

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

FACEBOOK, INC.,
Petitioner,

v.

EXPRESS MOBILE, INC.,
Patent Owner.

IPR2021-01226
Patent 7,594,168 B2

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 claims 1–4 and 6 of U.S. Patent No. 7,594,168 B2 (“the ’168 patent,” Ex. 1001). Paper 1 (“Pet.”). Express Mobile, Inc. (“Patent Owner”) filed a Preliminary Response. Paper 7 (“Prelim. Resp.”).

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 all challenged claims 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, including an *ex parte* reexamination of the ’168 patent. Pet. 1–7; Paper 4, 1–10; see Reexamination Control No. 90/014,615.

C. Real Parties in Interest

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

D. The ’168 Patent and Illustrative Claim

The ’168 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, 1:13–15. Independent claim 1,

from which claims 2–4 and 6 depend, is reproduced below with bracketed identifiers for the claim recitations.

1. A system for assembling a web site comprising:
 - [a] a server comprising a build engine configured to:
 - [b] accept user input to create a web site, the web site comprising a plurality of web pages, each web page comprising a plurality of objects,
 - [c] accept user input to associate a style with objects of the plurality of web pages, wherein each web page comprises at least one button object or at least one image object, and wherein the at least one button object or at least one image object is associated with a style that includes values defining transformations and time lines for the at least one button object or at least one image object; and
 - [d] wherein each web page is defined entirely by each of the plurality of objects comprising that web page and the style associated with the object,
 - [e] produce a database with a multidimensional array comprising the objects that comprise the web site including data defining, for each object, the object style, an object number, and an indication of the web page that each object is part of, and
 - [f] provide the database to a server accessible to web browser;
 - [g] wherein the database is produced such that a web browser with access to a runtime engine is configured to generate the web-site from the objects and style data extracted from the provided database.

E. Asserted Grounds of Unpatentability

Petitioner presents the following grounds:

Claims Challenged	35 U.S.C. §	References/Basis
1–4, 6	103(a)	Reynolds, ¹ Lemay Web, ² Lemay Java, ³ Perry, ⁴ Witkowski ⁵
1–4, 6	103(a)	Reynolds, Lemay Web, Lemay Java, Perry, Witkowski, Coombs ⁶

II. ANALYSIS

A. 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

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

² L. Lemay, *Teach Yourself Web Publishing with HTML 3.2 in a Week*, 3rd ed. © 1996 (Ex. 1004).

³ L. Lemay and C. Perkins, *Teach Yourself JAVA in 21 Days*, © 1996 (Ex. 1005).

⁴ G. Perry, *C++ Programming 101*, © 1992 (Ex. 1006).

⁵ US 6,125,360, issued Sept. 26, 2000 (Ex. 1007).

⁶ J. Coombs et al., *Setting Up an Internet Site for Dummies*, 3rd ed. © 1998 (Ex. 1008).

considerations, if in evidence.⁷ *Graham v. John Deere Co. of Kan. City*, 383 U.S. 1, 17–18 (1966).

B. Level of Ordinary Skill in the Art

Citing the testimony of its declarant, Dr. Vijay Madisetti, 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 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. Acquired as part of the person's basic computer education and/or experience, as the '168 patent makes clear, a person of ordinary skill in the art would have had a working knowledge about various ways to implement websites and providing webpages to browsers upon request. (*Id.*)

Pet. 12–13.

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

⁷ Patent Owner does not present any objective evidence of nonobviousness (i.e., secondary considerations) as to any of the challenged claims.

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.D–E 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.

C. 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 “in the interests of complete disclosure.” Pet. 15–18. Patent Owner does not provide a separate claim construction discussion in its Preliminary Response, but in one of its arguments, Patent Owner asserts that “the ’168 patent clearly describes styles as independent collections of attributes which are either preset or modifiable and are applied to objects as a set by the authoring tool.” Prelim. Resp. 9 (citing Ex. 1001, 31:57–32:18). Patent Owner does not elaborate on this argument nor explain how the cited passage from the ’168 patent supports such an interpretation. We address the parties’ contentions regarding “style” below in § II.D.2.b(1) and 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))).

*D. Alleged Obviousness over
Reynolds, Lemay Web, Lemay Java, Perry, and Witkowski
(Claims 1–4, 6)*

Petitioner asserts that claims 1–4 and 6 are unpatentable under 35 U.S.C. § 103(a) over the combined teachings of Reynolds, Lemay Web, Lemay Java, Perry, and Witkowski. Pet. 10, 20–73. Patent Owner opposes. Prelim. Resp. 4–19.

