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Paper 10
Entered: May 18, 2022

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

GOOGLE LLC,

Petitioner

v.

DEFENDERS OF THE AMERICAN DREAM, LLC,

Patent Owner.

Case IPR2022-00112
Patent 8,621,578 B1

Before PATRICK M. BOUCHER, AARON W. MOORE, and STEVEN M. AMUNDSON, *Administrative Patent Judges*.

MOORE, *Administrative Patent Judge*.

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

I. INTRODUCTION

Google LLC ("Petitioner") filed a Petition (Paper 2, "Pet.") for *inter partes* review of claims 1–17 of U.S. Patent No. 8,621,578 B2 (Ex. 1001, "the '578 patent"). Defenders of the American Dream, LLC ("Patent Owner") filed a Preliminary Response (Paper 6, "Prelim. Resp."). With our permission, Petitioner filed a Reply to the Preliminary Response (Paper 9, "Prelim. Reply"). Patent Owner elected to not file the authorized sur-reply.

We have authority to determine whether to institute an *inter partes* review. *See* 35 U.S.C. § 314; 37 C.F.R. § 42.4(a).

Having considered the parties' submissions, and for the reasons explained below, we do not institute *inter partes* review.

A. Related Matters

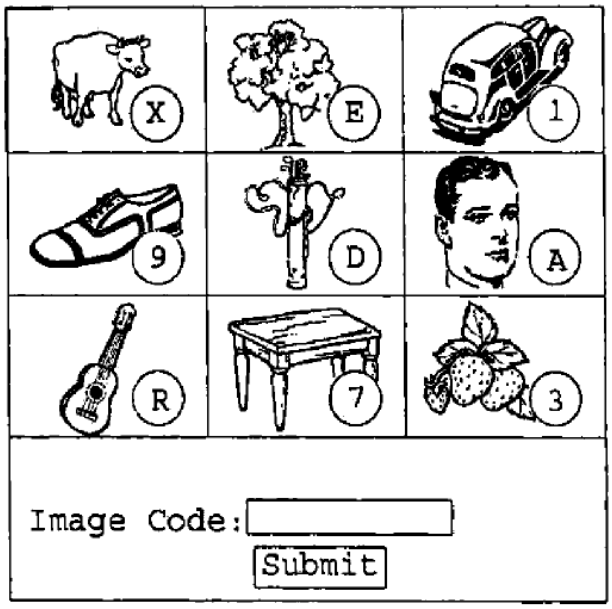
Petitioner states that the '578 patent "was asserted in the following proceedings in the Southern District of California, each of which has been dismissed with prejudice": "(i) *Confident Technologies, Inc. v. Best Buy Co., Inc.*, Case No. 3:18-cv-02552; (ii) *Confident Technologies, Inc. v. Fandango Media, LLC*, Case No. 2:18-cv-03035; (iii) *Confident Technologies, Inc. v. AXS Group LLC et al.*, Case No. 3:17-cv-02181; (iv) *Confident Technologies, Inc. v. Live Nation Entertainment, Inc. et al.*, Case No. 3:17-cv-01066." Pet. xii. Petitioner also identifies U.S. Patent Application No. 14/028,979, filed September 17, 2013, as claiming the benefit of the priority of the filing date of the '578 patent (*see id.*), but that application was abandoned in 2016.

Patent Owner states that "[t]he present *inter partes* review proceeding is not related to any pending judicial or administrative matters." Paper 4, 1.

B. The '578 Patent

1. Technical Description

The '578 patent is directed to "a system and method to tell apart a human from a computer using a test generally known as a Completely Automated Public test to Tell Computers and Humans Apart," that type of test being abbreviated as a "CAPTCHA." Ex. 1001, 2:39–42. Figure 1 of the patent depicts "an embodiment of the CAPTCHA-like test of the present invention" (*id.* at 3:18–19):



"FIG. 1 illustrates an example of a dynamic graphical arrangement of the [invention of the '578 patent]." Ex. 1001, 2:25–26.

The figure shows "a dynamic graphical arrangement comprising a plurality of images arranged in a three by three grid" where "[e]ach of the images shown therein comprises a unique randomly generated access code superimposed over or onto the image." Ex. 1001, 3:19–22. "[T]he cells of dynamic graphical arrangement may display a variety of images from different categories," and "the dynamic graphical arrangement may comprise

at least one randomly selected image from a category selected for an image recognition task and at least one image not from the selected category." *Id*. at 3:27–35.

"[T]he arrangement of dynamic graphical images can be delivered and presented to a user on a display device or display within the client system upon receipt of an access request." Ex. 1001, 6:28–31. In this embodiment, "[t]he user is instructed to select images from the selected category by typing the access codes corresponding to the images," "[t]he client system receives the input from the user, and transmits it to the server system," which "compares the access codes to the stored authenticating reference code," and, "[w]hen the user input matches the authentication reference code stored in the server system, authentication can be completed and access granted . . . to [a] requested resource or website." *Id*. at 6:31:40.

The graphical arrangement may also include "[1] one or more images known to belong to the selected category, [2] one or more images known not to belong in the selected category and [3] one or more images suspected to belong in the selected category." Ex. 1001, 3:44–47. "In [that] situation, the user is still granted access to the website upon successfully selecting [1] and avoiding selection of [2]." *Id*. at 3:44–51. But this "provides the service provider with an interpretation as to the proper category for [3]," such that the system "provides an automated way of learning how to categorize images based upon human feedback via the user input." *Id*. at 3:53–56.

