioner and Patent Owner filed, respectively, a Reply (Paper 7) and a Sur-reply (Paper 9) addressing discretionary denial issues.

Under 37 C.F.R. § 42.4(a), we have authority to determine whether to institute review. The standard for instituting an *inter partes* review is set forth in 35 U.S.C. § 314(a), which provides that an *inter partes* review may not be instituted unless the information presented in the Petition and the Preliminary Response shows “there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.”

For the reasons explained below, we institute an *inter partes* review of the sole challenged claim on all grounds raised in the Petition.

B. Related Matters

As required by 37 C.F.R. § 42.8(b)(2), the parties identify various related matters. Pet. 1–8; Paper 4, 1–9. Among the identified related matters are IPR2018-00750 (“the ’750 IPR”), IPR2021-00700 (“the ’700 IPR”), and *ex parte* reexamination Control No. 90/014,615 (“the ’615 Reexam”). Pet. 2; Paper 4, 2–3, 9.

C. Real Parties in Interest

The parties identify themselves as the real parties in interest. Pet. 1; Paper 4, 1.

D. The '397 Patent and Challenged Claim 1

The '397 patent states that it “is directed to computing systems, and more particularly to methods and apparatus for building a web site using a browser-based build engine.” Ex. 1001, 1:6–8. Independent claim 1, which is the sole challenged claim, is reproduced below.

1. A method to allow users to produce Internet websites on and for computers having a browser and a virtual machine capable of generating displays, said method comprising:

(a) presenting a viewable menu having a user selectable panel of settings describing elements on a website, said panel of settings being presented through a browser on a computer adapted to accept one or more of said selectable settings in said panel as inputs therefrom, and where at least one of said user selectable settings in said panel corresponds to commands to said virtual machine;

(b) generating a display in accordance with one or more user selected settings substantially contemporaneously with the selection thereof;

(c) storing information representative of said one or more user selected settings in a database;

(d) generating a website at least in part by retrieving said information representative of said one or more user selected settings stored in said database; and

(e) building one or more web pages to generate said website from at least a portion of said database and at least one run time file, where said at least one run time file utilizes information stored in said database to generate virtual machine commands for the display of at least a portion of said one or more web pages.

E. Asserted Grounds of Unpatentability

Petitioner presents the following grounds:

Claim Challenged	35 U.S.C. §	References/Basis
1	103(a)	Reynolds, ¹ Bernardo, ² Meyer, ³ Witkowski ⁴
1	103(a)	Reynolds, Bernardo, Meyer, Witkowski, Coombs ⁵

II. ANALYSIS

A. Discretionary Denial

Patent Owner argues that the Petition “is the fourth staggered post-issuance attack on the ’397 patent,” citing the ’750 IPR, the ’700 IPR, and the ’615 Reexam as the other challenges to the ’397 patent. Prelim. Resp. 28. Patent Owner contends that we should deny institution based on the factors set forth in the Board’s precedential decision in *General Plastic Industrial Co., Ltd. v. Canon Kabushiki Kaisha*, IPR2016-01357, Paper 19 (PTAB Sept. 6, 2017) (designated precedential in relevant part). Prelim. Resp. 29–35. *General Plastic* sets forth a series of factors to be considered by the Board in evaluating whether to exercise discretion under 35 U.S.C. § 314(a) to deny a petition that challenges a patent that was previously challenged before the Board. *General Plastic*, Paper 19 at 15–16. These factors are as follows:

¹ US 6,052,717, issued Apr. 18, 2000 (Ex. 1003).

² US 6,684,369 B1, issued Jan. 27, 2004 (Ex. 1004).

³ J. Meyer and T. Downing, *Java Virtual Machine*, © 1997 (Ex. 1005).

⁴ US 6,125,360, issued Sept. 26, 2000 (Ex. 1007).

⁵ J. Coombs et al., *Setting Up an Internet Site for Dummies*, 3rd ed. © 1998 (Ex. 1006).

1. whether the same petitioner previously filed a petition directed to the same claims of the same patent;
2. whether at the time of filing of the first petition the petitioner knew of the prior art asserted in the second petition or should have known of it;
3. whether at the time of filing of the second petition the petitioner already received the patent owner's preliminary response to the first petition or received the Board's decision on whether to institute review in the first petition;
4. the length of time that elapsed between the time the petitioner learned of the prior art asserted in the second petition and the filing of the second petition;
5. whether the petitioner provides adequate explanation for the time elapsed between the filings of multiple petitions directed to the same claims of the same patent;
6. the finite resources of the Board; and
7. the requirement under 35 U.S.C. § 316(a)(11) to issue a final determination not later than 1 year after the date on which the Director notices institution of review.

Id. at 16. These factors are “a non-exhaustive list,” and “additional factors may arise in other cases for consideration, where appropriate.” *Id.* at 16, 18.

General Plastic addressed the situation where the same petitioner filed “follow-on petitions” against the same patents, after a first set of petitions was denied on the merits. *General Plastic*, Paper 19 at 2–3. The Petition here is not a “follow-on petition,” as that term is used in *General Plastic*; there was no prior petition challenging the '397 patent filed by Petitioner, Facebook. The '750 IPR petition was filed by BigCommerce, Inc. (“BigCommerce”), the '700 IPR petition was filed by Google LLC (“Google”), and the '615 Reexam request was filed by Unified Patents, LLC (“Unified”). Prelim. Resp. 28. We recognize, however, that *General Plastic* has not been limited to instances where multiple petitions are filed by the

same petitioner. *Valve Corp. v. Elec. Scripting Prods., Inc.*, IPR2019-00062, Paper 11 (PTAB Apr. 2, 2019) (precedential). Rather, “when different petitioners challenge the same patent, we consider any relationship between those petitioners when weighing the *General Plastic* factors.” *Valve*, Paper 11 at 9.