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.⁸

2. Claim 1

a) Recitations 1[a] and 1[b]

Petitioner argues that Reynolds’s disclosure of assembling an ibook made up of web pages teaches “[a] system for assembling a web site,” as recited in the preamble of claim 1. Pet. 20–22 (citing Ex. 1003, code (57), 1:25–27, 1:30–31, 1:34–38, 7:57–67, 8:53–60, 11:24–40, Fig. 7; Ex. 1002 ¶ 65).

Petitioner argues that Reynolds’s ibook server 56 and ibook server application 64 correspond, respectively, to the “server” and the “build

⁸ On this record, we are persuaded that the evidence sufficiently establishes that Lemay Web, Lemay Java, and Perry were published before the December 2, 1999, filing date of the application to which the ’168 patent claims priority. See Ex. 1024 ¶¶ 48–54 (addressing Ex. 1005), 55–62 (addressing Ex. 1004), 63–69 (addressing Ex. 1006); 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 claimed December 1999 priority date of the ’168 patent. (EX1024, ¶¶40-69.).”). At this stage, Patent Owner does not challenge the prior art status of any of the applied references.

engine” recited in 1[a] (“a server comprising a build engine”). Pet. 22–23 (citing Ex. 1003, 5:18–20, Fig. 3; Ex. 1002 ¶ 67).

Claim 1 recites that the “build engine” is “configured to” perform several operations. The first operation is to “accept user input to create a web site, the web site comprising a plurality of web pages, each web page comprising a plurality of objects” (recitation 1[b]). Petitioner argues that Reynolds’s ibook, which is made up of web pages, is a “website” and that each web page of an ibook is made up of passages, i.e., “objects.” Pet. 23–27 (citing Ex. 1003, 1:29–30, 1:34–38, 7:36–37, 7:57–67, 8:4–11, 9:52–54, 11:7–11, 11:24–40, 11:43–55, Fig. 7; Ex. 1002 ¶¶ 68–71). Petitioner further argues that Reynolds’s authoring tool accepts user input to create the ibook. Pet. 27–30 (citing Ex. 1003, 5:21–23, 5:28–37, 7:2–5, 7:23–28, 7:37–39, 9:27–30, Figs. 3, 6; Ex. 1002 ¶¶ 73–75).

Patent Owner argues that Reynolds’s ibook is not a web site but a “Web robot” and that “[t]here is no evidence provided in the petition that a ‘Web robot’ is a web site or even has the characteristics of a web site.” Prelim. Resp. 5–7 (citing Ex. 1003, 1:24–29, 14:14–24, Fig. 3; Ex. 2001 ¶¶ 30–31; Pet. 20–24). 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. 6 (citing Ex. 2001 ¶ 31). Patent Owner also argues that “the only mention in Reynolds of the term ‘Web site’ explicitly refers to Web sites as targets for the advertisement of an ibook, differentiating the two terms.” Prelim. Resp. 6 (citing Ex. 1003, 14:14–24; Ex. 2001 ¶ 30).⁹

⁹ 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.

On this record, we are sufficiently persuaded by Petitioner’s showing that Reynolds’s ibook is a “web site.” See Pet. 20–22. Reynolds discloses that its “interactive Web book (‘ibook’)” is accessible over the Internet and “is preferably organized in the form of Web pages.” Ex. 1003, 1:24–30, *quoted in relevant part in* Pet. 20. Thus, Reynolds discloses that its ibook “compris[es] a plurality of web pages,” as required of the “web site” recited in claim 1. Reynolds’s disclosure that its Web book (ibook) “is resident on a data network such as the Internet” (Ex. 1003, 1:27–29) further supports, on this record, Petitioner’s position that the ibook is a web site. For these reasons, on this preliminary record, we are persuaded by Petitioner’s argument that Reynolds’s ibook is a “web site” as recited in claim 1.

In view of the foregoing and on this record, we are sufficiently persuaded by Petitioner’s contentions, summarized above, for the preamble¹⁰ of claim 1 and recitations 1[a] and 1[b].

b) Recitation 1[c]

The second operation of the build engine is to accept user input to associate a style with objects of the plurality of web pages, wherein each web page comprises at least one button object or at least one image object, and wherein the at least one button object or at least one image object is associated with a style that includes values defining transformations and time lines for the at least one button object or at least one image object (recitation 1[c]). Petitioner relies on a combination of Reynolds and Lemay Web for this subject matter and additionally relies on the teachings of Lemay Java to address a particular interpretation of “time lines.” Pet. 30–

¹⁰ 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.