2. Illustrative Claims

Independent claims 1 and 9, reproduced below, are representative of the subject matter at issue:

1. A method for generating a completely automated test to tell computers and humans apart comprising:

generating a matrix of non-overlapping randomly selected images in response to an access request of a user, the dynamic graphical arrangement comprising one randomly selected image from a selected image category chosen for an image recognition task and at least one image not from the selected image category, wherein each image is associated with a unique randomly generated access code, wherein the image recognition task comprises an instruction to select one image corresponding to the selected image category from the matrix of non-overlapping randomly selected images;

presenting the dynamic graphical arrangement of randomly selected images to the user and communicating the image recognition task to the user;

receiving an input from the user access device at a server system, the input comprising the unique randomly generated access code associated with the one image from the selected category;

the server system comparing the input from the user access device to an authenticating reference code to confirm the user is a human and not a computer; and

wherein the matrix comprises at least one image known to belong to the selected image category, at least one image known to not belong to the selected image category and at least one image suspected to belong to the selected image category and wherein the user is still granted access to the website when the input from the user access device comprises selection of the at least one image known to belong to the selected image category and selection or omission of the at least one image suspected to belong to the selected image category.

9. A method for selectively accepting access requests from a client computer connected to a server computer by a network, the method comprising:

receiving an access request from the client computer at an authentication server;

the authentication server generating a matrix of non-overlapping images in response to the access request, wherein the matrix of non-overlapping images comprises at least one randomly selected image from a randomly selected image category chosen for an image recognition task and at least one image not from the randomly selected image category, wherein the image recognition task comprises an instruction to select one image corresponding to the selected image category from the matrix of non-overlapping randomly selected images;

presenting the dynamic graphical arrangement of images on an output device of the client computer;

receiving an input from the client computer at the authentication server, the input comprising a user selection of at least one image;

the authentication server accepting the access request if the user selection of the at least one image corresponds to the image chosen from the selected image category and otherwise denying the access request; and

wherein the matrix comprises at least one image known to belong to the selected image category, at least one image known to not belong to the selected image category and at least one image suspected to belong to the selected image category and wherein the user is still granted access to the website when the input from the user access device comprises selection of the at least one image known to belong to the selected image category and selection or omission of the at least one image suspected to belong to the selected image category.

Ex. 1001, 9:1–36, 10:1–34.

3. Prosecution History

In a first Office Action, the Examiner rejected the claims as obvious in view of U.S. Patent App. Pub. No. 2008/0244700 to Osborn ("Osborn '700[1]) and U.S. Patent App. Pub. No. 2006/0230435 to Kokumai. *See* Ex. 1002, 345. The Examiner relied on Kokumai for its teaching of communicating an image recognition task to a user. *See id*. at 346. The applicant responded by amending the claims to, among other things, recite that "the image recognition task comprises an instruction to select an image corresponding to the selected image category from the dynamic graphical arrangement of randomly selected images." *Id.* at 377. The applicant then argued that "Kokumai does not disclose instructions that reveal an image from an image category" because "Kokumai teaches a particular image that is memorized by the user." *Id*. at 384.

The Examiner then rejected claims as unpatentable over Osborn '700 and U.S. Patent App. Pub. No. 2008/0216163 to Pratte, et al. *See* Ex. 1002, 403. The applicant responded with another amendment which, among other things, changed "an instruction to select **an** image" to "an instruction to select **one** image." *See id*. at 427 (emphases added). The applicant then argued that Pratte fails to teach the "image recognition task" because "Pratte does not instruct a user to select 'one image,' but instead "instructs a user to select all images that are associated with animals." *Id*. at 435.

The Examiner responded with a new rejection, obviousness in view of Osborn '700 and U.S. Patent App. Pub. No. 2009/0077629 to Douceur. *See*

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[1] Osborn '700 was a continuation-in-part of the Osborn reference used in the Petition. *See* Ex. 1006 ¶ 1 (claiming priority to ultimate parent U.S. Pat. App. Serial No. 11/420,061).

Ex. 1002, 449. The Examiner found that "Osborn does not explicitly teach the image recognition task comprising an instruction to select one image corresponding to the selected image category from the matrix of non-overlapping randomly selected images" or "communicating the image recognition task to the user." *Id*. at 450. But the Examiner cited Douceur's teaching that "the challenge includes displaying one or more images to the user to classify in a category," which "includes situations where only one image is necessary to be selected." *Id*. at 450–451.

The Examiner further found, however, that claims 10 and 21—which recited the three kinds of images in the matrix and selection of one known to belong to the category—would be allowable if rewritten in independent form with the addition of "wherein the user is still granted access to the website." Ex. 1002, 457–458.

The applicant responded by rewriting the claims, and those claims were allowed. *See* Ex. 1002, 467, 481.