Patent Owner does not allege any specific relationship between Petitioner and either BigCommerce or Unified; rather, Patent Owner’s arguments focus on an alleged relationship between Petitioner and Google. *See* Prelim. Resp. 29–30; Sur-reply 2. On this record, we determine that the *General Plastic* factors do not favor denial based on either the ’750 IPR or the ’615 Reexam because there is no evidence of any relationship between Petitioner and either BigCommerce or Unified that would implicate *General Plastic* under *Valve*.

Patent Owner argues that Petitioner’s alleged relationship with Google in district court litigations favors denial under *General Plastic* and *Valve*. Prelim. Resp. 28–30; Sur-reply 2–3. Patent Owner argues that “Google and Petitioner were sued in the same court on the same day and joined a joint plaintiffs’ [sic, defense] group.” Prelim. Resp. 28. According to Patent Owner, “Google and Petitioner worked as a team to form theories against the infringement allegations of the ’397 patent” and “jointly participated in meet-and-confers in the underlying cases and submitted joint papers to the court expressing the two parties’ aligned positions.” Prelim. Resp. 29–30 (citing Exs. 2005, 2008). Patent Owner asserts, therefore, that “[t]here is a significant relationship between Petitioner and Google with respect to Patent Owner’s assertion of the ’397 patent, as they have been working together to develop their theories and positions with respect to . . . that patent.” Prelim. Resp. 30.

Petitioner counters that its relationship with Google with respect to the '397 patent is simply that the two parties are defendants in co-pending litigation and that its work with Google on claim construction issues is the “kind of coordination [that] is actively encouraged by district courts, and often required in multi-defendant cases to conserve resources.” Reply 1–2 (citing Exs. 2005, 2008). Petitioner asserts that it “played no part in preparation of the *Google* IPR petition, nor had any input into the timing of its filing” and that it has no business relationship with Google of the type at issue in *Valve*. Reply 2.

We are not persuaded that Petitioner’s and Google’s status as defendants in co-pending litigation involving the '397 patent rises to the type of “significant relationship” described in *Valve*. In *Valve*, the Board noted that “Valve and HTC were co-defendants in the District Court litigation and were accused of infringing the [challenged] patent based on HTC’s VIVE devices that incorporate technology licensed from Valve.” *Valve*, Paper 11 at 10. The Board determined that there was “a significant relationship between Valve and HTC with respect to Patent Owner’s assertion of the [challenged] patent.” *Id.* Nothing in the present record indicates any such relationship between Petitioner and Google. Rather, they were sued by Patent Owner on the same day. See Prelim. Resp. 28; see also Paper 4, 1–9 (Patent Owner’s Mandatory Notices listing more than 100 lawsuits involving the '397 patent filed by Patent Owner). The record shows some coordination among numerous defendants in various cases on the issue of claim construction. See Exs. 2005 (Defendants’ List of Proposed Claim Terms and Phrases for Construction), 2008 (email chain discussing claim constructions issues in district court). But, as Petitioner argues, this is the

“kind of coordination [that] is actively encouraged by district courts.” See Reply 2.

Patent Owner argues that “the Board has even denied under § 314(a) institution of a serial petition filed by a petitioner having *no* alleged relationship with an earlier one.” Sur-reply 2 (citing *Samsung Elecs. Am., Inc. v. Uniloc 2017 LLC*, IPR2018-01756, Paper 7, at 24–30 (PTAB Mar. 11, 2019)). The *Samsung* case, which is not precedential, is readily distinguishable. The Board denied institution in that case “because the same or substantially the same prior art or arguments were previously presented to the Board.” *Samsung*, Paper 7 at 26. In the present case, by contrast, Petitioner represents that “the references in the proposed grounds of this Petition have not been relied upon in other PTO proceedings relating to the ’397 patent.” Pet. 12. Patent Owner does not dispute this assertion, and, although Patent Owner also asserts that its arguments warrant denial under 35 U.S.C. § 325(d), Patent Owner does not explain how the prior art or the arguments asserted in the Petition are the same or substantially the same as art or arguments previously presented to the Office. See Prelim. Resp. 33–34; see also 35 U.S.C. § 325(d) (“In determining whether to institute or order a proceeding under this chapter, chapter 30, or chapter 31, the Director may take into account whether, and reject the petition or request because, the same or substantially the same prior art or arguments previously were presented to the Office.”).

Based on the foregoing and under the circumstances of this case, we are not persuaded that there is a “significant relationship” between Petitioner and Google that would justify discretionary denial. In view of this determination, we also are not persuaded that the remaining *General Plastic* factors favor denial. For example, the third *General Plastic* factor is

“whether at the time of filing of the second petition the petitioner already received the patent owner’s preliminary response to the first petition or received the Board’s decision on whether to institute review in the first petition.” *General Plastic*, Paper 19 at 16. This factor “is directed to Petitioner’s potential benefit from receiving and having the opportunity to study Patent Owner’s Preliminary Response, as well as our institution decisions on the first-filed petitions, prior to its filing of follow-on petitions.” *Id.* at 17. Here, Petitioner filed the Petition before Patent Owner filed a preliminary response in the ’700 IPR, and, therefore, Petitioner received no such benefit. *See* Reply 4. Patent Owner argues that, “[l]ong before filing its petition, Petitioner was aware of the Patent Owner’s preliminary response and the Board’s denial of institution in BigCommerce, IPR2018-00750.” Prelim. Resp. 32 (emphasis omitted). But, as Petitioner points out, the ’750 IPR petition was denied two years before Patent Owner even sued Petitioner. *See* Reply 4. Thus, we do not view the ’750 IPR as justifying denial, especially in view of the lack of evidence of any relationship at all between Petitioner and BigCommerce, the petitioner in the ’750 IPR.

The second, fourth, and fifth *General Plastic* factors are “to assess and weigh whether a petitioner should have or could have raised the new challenges earlier.” *General Plastic*, Paper 19 at 18. Here, Petitioner has filed only one petition, and, as discussed above, the evidence does not show a relationship between Petitioner and previous petitioners that would justify denial. Therefore, we are not persuaded that Petitioner needed to raise the challenges in this Petition earlier.