40. According to Petitioner, Reynolds discloses that passages of an ibook “can include not just text but also graphic images, animation sequences, and executable code modules.” Pet. 30 (citing Ex. 1003, 8:4–11, 9:52–54). Petitioner argues that Reynolds “contemplates that authoring tool 86 will have functionality for the user to place content on an ibook web page, but Reynolds does not further detail the specific user inputs provided through authoring tool 86.” Pet. 31 (citing Ex. 1002 ¶¶ 78–84). Petitioner relies on Lemay Web’s disclosure of placing an animated image of a pocket watch on a web page to show specifying a style for a button object or an image object that is added to a web page. Pet. 31–35 (citing Ex. 1004, pp. 254–57, Fig. 9.10; Ex. 1002 ¶¶ 80, 83–84). Petitioner contends that Lemay Web’s “<PARAM>” tags define transformations and time lines of the object because they specify how the animated object changes from one state to the next as the animation progresses. Pet. 35–36 (citing Ex. 1002 ¶¶ 85–86); *see also* Pet. 36–37 (relying on Lemay Java to show time lines that are “independent” and “asynchronous”). Petitioner provides various reasons that it would have been obvious to combine the Java teachings of Lemay Web and Lemay Java with Reynolds, including that Reynolds discloses that its passages can be implemented as Java programs and that Lemay Web discloses pre-built Java animator applets that allow animation to be easily included in a web page. Pet. 38–40 (citing Ex. 1003, 8:7–11, 9:52–54, 9:56–58; Ex. 1004, p. 254; Ex. 1002 ¶¶ 90–91, 93).

Patent Owner argues that the proposed combination does not teach the claimed “style,” and Patent Owner also disputes Petitioner’s rationale to combine. Prelim. Resp. 8–11. We address both issues below.

(1) Style

Patent Owner argues that Petitioner’s asserted combination of references does not teach the claimed “style” in recitation 1[c]. Prelim. Resp. 8–11. Patent Owner asserts that Lemay’s disclosure “of manually programming individual attributes into page code while creating an object” is different from a “style” of the ’168 patent. Prelim. Resp. 9. According to Patent Owner, “the ’168 patent clearly describes styles as independent collections of attributes which are either preset or modifiable and are applied to objects as a set by the authoring tool.” Prelim. Resp. 9 (citing Ex. 1001, 31:57–32:18).

On this record, we do not agree with Patent Owner’s attempted distinction over the art. The portion of the ’168 patent cited by Patent Owner states that styles can be individualized for each object. For example, the ’168 patent states that

[f]lags are kept for every possible style setting for each object. If a given object is edited through the text button, image, or interaction menus or other interface objects of the panel 400, the flags are set for any setting[s] that are changed. If that style is subsequently changed, only those settings that have not had their flags set will be changed for any given object.

Ex. 1001, 32:12–18, *cited in* Prelim. Resp. 9. This quoted passage shows that the values for the style of an object can be individually set in the ’168 patent through user input. Lemay Web discloses that a user assigns values for various parameters of an animated Java object. Ex. 1004, pp. 255–57, *cited in* Pet. 31–34. Thus, on this record, we are sufficiently persuaded by Petitioner’s contention that Lemay Web, in combination with Reynolds, teaches “accept[ing] user input to associate a style with objects,” consistent with the disclosure of the ’168 patent. *See* Pet. 31–34.

Patent Owner also argues that “Petitioner draws no distinction between” the values in Lemay Web for various visual attributes “and the ‘style,’ though these necessarily must be separate and distinct concepts because they are identified separately in the claim language.” Prelim. Resp. 9 (citing Pet. 34). Claim 1 of the ’168 patent, however, recites “a style that includes values defining transformations and time lines.” Therefore, the “style” is defined, at least in part, by the recited “values.” On this record, we do not agree with Patent Owner’s assertion of a deficiency in Petitioner’s contentions on this basis.

(2) Rationale to Combine Reynolds, Lemay Web, and Lemay Java

Patent Owner offers several arguments against Petitioner’s reasoning to combine Reynolds, Lemay Web, and Lemay Java. Prelim. Resp. 9–11.