We observe that the amendment implementing the Examiner's proposal to obtain allowance does not appear to be consistent with the amendment earlier made by the applicant to distinguish Pratte and the related argument. This is because the material added at the suggestion of the Examiner (*see* Ex. 1002, 457–58) concerns the user gaining access when their input includes selection of an image known to belong to the category without regard to selection or omission of the unknown image. This corresponds to the disclosure about the system categorizing unknown images from user input (*see* Ex. 1001, 3:43–56), but it does not seem to make sense given that the applicant earlier limited the claims to an instruction to select one image, which would have to be in the known category to allow access.

We also note that the Examiner's version of the potentially allowable claim reads "an instruction to select **an one** image." Ex. 1002, 458 (emphasis added). The applicant corrected the Examiner's typo to "select **one** image" without comment. *See id*. at 467 (emphasis added), 471.

C. Asserted Grounds of Unpatentability

Petitioner asserts that claims 1–17 are unpatentable on the following grounds:

Claims Challenged	35 U.S.C. §	Reference(s)/Basis
9–10, 13–15	§ 103	Silva[2]
13–15	§ 103	Silva, Pinkas[3]
1–17	§ 103	Silva, Osborn[4]
2–3, 13–15	§ 103	Silva, Osborn, Pinkas
1–17	§ 103	Osborn, Silva
3, 10	§ 103	Osborn, Silva, Pinkas

See Pet. 1. Petitioner also relies on a declaration of Daniel P. Lopresti, Ph.D., filed as Exhibit 1003.

[2] Silva, et al., *KA-CAPTCHA: An Opportunity for Knowledge Acquisition on the Web*, Proceedings of the Twenty-Second AAAI Conference on Artificial Intelligence (July 2007), pp. 1322–1327 (Ex. 1005).

[3] U.S. Patent App. Pub. No. 2004/0059951 (Ex. 1007).

[4] U.S. Patent App. Pub. No. 2007/0277224 (Ex. 1006).

II. DISCUSSION

A. Recusal

The Preliminary Response does not address the merits of Petitioner's obviousness argument. Instead, Patent Owner argues that "the Board and the PTO are accused of infringing the very same patent [Petitioner] has requested to be examined" and that, as such, "[t]here is no way the Board can conduct this proceeding without actual bias or the appearance of bias." Prelim. Resp. 1. Patent Owner specifically contends that the Patent Office employs Google's "reCAPTCHA" technology on, for example, the PTAB E2E Search Page. *See id.* at 2. Patent Owner argues that "[b]ecause the Board and the PTO are involved in the unauthorized use of [Patent Owner]'s patent rights, they cannot be impartial, nor can they instill confidence in the fairness of this proceeding" and that, "[a]ccordingly, the Board has no other option but to recuse itself and not institute a trial on the merits of Google's petition." *Id*.

For a legal framework, Patent Owner points to 28 U.S.C. § 455(a) and Canon 2 of the Model Code of Judicial Conduct, which provide that an adjudicator "shall disqualify himself in any proceeding in which his impartiality might reasonably be questioned." Prelim. Resp. 6. Patent Owner argues that, as a result of the allegations of infringement, every judge of the Patent Trial and Appeal Board is conflicted out of hearing a challenge to the claims of the '578 patent, although Patent Owner acknowledges that "there is no case on point that addresses the recusal of an entire adjudicating body." Prelim. Resp. 7.

We find Patent Owner's arguments unpersuasive because they are based on the wrong standards, and the correct standards do not require

recusal. But we *also* find that recusal would not be required even under the standards Patent Owner cites.

1. Applicable Standards

Neither 28 U.S.C. § 455(a) nor Canon 2 of the Model Code of Judicial Conduct is applicable to judges of the Patent Trial and Appeal Board. *See Chianelli v. Env't Prot. Agency*, 8 F. App'x 971, 980 (Fed. Cir. 2001) (explaining that Section 455 "by its terms does not apply to . . . administrative judges"); Code of Conduct for United States Judges (March 12, 2019)[5] ("This Code applies to United States circuit judges, district judges, Court of International Trade judges, Court of Federal Claims judges, bankruptcy judges, and magistrate judges. . . . The Tax Court, Court of Appeals for Veterans Claims, and Court of Appeals for the Armed Forces have adopted this Code.").

Instead, Administrative Patent Judges are governed by the Standards of Ethical Conduct for Employees of the Executive Branch (the "Executive Branch Ethical Standards"), codified at 5 C.F.R. § 2635. Patent Owner's allegations implicate rules that prohibit financial conflicts, prohibit use of an office for private gain, and prohibit preferential treatment. *See* 5 C.F.R. § 2635.101(b)(1), (2), (7). Employees of the executive branch must "endeavor to avoid any actions creating the appearance that they are violating the law or the ethical standards," where "[w]hether particular circumstances create an appearance that the law or these standards have been

[5] Presently available at https://www.uscourts.gov/sites/default/files/code_of_conduct_for_united_states_judges_effective_march_12_2019.pdf.

violated shall be determined from the perspective of a reasonable person with knowledge of the relevant facts." 5 C.F.R. § 2635.101(b)(14).

Notably, Administrative Patent Judges are entitled to a "presumption of honesty and integrity." *Ethicon Endo-Surgery, Inc. v. Covidien LP*, 812 F.3d 1023, 1030 (Fed. Cir. 2016) (rejecting allegations of improper bias against the Board).

We see no basis to find even an appearance, to a "reasonable person with knowledge of the relevant facts," of a financial conflict.