Finally, we do not see the sixth *General Plastic* factor (“the finite resources of the Board”) or the seventh *General Plastic* factor (“the

requirement under 35 U.S.C. § 316(a)(11) to issue a final determination not later than 1 year after the date on which the Director notices institution of review”) as favoring denial.

Therefore, weighing all of *General Plastic* factors in view of *Valve*, we decline to exercise discretion to deny the Petition.

B. Principles of Law

A patent claim is unpatentable under 35 U.S.C. § 103(a) if the differences between the claimed subject matter 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. *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). The question of obviousness is resolved on the basis of underlying factual determinations including (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of ordinary skill in the art; and (4) any secondary considerations, if in evidence.⁶ *Graham v. John Deere Co. of Kan. City*, 383 U.S. 1, 17–18 (1966).

C. Level of Ordinary Skill in the Art

Citing the testimony of its declarant, Dr. Vijay Madiseti, Petitioner contends that

[a] person of ordinary skill in the art as of December 1999 would have possessed at least a bachelor’s degree in software engineering, computer science, computer engineering, or electrical engineering with at least two years of experience in web-based software application development, including experience in developing software and systems for storing, retrieving, and transmitting information (such as text and

⁶ Patent Owner does not present any objective evidence of nonobviousness (i.e., secondary considerations) as to any of the challenged claims.

images) over a computer network such as the Internet (or equivalent degree or experience). (EX1002, ¶17.) A person could also have qualified as a person of ordinary skill in the art with some combination of (1) more formal education (such as a master's of science degree) and less technical experience or (2) less formal education and more technical or professional experience in the fields listed above. As the '397 patent makes clear, a person of ordinary skill in the art would have had a working knowledge about various ways to implement websites using browser-based input and provide those websites to browsers upon request. (*Id.*)

Pet. 13.

Patent Owner's declarant, Mr. Glenn Weadock, testifies that

a person of ordinary skill in the art of the patent-in-suit would include someone who had a bachelors or graduate degree in computer science, mathematics, engineering, or a similar discipline together with knowledge of software development and web design, together with approximately two or three years of experience in the field relating to web design and development. The required levels of educational and industry experience are on a sliding scale relative to each other. For example, a person of ordinary skill could potentially have no educational degree but more industry experience or, conversely, could have something higher than an undergraduate degree with fewer years of industry experience.

Ex. 2001 ¶ 18.

The parties' assessments are substantially similar. Both call for a technical degree and some practical experience, but both also acknowledge that more experience can offset less formal education. Petitioner's proposed assessment, however, limits the technical degree to one of four disciplines. On this record, we are not persuaded that the educational requirements should be so restrictive, and we favor Patent Owner's assessment as it acknowledges that a person of ordinary skill in the art may have a degree in

a “similar discipline” to computer science, math, or engineering. In addition, Petitioner’s use of the language “at least” expands the ranges of education and experience indefinitely without an upper bound.

Thus, for purposes of this Decision, we apply Patent Owner’s assessment. We also note we would reach the same preliminary determinations on Petitioner’s patentability challenges in §§ II.E–F below if we adopted Petitioner’s assessment.

During the trial, the parties may address this preliminary assessment of the level of ordinary skill and may explain how any proposed level of ordinary skill in the art impacts the patentability analysis.

D. Claim Construction

We interpret claim terms using “the same claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. 282(b), including construing the claim in accordance with the ordinary and customary meaning of such claim as understood by one of ordinary skill in the art and the prosecution history pertaining to the patent.” 37 C.F.R. § 42.100(b) (2021).

Petitioner argues that no express constructions are necessary but provides various constructions or proposed constructions from district court litigations “for purposes of providing complete disclosure.” Pet. 15–18. Patent Owner does not provide a separate claim construction discussion in its Preliminary Response.

Having reviewed the parties’ arguments, we determine that we need not expressly construe this term or any others for purposes of this Decision. *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (“[W]e need only construe terms ‘that are in controversy, and only to the extent necessary to resolve the

controversy’” (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999))).

*E. Alleged Obviousness over
Reynolds, Bernardo, Meyer, and Witkowski
(Claim 1)*

Petitioner asserts that claim 1 is unpatentable under 35 U.S.C. § 103(a) over the combined teachings of Reynolds, Bernardo, Meyer, and Witkowski. Pet. 11, 20–69. Patent Owner opposes. Prelim. Resp. 10–27.

1. Overview of the Prior Art

Reynolds discloses “techniques for creating and viewing material on the World Wide Web in the form of an interactive Web book.” Ex. 1003, 1:6–8. Reynolds explains that its interactive Web book (“ibook”) “is a self-extending, self-sustaining information-redistributing Web robot, which is resident on a data network such as the Internet or an intranet,” and that “[m]aterial in an ibook is preferably organized in the form of Web pages.” Ex. 1003, 1:27–30.

Additional pertinent details of Reynolds and the other applied references are discussed below.⁷

⁷ On this record, we are persuaded that the evidence sufficiently establishes that Meyer was published before the December 2, 1999, filing date of the application for the ’397 patent. See Ex. 1024 ¶¶ 40–46; see also Pet. 20 (“Each reference cited in this Petition qualifies as prior art because each reference was either filed (in the case of patent references) or published long before the December 1999 application filing date of the ’397 patent. (EX1024, ¶¶40-54.).”). At this stage, Patent Owner does not challenge the prior art status of any of the applied references.