Patent Owner argues that “Reynolds and Lemay Web are not directed to the same technology.” Prelim. Resp. 9 (citing Ex. 2001 ¶48–49). We understand this argument to be directed to the analogousness of the references, and we note that this inquiry is directed to whether the prior art references are “analogous to the claimed invention,” not to each other. *In re Bigio*, 381 F.3d 1320, 1325 (Fed. Cir. 2004). A prior art reference qualifies as analogous art (1) if it is from the same field of endeavor as the claimed invention, regardless of the problem addressed, or (2) if the reference is not within the field of the inventor’s endeavor, it is nonetheless reasonably pertinent to the particular problem with which the inventor is involved. *Id.* Patent Owner argues that Reynolds concerns “Web robots,” not “web sites,” thereby suggesting that Reynolds is not in the ’168 patent’s field of endeavor. Prelim. Resp. 9–10 (citing Ex. 1003, 1:26–29). For the reasons explained above in § II.D.2.a, we are sufficiently persuaded, on this record, that Reynolds’s iBook is a website, and, therefore, we disagree with Patent

Owner’s field of endeavor argument. On this record, we are sufficiently persuaded by Petitioner’s contention that “Reynolds, Lemay Web, and Lemay Java are analogous references in the same field as the ’168 patent.” See Pet. 38 (citing Ex. 1002 ¶ 92).

Patent Owner also argues that Petitioner does not identify any problems faced by Reynolds even though Petitioner’s combination is premised “chiefly on the idea that *Reynolds* ‘faced’ ‘a host of problems’ in ‘building [the Reynolds] web site building system.’” Prelim. Resp. 10 (alteration added by Patent Owner) (citing Pet. 38; Ex. 2001 ¶¶ 48–54). Petitioner’s argument, however, does not refer to problems with Reynolds; rather, the cited portion of the Petition addresses the second prong of the analogous art test, namely that “Reynolds, Lemay Web, and Lemay Java are analogous references in the same field as the ’168 patent, and *are reasonably pertinent to a host of problems faced by the inventors in building their web site building system.*” Pet. 38 (emphasis added) (citing Ex. 1002 ¶ 92). As noted above, we are sufficiently persuaded that Reynolds, Lemay Web, and Lemay Java are analogous art because they are in the field of the endeavor of the claimed invention. Thus, we need not rely on the second prong of the analogous art test for purposes of this Decision. Nevertheless, we note that Dr. Madisetti’s testimony addresses this issue: “Lemay Web and Lemay Java would also have been pertinent to a plethora of issues faced by the inventors in implementing the alleged invention, including how to define and implement objects and specifying attributes defining how those objects will appear and behave on a web page.” Ex. 1002 ¶ 92; *but cf.* Prelim. Resp. 10 (arguing that “Petitioner and its expert do not identify even *one* of the ‘host of problems’ faced by Reynolds”).

Patent Owner further contends that Petitioner’s argument that Reynolds “clearly contemplates that a passage could include the Animator Java applet described in Lemay Web” (Pet. 39) “mischaracterizes the claim” because “the claim does not require simply that a single passage *could* include a single animated image object.” Prelim. Resp. 10. According to Patent Owner, Petitioner does not explain why a person of ordinary skill in the art “would have been motivated to create a combination wherein *each passage* includes animated image objects when *Reynolds* is centered around text-based ibooks.” Prelim. Resp. 10–11 (citing Ex. 2001 ¶ 52).

On this record, we disagree with Patent Owner’s arguments because Reynolds’s ibooks are not limited to text-based books. Rather, Reynolds discloses that, “[i]f an ibook contains multimedia material, passages 152 can be graphic images, animation sequences, portions of a sound track, still video images, or video clips.” Ex. 1003, 8:7–10. Petitioner’s argument that Reynolds “contemplates that a passage could include the Animator Java applet described in Lemay Web” (Pet. 39) simply notes that Reynolds expressly discloses that an ibook passage may be “a Java program.” Ex. 1003, 9:56–58, *quoted in* Pet. 39. Thus, Reynolds discloses that an ibook passage can be an “animation sequence[]” and “a Java program.” Ex. 1003, 8:7–10, 9:56–58; *see also* Ex. 1003, 8:10–11 (“If an ibook contains executable material, passages 152 can be modules of code.”). In view of these disclosures, we are sufficiently persuaded, on this record, that a person of ordinary skill in the art “would have had many motivations to implement Reynolds’ ibook system” using a Java animator applet, including that Lemay Web discloses pre-built Java animator applets that allow animation to be easily included in a web page. *See* Pet. 39–40 (citing Ex. 1004, p. 254; Ex. 1002 ¶¶ 90, 93).