Under 5 C.F.R. § 2635.402, executive-branch employees are prohibited "from participating personally and substantially in an official capacity in any particular matter in which, to his knowledge, he or any person whose interests are imputed to him . . . has a financial interest, if the particular matter will have a direct and predictable effect on that interest." There must be "a real, as opposed to a speculative possibility that the matter will affect the financial interest." 5 C.F.R. § 2635.402(b)(1)(ii). The rules also clarify that the term "person," as used in Part 2635, "does not include any agency or other entity of the Federal Government or any officer or employee thereof when acting in his official capacity on behalf of that agency or entity." 5 C.F.R. § 2635.1209(k).

Patent Owner does not allege that any member of this panel has a direct financial interest in either party. The only "financial interest" Patent Owner identifies is a possible damage award against the United States government for infringement of the '578 patent. That is not a financial interest of any APJ, however, nor may it be imputed to any APJ. As noted above, the financial-interest prohibition extends to interests of the employee and "any person whose interests are imputed to him." However, "person"

expressly excludes "any agency or other entity of the Federal Government," which means that financial interests of the Office, the Department of Commerce, and the government generally are not imputed to individual employees, such as APJs.[6]

Moreover, even if a damage award for infringement by the government could be imputed to an APJ, we further find that Patent Owner has not shown the possibility of a "direct and predictable effect" on a financial interest of the Office or the government generally.

First, the record indicates that no suit has been filed against the federal government, meaning that there is *no* possibility—at least at the present time—of a damages award against the federal government. *See* Paper 4, 1 ("The present *inter partes* review proceeding is not related to any pending judicial or administrative matters."). Patent Owner's infringement claim is simply speculation at this point, and, as such, is insufficient to show a direct effect on a financial interest. *See* 5 C.F.R. § 2635.402(b)(1)(i) (explaining that "[a] particular matter will not have a direct effect on a financial interest . . . if the chain of causation is . . . contingent upon the occurrence of events that are speculative").

Second, we find Patent Owner's claim chart insufficient on its face to demonstrate infringement. Claim 1 of the '578 patent recites "an image recognition task" that "comprises an instruction to select ***one image*** corresponding to the selected image category." Ex. 1001, 9:12–14

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[6] Petitioner provides evidence that Patent Owner has been offering licenses to the '578 patent for as low as $8,500 (*see* Ex. 1038), but the rules provide that the magnitude of the financial interest is not a relevant consideration. *See* 5 C.F.R. § 2635.402(b)(1)(ii).

(emphasis added). However, the screenshot presented in the claim chart corresponding to that limitation shows a reCAPTCHA v2 widget in which the instruction is to "Select ***all images*** with taxis." *See* Ex. 2001, 3 (emphasis added). Patent Owner does not even attempt to explain how the claimed instruction to select "one" image corresponding to the selected image category might be met by a system that instructs the user to select "all" images in a category.[7]

Finally, we find Exhibit 2001 insufficient because there is no declaration or other evidence explaining when, how, or by whom the screen shots were prepared, and when the panel inspected the PTAB E2E webpage to try to verify what is in the claim chart, the reCAPTCHA was satisfied without use of the matrix of images required by all claims of the '578 patent. Thus, there is no competent evidence in the record to support the allegation that the '578 patent was or is infringed by the government.

We conclude that Patent Owner has not shown that this case implicates a financial interest of the government or, even if it did, that such interest would be imputed to, and thus disqualifying for, this panel.

Nor do we find a basis to conclude that there would be even an appearance, to a "reasonable person with knowledge of the relevant facts," of improper gain or partiality.

Under 5 C.F.R. § 2635.501, one "should not participate in a particular matter involving specific parties which he knows is likely to affect the financial interests of a member of his household, or in which he knows a person with whom he has a covered relationship is or represents a party, if

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[7] This claim language is discussed in more detail in Section II.D.

he determines that a reasonable person with knowledge of the relevant facts would question his impartiality in the matter." *See also* 5 C.F.R. § 26.35.502(a). An employee has a "covered relationship" with (i) a person with whom the employee has or seeks a business, contractual, or other financial relationship; (ii) a person who is a member of the employee's household or a close relative; (iii) a person for whom the employee's spouse, parent, or dependent is serving or seeking to serve as an officer, director, trustee, general partner, agent, attorney, consultant, contractor or employee; (iv) a person for whom the employee has, within the last year, served as officer, director, trustee, general partner, agent, attorney, consultant, contractor or employee; or (v) an organization in which the employee is an active participant. *See* 5 C.F.R. § 2635.502(b).

Patent Owner does not argue that this matter might affect a financial interest of a member of an APJ's household or that any APJ has any other association that might be a "covered relationship." And, as noted above, the Office and the government are not "persons" with whom a panel member might have a covered relationship. We thus find no interest or relationship that might give rise to a colorable claim that any member of this panel might be influenced by the possibility of improper personal gain.

We thus conclude that there also is no disqualifying non-financial personal interest and that, as a result, the Executive Branch Ethical Standards do not require recusal.