2. Claim 1

a) Preamble and Recitation 1(a)

Claim 1 is directed to “[a] method to allow users to produce Internet websites on and for computers having a browser and a virtual machine capable of generating displays.” Petitioner argues that Reynolds’s disclosure of allowing users to produce ibooks made up of web pages teaches “[a] method to allow users to produce Internet websites on and for computers having a browser.” Pet. 22–24 (citing Ex. 1003, code (57), 1:5–8, 3:46–47, 5:13–14, 5:31–33, 5:41–42, 7:2–3, 7:35–36, Fig. 3; Ex. 1002 ¶¶ 56–58).⁸ Petitioner argues that “Reynolds, alone and in combination with Meyer, discloses and renders obvious the claimed ‘browser and a virtual machine capable of generating displays.’” Pet. 24 (citing Ex. 1002 ¶¶ 59–60). For a browser that generates displays, Petitioner relies on Reynolds’s disclosure of browser 82 running plug-ins 80 that form the ibook tools. Pet. 24–26 (citing Ex. 1003, 1:10–11, 1:30–38, 3:40–43, 5:28–31, 5:35–37, 7:2–3, 11:31–40; Ex. 1002 ¶¶ 59–60). For the “virtual machine,” Petitioner relies on Meyer’s disclosure of the Java Virtual Machine (JVM) in combination with Reynolds. Pet. 26–28 (citing Ex. 1005, pp. 2, 4–6, 36; Ex. 1002 ¶¶ 61–62). Petitioner provides various reasons to combine Meyer’s JVM teachings with Reynolds, including that Reynolds expressly discloses the use of Java. Pet. 28–31 (citing Ex. 1003, 1:5–8, 4:48–50, 7:2–4, 9:52–58; Ex. 1005, pp. 2–5, 36–42; Ex. 1002 ¶¶ 64–68); *see* Ex. 1003, 9:56–58 (disclosing that an ibook passage may be a Java program).

⁸ The parties emphasize reference names, claim recitations, and numerals designating elements in references. We omit such emphasis when quoting the parties’ arguments in this Decision.

Claim 1 recites that the method comprises “(a) presenting a viewable menu having a user selectable panel of settings describing elements on a website, said panel of settings being presented through a browser on a computer adapted to accept one or more of said selectable settings in said panel as inputs therefrom,” which Petitioner labels “1[a][1].” Pet. 32. Petitioner relies on Reynolds’s authoring tool 86, which includes editing tool 136, to show an interface through which a user can create and modify material. Pet. 32–34 (citing Ex. 1003, 7:2–7, 7:24–28; Fig. 3, 6). Petitioner notes that “Reynolds does not describe specific details on the user interface for authoring tool 86 or editing tool 136 and thus does not expressly disclose ‘presenting a viewable menu having a user selectable panel of settings describing elements on a website.’” Pet. 34. Petitioner argues that “it would have been obvious to adapt authoring tool 86 of Reynolds based on Bernardo to implement the claimed viewable menu.” Pet. 34 (citing Ex. 1002 ¶¶ 71–81). In particular, Petitioner argues that Bernardo discloses menus through which input from a website creator is received. Pet. 34–42 (citing Ex. 1004, 1:23–27, 4:45–46, 4:49–50, 5:28–37, 6:32–34, 6:57–59, 6:54–56, 6:58–7:10, 7:37–39, 7:42–44, 8:38–42, 8:56–62, 8:67–9:12, 9:48–64, 22:23–30, 22:56–61, Figs. 5, 8–10; Ex. 1002 ¶¶ 73–78, 80). Petitioner provides various reasons to combine Bernardo’s menu teachings with Reynolds, including that such a combination would have improved the user experience. Pet. 42–46 (citing Ex. 1003, 7:24–31, 8:5–10; Ex. 1004, 1:25–27, 7:24–37, 8:57–62, 9:48–64; Ex. 1009, 6:16–58, Figs. 14, 15; Ex. 1002 ¶¶ 81–89).

Claim 1 further recites “where at least one of said user selectable settings in said panel corresponds to commands to said virtual machine,” which Petitioner labels “1[a][2].” Pet. 47. Petitioner argues that it would

have been obvious to implement the viewable menu as a Java applet based on the combined teachings of Reynolds, Bernardo, and Meyer. Pet. 47–52. According to Petitioner’s “proposed combination, a Java applet would perform the functionality of (1) presenting the claimed ‘viewable menu’ having user selectable settings, and (2) responding to the user selection by providing the functionality specified by the user’s selection from the viewable menu.” Pet. 48 (citing Ex. 1002 ¶ 92). Petitioner provides various reasons to make this combination, including that a Java applet would have been “a simple substitution” for Reynolds’s authoring tool “plug-in.” Pet. 48–52 (citing Ex. 1003, 5:28–31, 7:24–28; Ex. 1004, 8:56–60, 12:11–26, 12:34–40; Ex. 1005, pp. 2–4, 8–9; Ex. 1002 ¶¶ 93–96).

Patent Owner presents several arguments against Petitioner’s contentions for the preamble and recitation 1(a). Prelim. Resp. 12–19. We address these arguments below.

(1) Website

Patent Owner argues that Reynolds’s ibook is not a website but a “Web robot” and that “[t]here is no evidence that a ‘Web robot’ is a web site or even has the characteristics of a web site.” Prelim. Resp. 14–15 (citing Ex. 1003, 1:24–29, 14:14–24, Fig. 3; Ex. 2001 ¶¶ 42–44; Pet. 20). Patent Owner further argues that “[n]ot all content available via the Web is a ‘web site,’ and not all collections of web pages saved to a database are ‘web sites.’” Prelim. Resp. 15 (citing Ex. 2001 ¶¶ 42–44). Patent Owner also argues that “Reynolds itself recognizes that an ibook is not a website by referring to ibooks and websites separately.” Prelim. Resp. 15 (citing Ex. 1003, 14:14–24).

On this record, we are sufficiently persuaded by Petitioner’s showing that Reynolds’s ibook is a “web site.” See Pet. 22–23. Reynolds “relates to

the Internet, and more particularly, to techniques for creating and viewing material on the World Wide Web in the form of an interactive Web book.” Ex. 1003, 1:5–8, *quoted in* Pet. 22. Reynolds discloses that its ibook is accessible over the Internet and is “stored in the form of ibook web pages.” Ex. 1003, 1:5–8, 3:46–47, *cited in* Pet. 22. Although Reynolds does not expressly label its ibooks “websites,” we are sufficiently persuaded, on this record, that the ibooks are websites because they are web pages that are on the Internet.