(3) Preliminary Determination for Recitation 1[c]

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

c) Recitation 1[d]

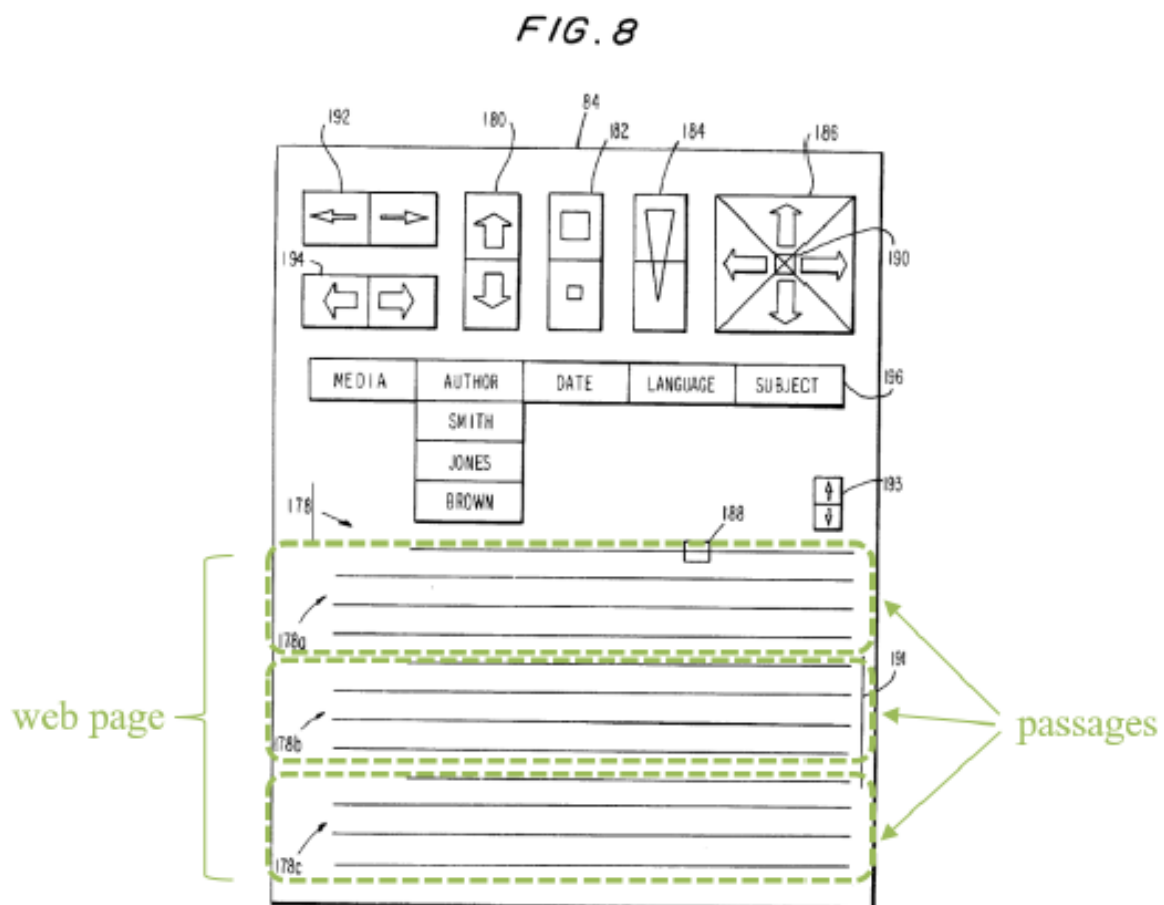
Claim 1 also recites "wherein each web page is defined entirely by each of the plurality of objects comprising that web page and the style associated with the object" (recitation 1[d]). Petitioner argues that Reynolds, as modified by Lemay Web and Lemay Java, teaches this subject matter "because each ibook web page is nothing more than a collection of passages" displayed according to their associated styles. Pet. 40–43 (citing Ex. 1003, 7:37–39, 7:66–67, 8:7–10, 9:27–30, 9:54–56, 9:62–10:16, 10:27–38, Figs. 7, 8; Ex. 1002 ¶¶ 95–96).

Patent Owner makes several arguments disputing Petitioner's contentions for recitation 1[d]. We address each below.

Patent Owner argues that the references do not teach the claimed "style." Prelim. Resp. 11. For the reasons discussed above in § II.D.2.b(1), we disagree.