2. 28 U.S.C. § 455(a) and Canon 2

As noted, Patent Owner argues that we should recuse ourselves because "[u]nder 28 U.S.C. § 455(a) and Canon 2 of the Model Code of Judicial Conduct, any adjudicator 'shall disqualify himself in any proceeding

in which his impartiality might reasonably be questioned.'" Prelim. Resp. 6. These standards are not applicable but, even if they were, they would not require recusal.

Patent Owner focuses on *Liljeberg v. Health Services Acquisition Corp.*, 486 U.S. 847, 861 (1988), in which, according to Patent Owner, the court "found a violation of the statute where the sitting judge, who was a member of a university's Board of Trustees, failed to disqualify himself from proceedings in which the '[u]niversity continued to have an active interest in the outcome of the litigation.'" Prelim. Resp. 6. Patent Owner reasons that "the PTO's interest in the outcome of the [*inter partes* review] of the '578 patent is imputed to the individual administrative patent judges and the Board as administrators, or fiduciaries, of the PTO." *Id*.

This is not persuasive. As Petitioner points out (*see* Pet. Reply 6), Patent Owner provides no authority to support the proposition that APJs have a fiduciary duty to the Office, and we find none to suggest that we do. APJs simply have no obligation to protect the Office or the government from patent-infringement liability.

Moreover, as Petitioner observes (*see* Pet. Reply 8), there are various other adjudicators employed in the government who routinely make decisions that might have a negative financial impact on the government. This is not an unprecedented, or even unusual, arrangement, and the Federal Circuit has explained that "the fact that a case seeks money from the United States neither means that the judge (employed by the United States) has a conflict of interest nor provides a reasonable basis for questioning the judge's impartiality." *Anderson v. U.S.*, 587 F. App'x 635 (Fed. Cir. 2014).

We are also unpersuaded by Patent Owner's argument that "[t]he PTO has an intimate relationship with Google that would lead an objective observer to reasonably question the PTO's ability to render an impartial decision in any case related to the Petitioner." Prelim. Resp. 11. Patent Owner asserts that "to make the patent system more accessible and promote innovation, the PTO collaborated with the MIT Media Lab and Cisco to launch the Prior Art Archive" and that "Google devoted significant resources to the Prior Art Archive, which is searchable through Google Patents." Prelim. Resp. 11. Patent Owner also argues that the Office uses "Google Analytics in its privacy policy" and that Google has a 'nonexclusive, worldwide, royalty-free license' to the PTO's Public PAIR information and data." *Id*. We do not agree that the Office's cooperation with Google, among others, to make prior art and PAIR data available to the public, or its use of off-the-shelf Google products, would lead a reasonable person to believe that the Office would favor Google in a post-grant proceeding concerning the unrelated '578 patent, and we further see no reason to impute the Office's business dealings to the APJs on this panel.

Upon careful consideration, we determine that Patent Owner has not shown that any objective and reasonable person would think that the Administrative Patent Judges on this panel, all of whom have taken an oath to uphold the constitution and laws of the United States, and are bound by the Executive Branch Ethical Standards, would cast those weighty obligations aside in order to protect the federal government against allegations of patent infringement, or because Google and the Office have unrelated business dealings. Patent Owner has not shown that our impartiality might reasonably be questioned.

3. Due Process

Patent Owner also briefly argues that no APJ may hear this case because Patent Owner's right to due process would be violated, as "a reasonable person understanding the facts . . . and the PTO's potential exposure to liability would recognize that the Board would likely be acting as a judge in its defense and would be tempted to render a decision that ultimately favors the PTO to the detriment of [Patent Owner]." Prelim. Resp. 14. We again do not agree with Patent Owner, for essentially the same reasons articulated above.

The APJs on this panel do not have a personal interest in this case, Patent Owner has not alleged that they do, and Patent Owner's allegations concerning monetary risk to the federal government are speculative and, in any event would be insufficient to give rise to a due process violation. *See Anderson*, 587 F. App'x at 638 (rejecting a due-process argument based on an alleged conflict arising from the fact that the plaintiff sought money from the government); *see also Mobility Workx, LLC v. Unified Patents, LLC*, 15 F.4th 1146, 1154 (Fed. Cir. 2021) (explaining that even the "leadership APJs' role in budgeting is . . . too remote to constitute a due process violation" and that "[t]he role of other APJs in the budgetary process is even more remote, and even less a due process problem").

4. Conclusion on Recusal

Patent Owner has not shown that a reasonable person would have any basis for concluding that this panel will not decide this case in an impartial manner or that Patent Owner's right to due process is threatened. Patent Owner's request that this panel recuse itself is denied.

B. Level of Skill in the Art

The level of skill in the art is a factual determination that provides a primary guarantee of objectivity in an obviousness analysis. *See Al-Site Corp. v. VSI Int'l Inc.*, 174 F.3d 1308, 1323 (Fed. Cir. 1999) (citing *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966)). The level of skill in the art also informs the claim-construction analysis. *See Teva Pharm. USA, Inc. v. Sandoz, Inc.*, 135 S. Ct. 831, 841 (2015) (explaining that claim construction seeks the meaning "a skilled artisan would ascribe" to the claim term "in the context of the specific patent claim").

Petitioner asserts that a person of ordinary skill in the art "would have had a bachelor's degree in computer science or a related field with coursework relating to computer science, plus two years' academic and/or industry experience in computer security and/or artificial intelligence" and that "[m]ore education could substitute for experience, and vice versa." Pet. 6 (citing Ex. 1003 ¶¶ 34–39). Patent Owner does not address this issue in the Preliminary Response.