(2) Rationale to Combine Bernardo and Reynolds

Patent Owner argues that “Petitioner provides insufficient analysis of why a [person of ordinary skill in the art] would have been motivated to combine Bernardo with the system of Reynolds.” Prelim. Resp. 16 (citing Ex. 2001 ¶¶ 60–65). According to Patent Owner, Petitioner does not identify any shortcomings of Reynolds that would be addressed by the combination, and Patent Owner argues that “Reynolds was aware of the concept of viewable menus, and specifically chose not to implement them for modifying content.” Prelim. Resp. 17 (citing Ex. 1003, 10:35–38).

On this record, we disagree that Petitioner’s analysis is deficient and, instead, are persuaded by Petitioner’s argument that the proposed combination would “[f]acilitat[e] greater customization of the appearance of ibook web page content displayed by the browser,” which “would have enhanced the user experience for both the ibook contributor and viewer.” Pet. 44 (citing Ex. 1002 ¶ 84). For example, referring to Figure 8, which depicts selection menus (Ex. 1004, 4:44–45), Bernardo discloses that its “design center feature provides a screen from which the user is prompted to decide on the options for the design of the web page, for example, by selecting colors, background images, frame styles, and logos” and that,

“[o]nce selections have been made, the user can preview the design and then make changes as desired.” Ex. 1004, 8:57–62, *cited in* Pet. 44. Bernardo discloses that this website development “module essentially provides simple-to-use graphic design tools allowing a site creator to have a preferred layout and design, without writing or editing HTML or other code.” Ex. 1004, 8:62–65. Thus, Bernardo itself supports Petitioner’s contention of an enhanced user experience using viewable menus. Furthermore, Bernardo’s web page design teachings are directly applicable to Reynolds’s ibooks, which are stored as web pages, as discussed above in § II.E.2.a(1). Therefore, we disagree with Patent Owner’s argument that Reynolds’s alleged focus on “creating digital books with text and images in a standard format specifically designed for modular reuse of content” undermines the proposed combination. *See* Prelim. Resp. 16–17. Rather, both Reynolds and Bernardo are directed to creating web pages. *See* Ex. 1003, 3:46–47 (“Contributed material is preferably stored in the form of ibook web pages . . .”); Ex. 1004, 8:56–65 (discussing Figure 8’s screen for selecting design options for a web page).

(3) Rationale to Combine Bernardo, Reynolds, and Meyer

Patent Owner argues that Petitioner does not articulate a sufficient rationale to support its combination of Bernardo, Reynolds, and Meyer to teach “where at least one of said user selectable settings in said panel corresponds to commands to said virtual machine.” Prelim. Resp. 17–19. According to Patent Owner, “Petitioner creates a new claim element, 1[a][2],” which shows that “Petitioner’s methodology is purely hindsight driven.” Prelim. Resp. 17. We do not agree that Petitioner’s treatment of recitation 1[a][2] shows hindsight. Recitation 1[a][1] of claim 1’s step (a) recites the step that must be performed, and recitation 1[a][2] is essentially a

“wherein” clause that defines one of the “user selectable settings” in step (a). We do not fault Petitioner for providing a separate explanation for these different recitations, and, as discussed below, we are sufficiently persuaded that Petitioner has supported its proposed combination.

Patent Owner also disputes some of the purported advantages of the proposed combination. Prelim. Resp. 18. For example, Patent Owner argues that a Java applet would not have solved the problem of how browsers treat frames differently. Prelim. Resp. 18 (citing Ex. 2001 ¶ 73). Patent Owner’s declarant, Mr. Weadock, testifies that “Petitioner fails to recognize that Bernardo’s concern (that different browsers treated Web page ‘frames’ differently) would still apply to Java applets contained in frames, and so the compatibility concern of Bernardo would not necessarily be addressed by Java.” Ex. 2001 ¶ 73 (citing Pet. 49). The portion of Bernardo cited by Petitioner states that “a given user interface (A) may not display Web site content (e.g., frames) in the same manner as a different user interface (B).” Ex. 1004, 12:24–26, *cited in* Pet. 49. Bernardo, therefore, discloses “frames” as one example of web site content; it was not limiting the discussion only to web page frames. On this record, we are persuaded by Petitioner’s contention that Meyer’s disclosure addresses this issue. *See* Pet. 49 (citing Ex. 1005, pp. 8–9). In particular, among the advantages of virtual machines discussed in Meyer is portability: “You only have to port the virtual machine and associated support libraries to a new architecture once, and then all of the applications built on top of the virtual machine run unchanged.” Ex. 1005, p. 9, *quoted in* Pet. 49.

Patent Owner also argues that Petitioner’s identified advantage of “increased security” does not support the proposed combination because “Reynolds never identified security as a concern of the ibook editing

system.” Prelim. Resp. 18 (citing Pet. 51–52). A reference, however, does not have to identify in itself an area in need of improvement for that reference to be used in an obviousness combination. Rather, “there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” *KSR*, 550 U.S. at 418 (quoting *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)).

Patent Owner also argues that Petitioner fails to consider the drawbacks of using a virtual machine, such as adding complexity and being slower. Prelim. Resp. 18–19 (citing Ex. 2001 ¶ 75; Ex. 1005, 24–25 (pp. 12–13)). We agree with Patent Owner that the record evidence shows disadvantages to using virtual machines, such as those described in Meyer’s section titled “Drawbacks of Virtual Machines.” Ex. 1005, pp. 12–13. As the U.S. Court of Appeals for the Federal Circuit has stated, however, “a given course of action often has simultaneous advantages and disadvantages, and this does not necessarily obviate motivation to combine.” *Medichem, S.A. v. Rolabo, S.L.*, 437 F.3d 1157, 1165 (Fed. Cir. 2006). “Instead, the benefits, both lost and gained, should be weighed against one another.” *Id.* (quoting *Winner Int’l Royalty Corp. v. Wang*, 202 F.3d 1340, 1349 n.8 (Fed. Cir. 2000)). On this preliminary record, even considering the drawbacks of virtual machines, we are persuaded that Petitioner has presented sufficient articulated reasoning to support the proposed combination.