Patent Owner also argues that Petitioner has not explained how it would have been obvious that "each passage would have included an animated image object" in the proposed combination (Pet. 40) when Reynolds "is directed to ibooks, which are web-based books consisting primarily of text, not slideshows of animated images devoid of readable content." Prelim. Resp. 12 (citing Pet. 34, 38, 43). As discussed above in § II.D.2.b(2), however, Reynolds discloses that an ibook may contain multimedia material such that passages are animation sequences. Ex. 1003, 8:7–10. Thus, Reynolds's express disclosure contradicts Patent Owner's position.

Patent Owner further argues that Petitioner improperly excludes navigation tool 84 in Reynolds's Figure 8 from the asserted "web page" to meet the "defined entirely" aspect of recitation 1[d]. Prelim. Resp. 12–13 (citing Pet. 41–42; Ex. 1003, 10:35–52). Patent Owner's argument is best understood with reference to Petitioner's annotated version of Reynolds's Figure 8, reproduced below.



Pet. 42. Reynolds's Figure 8 above depicts iBook navigation tool 84, and Petitioner adds annotations to show the "web page" as made up of the passages. Ex. 1003, 9:48–49; Pet. 42. Petitioner argues that the on-screen buttons and menus at the top of Figure 8 "are not part of the actual web page but" instead are "user interface features of navigation tool 84" and, therefore, that "all content displayed for an iBook web page is based on the

passages 152 associated with the page.” Pet. 42 (citing Ex. 1003, 9:54–56, 9:62–10:16, 10:27–38; Ex. 1002 ¶ 95).

Patent Owner argues that Petitioner’s contentions are undermined by the fact that menu 196 in Figure 8 “contain[s] information drawn from the passages of the ibook.” Thus, Patent Owner argues, when the web page is properly considered to include the navigation elements, the web page is not “defined entirely” by the passages and their associated styles. Prelim. Resp. 13.

On this record, we are sufficiently persuaded by Petitioner’s contentions, which include the annotated version of Reynolds’s Figure 7 reproduced below.

contributor who has previously navigated through the material using scroll buttons 186 and derivation traverse buttons 192.” Ex. 1003, 10:27–31. Thus, Reynolds describes the navigation tool as separate from the web pages and used to navigate between web pages. Similarly, Reynolds explains that cursor keys 186 move the cursor within a passage “on a given iBook Web page 138.” Ex. 1003, 10:1–2. Reynolds also discloses that navigation tool 84 is implemented by downloading a client plug-in to add capabilities to a web browser. Ex. 1003, 5:28–37. Thus, navigation tool 84 is not downloaded as part of the iBook web pages. Based on Reynolds’s distinction between the navigation buttons and the web pages themselves, we are sufficiently persuaded, on this record, by Petitioner’s contentions that the combination of Reynolds, Lemay Web, and Lemay Java teaches a plurality of web pages where each is “defined entirely” by the passages and styles associated with those passages. See Pet. 40–43. We also do not agree with Patent Owner that menu 196 must be part of the web page merely because it contains material drawn from passages of an iBook. We see nothing in the claim prohibiting information derived from “objects” from being used in other aspects outside of the recited “web pages.”

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

d) Recitation 1[e]

The third operation recited for the “build engine” is to “produce a database with a multidimensional array comprising the objects that comprise the web site including data defining, for each object, the object style, an object number, and an indication of the web page that each object is part of” (recitation 1[e]). Petitioner argues that Reynolds teaches producing a

database having the website objects and associated object information. Pet. 43–49 (citing Ex. 1003, 1:34–38, 5:19–23, 7:37–39, 7:66–8:2, 9:27–30, 11:28–40, Figs. 3, 7; Ex. 1002 ¶¶ 98–102). Petitioner argues that “the claimed database with a multidimensional array would have been obvious to an ordinarily skilled artisan in view of Perry and Witkowski.” Pet. 49 (citing Ex. 1002 ¶¶ 104–109). Petitioner relies on Perry for its disclosure of multidimensional arrays, such as a two dimensional table, and on Witkowski for its disclosure of using multidimensional arrays in databases. Pet. 49–53 (citing Ex. 1006, p. 456; Ex. 1007, 1:20–25, 15:54–59, Fig. 4A; Ex. 1002 ¶¶ 105–106, 108–109). Petitioner argues that it would have been obvious to implement Reynolds’s database using a two-dimensional array, with “the most straightforward” configuration having rows corresponding to passages and columns with data relating to the passages. Pet. 54 (citing Ex. 1002 ¶ 110). Petitioner provides various rationales for making the combination, including that Reynolds expressly discloses storing web page information in tables in a relational database. Pet. 54–57 (citing Ex. 1003, 15:30–37; Ex. 1006, p. 456; Ex. 1002 ¶¶ 111–113).