As Patent Owner does not dispute Petitioner's characterization of the level of skill in the art, and because we find it generally consistent with the disclosures of the '578 patent and the prior art, we adopt it for purposes of this analysis.

C. Claim Construction

Petitioner asserts that it interprets the claims "using the standard used in civil actions under 35 U.S.C. § 282(b), in accordance with the ordinary and customary meaning as understood by a POSA and the patent's prosecution history," but does not identify any constructions. Pet. 6. Patent Owner does not address claim construction in the Preliminary Response.

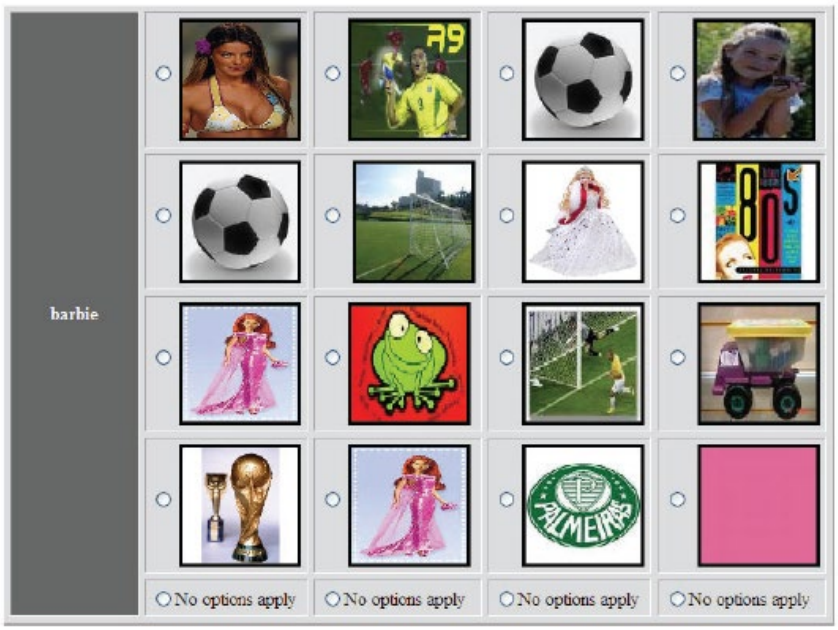
Under these circumstances, we find that we need not engage in formal claim construction, although we do address some claim language in the course of the obviousness analysis below. *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (explaining that construction is needed only for terms that are in dispute, and only as necessary to resolve the controversy).

D. Obviousness

A 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 the subject matter pertains. *See 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, primarily: (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) objective evidence of nonobviousness. *Graham*, 383 U.S. at 17–18. Patent Owner does not offer objective evidence of nonobviousness or argue any secondary considerations.

1. The Primary References

Silva describes a CAPTCHA procedure that "retrieves a group of images from the repository: some that it knows relates to [a] label . . . , some it knows do not relate to [the] label . . . , and some whose pertinence to the label it wants to verify." Ex. 1005, 1325. This is shown in Figure 4, reproduced below.



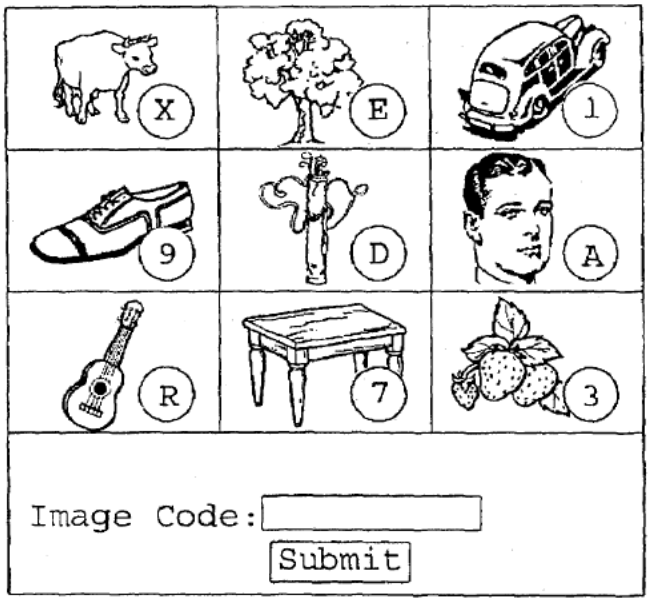
Silva's Figure 4 shows a "KA-CAPTCHA designed to extract pictorial knowledge from its users." Ex. 1007, 1325.

"[T]he selected label [e.g., 'barbie'] is displayed on the left and the images retrieved from the knowledge base are organized by columns on the right." Ex. 1005, 1325. "One special column will contain all those images whose relation to the current label [is to be verified], while all the others contain the remaining images whose relation to the label the system is confident about, i.e. they certainly do or do not relate to the label." *Id*. "The user is then asked to identify, from each column available in the test, which image relates to the label." *Id*.