As Petitioner notes (Pet. 29), Reynolds discloses that its ibooks can contain Java programs. Ex. 1003, 9:56–58 (“Each style is controlled by an ibook passage (e.g., a Java program) which implements that style.”). As Petitioner also correctly points out, “Meyer explains that ‘you can’t run a Java program without also running an implementation of the Java Virtual Machine.’” Pet. 31 (quoting Ex. 1005, p. 5). Thus, Reynolds’s disclosure of

a Java program at the very least suggests, if not dictates, the use of a virtual machine. In light of this disclosure, we disagree with Patent Owner's argument that the drawbacks of Java virtual machines would "dissuade a [person of ordinary skill in the art] from using a Java Virtual Machine in a system such as Reynold's disclosure of creating ibooks, as delays in rendering ibook pages would not be tolerated by a reader." See Prelim. Resp. 18–19. On this preliminary record, we are sufficiently persuaded that Reynolds's express disclosure of Java and the advantages of Java, including portability, support Petitioner's proposed combination. See Pet. 49 (discussing portability) (citing Ex. 1005, pp. 8–9); see also Ex. 1005, p. 9 ("Virtual machines have many advantages. They are great for portability. You only have to port the virtual machine and associated support libraries to a new architecture once, and then all of the applications built on top of the virtual machine run unchanged.").

(4) Preliminary Determination for Preamble and Recitation 1(a)

In view of the foregoing and on this record, we are sufficiently persuaded by Petitioner's contentions, summarized above, for the preamble⁹ of claim 1 and recitation 1(a).

b) Recitation 1(b)

Claim 1 recites that the method comprises "(b) generating a display in accordance with one or more user selected settings substantially contemporaneously with the selection thereof." Petitioner argues that Bernardo's "preview" feature teaches this subject matter. Pet. 52–54 (citing Ex. 1004, 4:19–21, 8:56–62, 10:5–13, Fig. 8; Ex. 1002 ¶¶ 97–99). Bernardo

⁹ We need not decide whether the preamble is limiting for purposes of this Decision because we determine that, on the record before us, Petitioner's cited evidence sufficiently supports its contentions regarding the preamble.

explains that its web page creation tool “permits authorized content creators to preview proposed content as it is being created by rendering pages on-the-fly.” Ex. 1004, 4:19–21, *quoted in* Pet. 52. Bernardo further explains that its

preview function may enable the user to view the Web page as it is created. For example as various options are selected, a preview of the option(s) selected may be displayed for a user to observe. This ability is provided by the tool based on the templates without requiring the user to close the file and reopen it with a browser as would be the case if the user were writing HTML code. Thus, the tool enables pages/objects to be rendered on-the-fly.

Ex. 1004, 10:6–13, *quoted in* Pet. 52.

Petitioner argues that a person of ordinary skill in the art would have been motivated to include Bernardo’s preview feature in the ibook creation system of Reynolds to improve the user experience by providing “immediate visual feedback on the appearance of ibook webpages” to ibook creators and contributors. Pet. 54–56 (citing Ex. 1002 ¶¶ 101–102).

Patent Owner argues that Bernardo does not teach generating a display “substantially contemporaneously with the selection” of settings, as recited in claim 1. Prelim. Resp. 19–21. According to Patent Owner, “Petitioner readily admits” that Bernardo does not teach this aspect of claim 1, and Patent Owner provides the following quotation: “Bernardo does not [...] describe the specific timing with respect to the generation of the preview display.” Prelim. Resp. 19 (quoting Pet. 53 with alteration and ellipsis as added by Patent Owner).

We disagree with Patent Owner’s argument regarding Petitioner’s alleged admission. Petitioner’s argument is as follows: “Although Bernardo does not further describe the specific timing with respect to the generation of

the preview display, an ordinarily skilled artisan would have understood ‘on-the-fly’ rendering to satisfy any reasonable interpretation of generating the display ‘substantially contemporaneously with’ the above-mentioned user selections.” Pet. 53 (emphasis omitted) (citing Ex. 1002 ¶ 97). Thus, in reproducing Petitioner’s argument, Patent Owner substitutes a bracketed ellipsis for the word “further.” Patent Owner’s alteration of Petitioner’s quotation attempts to convey an admission that Petitioner does not make. Rather, Petitioner’s argument is that Bernardo’s disclosure of “on-the-fly” satisfies the disputed claim language, even though Bernardo does not “further” discuss the particular timing of the on-the-fly generation.

Patent Owner argues that Bernardo discloses that the user has the option of previewing a page after making selections but does not disclose that “a visual preview is updated in real time and simultaneously presented to the user.” Prelim. Resp. 20. On this record, we are sufficiently persuaded by Petitioner’s argument that rendering a page “on-the-fly” to “enable the user to view the Web page as it is created,” as disclosed in Bernardo (Ex. 1004, 10:6–13), teaches the “substantially contemporaneously” recitation of claim 1. See Pet. 52–53.

In view of the foregoing and on this record, we are sufficiently persuaded by Petitioner’s contentions, summarized above, for recitation 1(b).

c) Recitation 1(c)

Claim 1 recites that the method comprises “(c) storing information representative of said one or more user selected settings in a database.” Petitioner argues that “Reynolds discloses the claimed ‘database’ in the form of ibook Web pages database 76.” Pet. 56 (citing Ex. 1003, 7:36–39, 11:31–40). Petitioner contends that, “[i]n the combination of Reynolds and

Bernardo, it would have been obvious to ‘stor[e] information representative of said one or more user selected settings in a database,’ by storing the user selections made through the viewable menus (see claim 1[a] above) in Web pages database 76 of Reynolds.” Pet. 56 (citing Ex. 1002 ¶ 104). Petitioner also cites Witkowski to satisfy a “longer definition” of database and provides reasons that a person of ordinary skill in the art would have combined Witkowski’s database teachings with Reynolds, including that Reynolds discloses the use of a relational database, thereby “provid[ing] an express motivation.” Pet. 58–60 (citing Ex. 1003, 15:30–37; Ex. 1007, 1:20–25; Ex. 1002 ¶¶ 107–108).