Patent Owner makes several arguments disputing Petitioner’s contentions for recitation 1[e]. Prelim. Resp. 14–18. We address each below.

Patent Owner argues that Petitioner’s contentions for this recitation fail because Reynolds does not disclose a web site. Prelim. Resp. 14. For the reasons discussed above in § II.D.2.a, we disagree.

Patent Owner also argues that Petitioner relies on Lemay Web and Lemay Java to teach a “style” in recitation 1[c] but does not rely on them for recitation 1[e], which also recites “style.” Prelim. Resp. 14. According to Patent Owner, Petitioner does this “to avoid a five-reference combination for

a single claim element.” Prelim. Resp. 14–15. We do not read the Petition so narrowly. Petitioner’s focus for recitation 1[e] is on the “multidimensional array,” and Petitioner explains that the combination would use such an array with “a number of columns (‘including data defining, for each object’) containing the above-discussed data relating to passages.” Pet. 54 (citing Ex. 1002 ¶ 110). Thus, the proposed combination would include the “style” for each passage, as discussed above in § II.D.2.b(1) for recitation 1[c].

Patent Owner also disputes Petitioner’s contention regarding the storage of an object number in the database. Prelim. Resp. 15–16. Petitioner argues that Reynolds “discloses the association of a passage with a numeric value (‘object number’)” as shown by the numerals in Figure 7, but Petitioner acknowledges that “Reynolds does not specify whether the passage numbers discussed above are stored in the database (as opposed to identifying passages in the figure).” Pet. 47–48 (citing Ex. 1003, 7:67–8:2, Fig. 7; Ex. 1002 ¶ 101). Petitioner argues that, “in order to keep track of the web pages containing a particular passage, the system must assign some kind of value to each passage in the database to allow it to be identified,” and Petitioner contends that a person of ordinary skill in the art “would have appreciated that a number is the simplest and most easily-implemented way of representing such an identifier.” Pet. 48 (citing Ex. 1002 ¶ 102).

Patent Owner argues that Petitioner’s contention “is based on a speculative interpretation of the visual annotations of Reynolds’ Fig. 7.” Prelim. Resp. 15 (citing Pet. 46–48). Patent Owner also disputes Petitioner’s contention that using numbers would have been the “simplest” way, arguing instead that “[t]here are a variety of simple ways of tracking such associations not involving separately-stored numerical identifiers, such

as having each web page contain a list of pointers to passages related to that web page.” Prelim. Resp. 16 (citing Ex. 2001 ¶ 58).

On this record, we are sufficiently persuaded by Petitioner’s contentions. Reynolds expressly discloses numbers for each passage. Ex. 1003, 7:66–8:2, Fig. 7. Even if it would have been simpler to identify passages using pointers, as Patent Owner asserts (Prelim. Resp. 16), the pointer could still be considered “data defining . . . an object number” as recited in claim 1. As Petitioner points out, “some kind of value” must be assigned to each passage to allow the passage to be identified. See Pet. 48 (citing Ex. 1002 ¶ 102). Thus, on this record, we are sufficiently persuaded that Reynolds “renders obvious storing ‘an object number,’” as asserted by Petitioner. Pet. 46.

Patent Owner also argues that Petitioner’s reasoning to combine for recitation 1[e] “is generalized, conclusory, and speculative” and that “Petitioner does not attempt to provide any specific analysis as to why a [person of ordinary skill in the art] would have looked to Perry and Witkowski when considering Reynolds at any point in connection with claim 1[e].” Prelim. Resp. 16.

We disagree with Patent Owner and determine, on this record, that Petitioner provides sufficient articulated reasoning for the proposed combination. Reynolds expressly discloses using a table in a relational database to store passage information:

Although various information concerning the ibook passages, such as derivation linking information, derivation type information, passage characteristics, and attribution information have been described as being stored in passage databases, a suitable alternative is to store this information in the Web pages that contain the passages or as a set of relations and tables in a

suitable relational database, or as a set of objects in an object database.

Ex. 1003, 15:30–37, *quoted in* Pet. 55–56. On this record, we are sufficiently persuaded that Reynolds’s express disclosure of using a table in a relational database supports Petitioner’s proposed combination to achieve the “multidimensional array” aspect of recitation 1[e]. Perry and Witkowski provide additional useful background on tables in databases. Petitioner cites Perry to show that a table is an example of a multidimensional array having two dimensions represented by rows and columns. Pet. 49–51 (citing Ex. 1006, pp. 455–56; Ex. 1002 ¶¶ 105–106, 108). For example, Perry discloses that “[m]ultidimensional arrays, sometimes called *tables* or *matrices*, have at least two dimensions (rows and columns).” Ex. 1006, p. 455. Witkowski provides further details on implementing tables in relational databases. Ex. 1007, 1:20–25, 15:54–59, Fig. 4A); *see* Pet. 51–53. On this record, therefore, we are sufficiently persuaded by Petitioner’s reasoning to combine the teachings of Perry and Witkowski with Reynolds, as modified by Lemay Web and Lemay Java.