After the user submits the response, the system "consider[s] all those columns whose correct answer [was known] a-priori" and "if the user fails to recognize some correct answer then it is considered a computer and access to the resource protected by our CAPTCHA is denied," but "if all provided answers were correct, the user is viewed as a human and access to some resource is granted." Ex. 1005, 1325. Thus, access is not based on the

special column containing the images whose relation to the current label is to be verified.

Osborn is "directed to a graphical image identity authentication system." Ex. 1006 ¶ 3. In the embodiment on which Petitioner relies, a user enters "a first login account identifier, such as his or her username, and a traditional password" that is then validated. *See id*. ¶ 54. "If the username/password pair is authenticated, an image grid will be generated and displayed," where "[t]he cells of the grid will display images from different categories." *Id*. ¶ 55. The grid is shown in Figure 5:



Osborn's Figure 5 is an example of a screen display. See Ex. 1006 ¶ 44.

Next, "[t]he user will select the image on the grid according to the categories in their authentication sequence by entering the image key overlaid on the images." Ex. 1006 ¶ 56. "The sequence of image keys is sent to the authentication server for validation," and "[i]f the image keys are validated, the authentication concludes successfully." *Id*.

Osborn explains that "the user knows which image(s) to look for and select within the arrangement because the images are based upon a preselected category designated by the user or third party during an enrollment process." Ex. 1006 ¶ 63. "The basis for a user selection could be some thing(s) that could be easily remembered by that person or something of interest such as cars, for example," and "[d]uring a login process, the user can look for and find any image(s) displayed within the arrangement falling within the selected category." *Id*. ¶ 65.

For example, the system "may receive information to render a display image with two icons and two corresponding password elements," and "Icon #1 may be an image of a Rolls Royce, while Icon #2 may be an image of a banana." Ex. 1006 ¶ 69. "Icon #1 may include and display a corresponding [access code] that is 'AB' and Icon #2 may include and display a corresponding [access code] that is 'CD.'" *Id*. Then, "a user that selected automobiles as an authenticating category would enter in password element 'AB' for authentication," while "a user that may have selected fruits as an authenticating category would enter 'CD' for authentication." *Id*.

2. Grounds 1–4, Based on Silva

Petitioner argues in Ground 1 that Silva alone renders claims 9–10 and 13–15 obvious and in Ground 3 that claims 1–17 would have been obvious in view of Silva and Osborn. *See* Pet. 28–42. Ground 2 adds Pinkas for claims 13–15 and Ground 4 adds Pinkas for claims 2–3 and 13–15. *See id*. at 25–27, 42–45.

We focus on the requirement of all independent claims that "the image recognition task comprises an instruction to select one image corresponding to the selected image category from the matrix of non-

overlapping randomly selected images." For all of Grounds 1–4, Petitioner maps the claimed "matrix" to the 4x4 set of images shown in Silva's Figure 4. *See* Pet. 15, 33, 41. Petitioner then argues that "Silva's KA-CAPTCHA instructs the user to '*Select, for each column on the right, the alternative that is best described by the label on the left.*'" Pet. 18 (quoting Ex. 1005, 1325–26); *see also* Pet. 34, 41 (incorporating the same argument for Ground 3, claims 1 and 9). Petitioner concludes that "[t]he image recognition task . . . thus comprises an instruction to select one image corresponding to the selected image category (represented by the label) from each column of the KA-CAPTCHA matrix." Pet. 18 (citing Ex. 1003 ¶ 136); *see also* Pet. 34, 41 (incorporating the same argument for Ground 3, claims 1 and 9). We find Petitioner's contentions unpersuasive.

The claim requires an instruction to select ***one*** image corresponding to the selected image category from a ***matrix***, but Silva describes instructing the user to select ***one*** image from each ***column***, for a total of ***four*** images from the ***matrix***. Petitioner does not sufficiently explain how the claim language concerning an instruction to select one image is met by a system that instructs the user to select four images.

The claim does recite that the image recognition task "comprises" the instruction to select one image, which would allow the claim to cover systems with tasks that had additional instructions. So, for example, a system with an instruction to select one image *and* an instruction to select one or more other images would not escape the claims. But the open-ended nature of the claims does not change the substance of the specific instruction that is claimed. In other words, the fact that a task may "comprise" other instructions does not convert "select one image" to "select one or more

images," any more than it could covert "select two images" to "select five images," for example.

Moreover, the prosecution history removes any doubt about whether these claims are limited to an instruction to select only one image. As explained above, the applicant changed "an instruction to select an image" to "an instruction to select one image" in response to a rejection in which the Examiner was relying on the Pratte reference for the instruction. *See* Ex. 1002, 404, 427. The applicant then argued that Pratte failed to teach the "image recognition task" because "Pratte does not instruct a user to select 'one image,' but instead 'instructs a user to select all images that are associated with animals.'" *Id*. at 435.