Patent Owner argues that Petitioner’s contentions for this subject matter fail because the asserted combination does not teach a “website” and “user selectable settings,” referring to its arguments regarding step (a). Prelim. Resp. 21. For the reasons discussed above in § II.E.2.a above, we disagree, on this record, with Patent Owner’s arguments. We also note that recitation 1(c) does not recite “website.”

Patent Owner also argues that Petitioner’s contentions for recitation 1(c) are “inconsistent and difficult to discern.” Prelim. Resp. 21. We disagree and determine that Petitioner’s contentions, summarized above, are sufficiently set forth and are straightforward. See Pet. 56–60.

Patent Owner also disputes Petitioner’s rationale for relying on Witkowski in the proposed combination. Prelim. Resp. 22–23. On this record, we are sufficiently persuaded by Petitioner’s reasoning. As an initial matter, Petitioner argues that Reynolds itself discloses a database and only relies on Witkowski to satisfy a “longer definition” of database. Pet. 56–58. We agree that Reynolds discloses a database: “The content of the iBook Web pages is preferably stored in iBook Web pages database 76 (FIG. 3).”

Ex. 1003, 7:37–39, *quoted in* Pet. 56. The testimony of Patent Owner’s declarant, Mr. Weadock, supports Petitioner’s position: “[A]s Reynolds states, ibook content, passages, and derivation and attribution information may be stored in ‘passage databases,’ ‘a suitable relational database,’ an ‘object database,’ and using linking technology such as Object Linking and Embedding (OLE) and Component Object Model (COM).” Ex. 2001 ¶ 78 (citing Ex. 1003, 15:30–40). We are persuaded that, in the proposed combination, it would have been obvious to store user selection information in this database as the user selection information defines the ibook web pages. *See* Pet. 56–57. Because recitation 1(c) merely requires a “database,” and not any particular kind, Reynolds’s database disclosures suffice. Nevertheless, we are persuaded that using a relational database as in Witkowski would have been obvious to a person of ordinary skill in the art, as asserted by Petitioner. *See* Pet. 58–60. Patent Owner’s argument that a person of ordinary skill in the art “would have readily considered a variety of options for storing data, such as linked lists, lookup tables, registries, and non-relational databases” (Prelim. Resp. 23 (citing Ex. 2001 ¶ 78)) does not take away from Reynolds’s express disclosure of using relational databases. *See* Ex. 1003, 15:30–37 (describing the use of “a suitable relational database” for storing data pertaining to ibooks).

In view of the foregoing and on this record, we are sufficiently persuaded by Petitioner’s contentions, summarized above, for recitation 1(c).

d) Recitation 1(d)

Claim 1 recites that the method comprises “(d) generating a website at least in part by retrieving said information representative of said one or more user selected settings stored in said database.” Petitioner argues that “Reynolds’ navigation tool 84 running in the browser generates an ibook

website by retrieving passages from Web pages database 76, which include content representing selections made by the user.” Pet. 60; *see* Pet. 60–63 (citing Ex. 1003, 7:24–31, 7:57–8:11, 8:53–55, 11:24–26, 11:28–39, Fig. 7; Ex. 1002 ¶¶ 109–111).

Patent Owner argues that Petitioner’s contentions for this subject matter fail because the asserted combination does not teach a “website” and “user selected settings,” referring to its arguments regarding step (a).

Prelim. Resp. 24. For the reasons discussed above in § II.E.2.a above, we disagree, on this record, with Patent Owner’s arguments.

Patent Owner also argues that “Petitioner only mentions Bernardo in passing and fails to provide a substantive analysis of the combination.”

Prelim. Resp. 24. We disagree that Petitioner’s analysis is lacking in this regard. Petitioner argues that,

[a]s combined with Bernardo, Reynolds’ system generates the web pages for an ibook website by retrieving user selections from ibook Web pages database 76. For the same reasons that a skilled artisan would have been motivated to store user selections in Reynolds’ database—to allow the user greater control over the features and appearance of the website and its pages, as discussed for claim 1[d]—a skilled artisan would have been motivated to build and display ibook web pages according to those user selections.

Pet. 62 (citing Ex. 1002 ¶¶ 110–111). Thus, Petitioner’s contention is simply that, once the user selected settings have been accepted and stored, as discussed for steps (a) and (c) in the combination of Reynolds and Bernardo, it would have been obvious to use those selections to generate the resulting web pages for the ibook. We also disagree with Patent Owner’s contention that Petitioner relies only on the selection of Reynolds’s passages as user selected settings in step (d). *See* Prelim. Resp. 24 (citing Pet. 63). As the

quotation above from the Petition sets forth, Petitioner relies on the combination of Reynolds and Bernardo, in which user selected settings are accepted via a viewable menu, as discussed above in § II.E.2.a.

On this record, we are sufficiently persuaded by Petitioner's contentions. In particular, Reynolds's navigation tool 84 is used to navigate passages in an ibook and generate requests for those passages, and Reynolds's client displays the requested passages when received. Ex. 1003, 11:24–39, *cited in* Pet. 63. In the proposed combination, the user selected settings would be stored and retrieved to build the ibook web pages. *See* Pet. 62.

In view of the foregoing and on this record, we are sufficiently persuaded by Petitioner's contentions, summarized above, for recitation 1(d).

e) Recitation 1(e)

Claim 1 recites that the method comprises

(e) building one or more web pages to generate said website from at least a portion of said database and at least one run time file, where said at least one run time file utilizes information stored in said database to generate virtual machine commands for the display of at least a portion of said one or more web pages.