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

e) Recitation 1[f]

The fourth operation recited for the “build engine” is to “provide the database to a server accessible to web browser” (recitation 1[f]). Petitioner argues that “Reynolds discloses that web pages database 76 is provided to a server accessible to web browser 82.” Pet. 57–59 (citing Ex. 1003, 5:19–22, 5:27–31, 5:35–37, 11:24–39, Fig. 3; Ex. 1002 ¶¶ 114–115). Referring to Figure 3, Reynolds discloses that ibook client 60 runs web browser 82 with

added capabilities from downloaded client plug-ins 80. Ex. 1003, 5:28–33, *cited in* Pet. 58.

Patent Owner does not address Petitioner’s contentions for recitation 1[f] at this stage of the proceeding.

On this record, we are sufficiently persuaded by Petitioner’s contentions, summarized above, for recitation 1[f].

f) Recitation 1[g]

Claim 1 also recites “wherein the database is produced such that a web browser with access to a runtime engine is configured to generate the web-site from the objects and style data extracted from the provided database” (recitation 1[g]). Petitioner identifies Reynolds’s navigation tool 84 as the recited “runtime engine” and argues that web browser 82 executing navigation tool 84 generates the web site as recited in the claim. Pet. 59–62 (citing Ex. 1003, 5:28–31, 5:35–37; Ex. 1002 ¶¶ 116).

Patent Owner argues that the asserted combination of references does not teach a “web site” and a “style” and, therefore, “cannot disclose or render obvious claim 1[g].” Prelim. Resp. 18–19. For the reasons discussed above in §§ II.D.2.a and II.D.2.b(1), we disagree, on this record, with these arguments.

On this record, we are sufficiently persuaded by Petitioner’s contentions, summarized above, for recitation 1[g].

g) 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, Lemay Web, Lemay Java, Perry, and Witkowski.

3. *Claims 2–4, 6*

Petitioner also asserts that claims 2–4 and 6 are unpatentable as obvious over the combined teachings of Reynolds, Lemay Web, Lemay Java, Perry, and Witkowski. Pet. 62–73. Patent Owner refers to its arguments for claim 1 and does not set forth additional arguments for claims 2–4 and 6 at this stage of the proceeding. Prelim. Resp. 19. We have reviewed Petitioner’s contentions, and we are sufficiently persuaded, on this record, that Petitioner has shown a reasonable likelihood of prevailing in its argument that claims 2–4 and 6 are unpatentable as obvious over the combined teachings of Reynolds, Lemay Web, Lemay Java, Perry, and Witkowski.

E. Alleged Obviousness over Reynolds, Lemay Web, Lemay Java, Perry, Witkowski, and Coombs (Claims 1–4, 6)

Petitioner asserts that claims 1–4 and 6 are unpatentable under 35 U.S.C. § 103(a) over the combined teachings of Reynolds, Lemay Web, Lemay Java, Perry, Witkowski, and Coombs.¹¹ Pet. 73–79. Petitioner notes that “Reynolds does not expressly use the word ‘website’ to describe the collection of ibook web pages” and argues that, “[i]n the event Patent Owner were to argue that ‘website’ requires that the ibook web pages be accessed through a separate and dedicated domain name (such as ‘www.domainname.com’),” this would have been obvious. Pet. 74 (emphasis omitted).

¹¹ 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 to which the ’168 patent claims priority. See Ex. 1024 ¶¶ 40–47; Pet. 20.

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. 20 (citing Pet. 74–75). Patent Owner argues that “Reynolds’ disclosure is lacking for many additional reasons” discussed in the first ground. Prelim. Resp. 20.

As discussed above in § II.D.2.a, we are persuaded, on this record, that Reynolds teaches a “web site” as recited in claim 1. Therefore, for purposes of determining whether to institute trial, we need not rely on Petitioner’s alternative argument for the “web site” 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. 73–78.

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 at least one claim of the ’168 patent, and we institute *inter partes* review of all challenged claims 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 claims 1–4 and 6 of the '168 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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