We conclude that the amendment and associated argument evidence a clear and unmistakable narrowing of the claims to systems with instructions to select one image corresponding to the category, and excluding systems, like Pratte, in which the user is instructed to select all images associated with a category. *See Genuine Enabling Tech. LLC v. Nintendo Co., Ltd.*, 29 F.4th 1365, 1374 (Fed. Cir. 2022) (explaining that "for a statement during prosecution to qualify as a disavowal of claim scope, it must be 'so clear as to show reasonable clarity and deliberateness' and 'so unmistakable as to be unambiguous evidence of disclaimer'") (quoting *Omega Engr., Inc, v. Raytek Corp.*, 334 F.3d 1314, 1325 (Fed. Cir. 2003)); *see, e.g.*, *SpeedTrack, Inc. v. Amazon.com*, 998 F.3d 1373, 1379 (Fed. Cir. 2021) (limiting claims where "the applicants argued that [the prior art] had a 'hierarchical' relationship between fields and values that fell outside the scope of the amended claims"). The disclaimer arises even though the applicant made other arguments in the same response. *See SpeedTrack*, 998 F.3d at 1380.

Silva, like Pratte, instructs the user to select all images that fall into a category—*see* Ex. 1005, 1325 ("The user is then asked to identify, from each column available in the test, which image relates to the label.")—and thus does not meet the claim language requiring an instruction to select "one" image. Notably, this problem cannot be cured by mapping the claimed "matrix" to a single column of Silva, because the claims also require that the "matrix" comprise at least one of each of the three categories of images, and Silva has three columns that are a mix of images known to be in the category and known to not be in the category, and a fourth column that consists of entirely unknown images. *See* Ex. 1005, 1325 ("One special column will contain all those images whose relation to the current label we want to verify, while all the others contain the remaining images whose relation to the label the system is confident about, i.e. they certainly do or do not relate to the label.").

Because Petitioner has not sufficiently shown that Silva discloses "an image recognition task [that] comprises an instruction to select one image corresponding to the selected image category from the matrix of non-overlapping randomly selected images," we find that Petitioner has not demonstrated a reasonable likelihood that it will prevail in showing that claims 1–17 would have been obvious in view of Silva, either alone or in combination with Osborn or Osborn and Pinkas.

3. Grounds 5–6, Based on Osborn

Petitioner asserts in Grounds 5 and 6 that claims 1–17 would have been obvious in view of Osborn and Silva and that claims 3 and 10 would have been obvious in view of Osborn, Silva, and Pinkas. *See* Pet. 46–73.

Specifically, Petitioner argues that "Osborn's system modified using Silva's knowledge-acquisition teachings . . . renders the claims obvious." Pet. 46. Petitioner contends that "Osborn discloses nearly all claim limitations of the '578 patent, as the Examiner found during prosecution,"[8] and that the wherein clause limitations that "were added to obtain allowance . . . would have been obvious to include in Osborn's test in view of Silva's teachings." *Id*.

For the claimed "matrix," Petitioner points to Figure 5 of Osborn, which is essentially the same as Figure 1 of the '578 patent. *See* Pet. 50. Petitioner then argues that "the user's task in Osborn's system is to recognize and select the image corresponding to the selected authenticating category from the displayed matrix." Pet. 53 (citing Ex. 1006 ¶¶ 21, 56, 63, 65, 68–69). Petitioner asserts that "some arrangements have 'one' matching image, such as 'Rolls Royce' in category 'automobiles.'" *Id*. (citing Ex. 1006 ¶¶ 76, 86). Petitioner concludes that "Osborn's image recognition task thus 'comprises an instruction to select one image corresponding to the selected image category from the matrix of non-overlapping randomly selected images,'" as recited in claim 1. Pet. 53.

We are not persuaded that Petitioner has shown Osborn to include an "image recognition task [that] comprises an instruction to select one image corresponding to the selected image category," as claimed.

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[8] The Examiner actually found that Osborn '700 "does not explicitly teach the image recognition task comprising an instruction to select one image corresponding to the selected image category from the matrix of non-overlapping randomly selected images" and relied on Douceur for that subject matter." *See* Ex. 1002, 450; *see also id*. at 404 (earlier finding relying on Pratte for the instruction).

Osborn describes a system in which "the user knows which image(s) to look for and select within the arrangement because the images are based upon a preselected category designated by the user or third party during an enrollment process as described elsewhere herein." Ex. 1006 ¶ 63. The task, therefore, is to select all images that fall within a category (like in Pratte), and we find nothing to suggest that Osborn describes an instruction to select just one image in the category.

We recognize that, in the example that includes only one image in the category, the result would be that just one image was selected, but find that the *result* does not change the *task/instruction*, which is to "look for and find any image(s) displayed within the arrangement falling within the selected category."[9] Ex. 1006 ¶ 65.

We conclude that Petitioner has not shown Osborn to disclose an "image recognition task [that] comprises an instruction to select one image corresponding to the selected image category," and, accordingly, we find that Petitioner has not demonstrated a reasonable likelihood that it will prevail in showing that claims 1–17 were obvious in view of either Osborn and Silva or Osborn, Silva, and Pinkas.

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[9] The Examiner found that Douceur disclosed the claimed instruction because its "challenge includes displaying one or more images to the user to classify in a category" which "thus includes situations where only one image is necessary to be selected." Ex. 1002, 450–51. We do not agree with that analysis because the instruction in all cases is still to identify all images in the category. Douceur's instruction thus appears to be essentially the same as Pratte's. *See, e.g.*, Ex. 3003, Fig. 4 ("Please select all the cat photos:").

III. CONCLUSION

Petitioner has not demonstrated a reasonable likelihood of showing the unpatentability of claims 1–17 of the '578 patent.

IV. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that an *inter partes* review is not instituted in this proceeding.

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