Petitioner argues that Reynolds's ibook web pages are built with passages from the ibook database, thereby teaching “building one or more web pages to generate said website from at least a portion of said database,” as recited in step (e). Pet. 63–64 (citing Ex. 1003, 1:29–30, 7:36–37, 11:24–39, Fig. 7; Ex. 1002 ¶ 112). Petitioner contends that Reynolds's navigation tool 84 is a “run time file,” as recited in step (e), because it is a plug-in that is downloaded to and executed on the client's browser. Pet. 64–65 (citing Ex. 1003, 5:28–37, 9:48–52, Fig. 8; Ex. 1002 ¶ 113). According to

Petitioner, Reynolds's navigation tool 84, when executed in the browser, "(a) downloads passages from ibook Web pages database 76, (b) builds web pages from the passages, and (c) presents those web pages to the user," and, therefore, Reynolds teaches "at least one run time file utilizes information stored in said database . . . for the display of at least a portion of said one or more web pages," as recited in step (e). Pet. 66 (citing Ex. 1003, 11:24–40; Ex. 1002 ¶ 114). Referring to its contentions for recitation 1[a][2], Petitioner further argues that it would have been obvious to implement navigation tool 84 as a Java applet, whereby it would "generate virtual machine commands," as recited in step (e). Pet. 66 (citing Ex. 1002 ¶ 115).

Patent Owner's arguments for step (e) refer to arguments that we have addressed above. For example, Patent Owner argues that Petitioner's contentions for this subject matter fail because the asserted combination does not teach a "website," referring to its arguments regarding step (a). Prelim. Resp. 25–26. For the reasons discussed above in § II.E.2.a above, we disagree, on this record, with Patent Owner's argument. Patent Owner also disputes Petitioner's reasons to combine Meyer's teachings of a Java virtual machine with Reynolds, referring to its arguments for recitation 1[a][2]. Prelim. Resp. 26–27. For the reasons discussed above in § II.E.2.a(3) and for those given at pages 68–69 of the Petition, we are sufficiently persuaded, on this record, that it would have been obvious to a person of ordinary skill in the art to implement Reynolds's navigation tool 84 as a Java applet, which would then generate virtual machine commands. See Ex. 1005, p. 5 ("[Y]ou can't run a Java program without also running an implementation of the Java Virtual Machine.").

In view of the foregoing and on this record, we are sufficiently persuaded by Petitioner's contentions, summarized above, for recitation 1(e).

f) Preliminary Determination for Claim 1

For the reasons discussed above and based on Petitioner’s contentions and evidence, we are persuaded, on this record, that Petitioner has shown a reasonable likelihood of prevailing in its argument that claim 1 is unpatentable as obvious over the combined teachings of Reynolds, Bernardo, Meyer, and Witkowski.

*F. Alleged Obviousness over
Reynolds, Bernardo, Meyer, Witkowski, and Coombs
(Claim 1)*

Petitioner asserts that claim 1 is unpatentable under 35 U.S.C. § 103(a) over the combined teachings of Reynolds, Bernardo, Meyer, Witkowski, and Coombs.¹⁰ Pet. 69–75. Petitioner notes that “Reynolds does not expressly use the word ‘website’ to describe the collection of ibook web pages” and argues that, “to the extent that Patent Owner were to argue that ‘website’ requires web pages be accessed using a separate and dedicated domain name (such as ‘www.domainname.com’),” this would have been obvious. Pet. 71 (emphasis omitted).

Patent Owner responds that Petitioner’s arguments “presuppose[] that the only potential deficiency in Reynolds’ disclosure of a ‘website’ is the lack of a ‘separate and dedicated domain name.’” Prelim. Resp. 27 (citing Pet. 71). Patent Owner argues that “Reynolds’ disclosure is lacking for many additional reasons” discussed in the first ground. Prelim. Resp. 27.

As discussed above in § II.E.2.a(1), we are persuaded, on this record, that Reynolds teaches a “website” as recited in claim 1. Therefore, for

¹⁰ On this record, we are persuaded that the evidence sufficiently establishes that Coombs was published before the December 2, 1999, filing date of the application for the ’397 patent. See Ex. 1024 ¶¶ 47–54; Pet. 20.

purposes of determining whether to institute trial, we need not rely on Petitioner's alternative argument for the "website" recitation of claim 1. Nevertheless, we have reviewed Petitioner's contentions, and we are persuaded, on this record, that it would have been obvious to a person of ordinary skill in the art to make Reynolds's ibook accessible under a separate and dedicated domain name in light of Coombs's teachings. See Pet. 69–75.

III. CONCLUSION

For the foregoing reasons, we determine that the information presented in the Petition establishes that there is a reasonable likelihood that Petitioner would prevail in challenging claim 1 of the '397 patent, and we institute *inter partes* review of claim 1 on all grounds raised in the Petition. See 37 C.F.R. 42.108(a) ("When instituting *inter partes* review, the Board will authorize the review to proceed on all of the challenged claims and on all grounds of unpatentability asserted for each claim."). At this stage of the proceeding, we have not made a final determination with respect to the patentability of any of the challenged claims or the construction of any claim term.

IV. ORDER

Accordingly, it is

ORDERED that, pursuant to 35 U.S.C. § 314(a) and 37 C.F.R. § 42.4, an *inter partes* review is hereby instituted as to claim 1 of the '397 patent on all challenges raised in the Petition; and

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

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Patent 6,546,397 B1

FOR PETITIONER:

Heidi L. Keefe
Phil Morton
Dustin Knight
Andrew Mace
Chih Yun Wu
COOLEY LLP
hkeefe@cooley.com
pmorton@cooley.com
dknight@cooley.com
amace@cooley.com
swu@cooley.com

FOR PATENT OWNER:

David Alberti
Sal Lim
Russell Tonkovich
David Wiggins
FEINBERG DAY KRAMER ALBERTI
LIM TONKOVICH & BELLOLI LLP
dalberti@feinday.com
slim@feinday.com
rtonkovich@feinday.com
dwiggins@feinday.com

Bridget Smith
LOWENSTEIN & WEATHERWAX LLP
smith@lowensteinweatherwax.com