

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

VISA, INC.,
Petitioner,

v.

CORTEX MCP, INC.,
Patent Owner.

IPR2024-00488
Patent 9,954,854 B2

Before JAMES J. MAYBERRY, SHEILA F. McSHANE, and
KARA L. SZPONDOWSKI, *Administrative Patent Judges*.

SZPONDOWSKI, *Administrative Patent Judge*.

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

I. INTRODUCTION

Visa Inc. (“Petitioner”) filed a Petition (Paper 2, “Pet.”) to institute an *inter partes* review of claims 1–17 of U.S. Patent 9,954,854 B2, issued on April 24, 2018 (Ex. 1002, “the ’854 patent”). Cortex MCP, Inc. (“Patent Owner”) filed a Preliminary Response (Paper 6, “Prelim. Resp.”).

Institution of an *inter partes* review is authorized when “the information presented in the petition . . . and any response . . . shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” 35 U.S.C. § 314(a). Based on the current record, and for the reasons explained below, we determine that Petitioner has established a reasonable likelihood that it would prevail with respect to at least one challenged claim, and we institute an *inter partes* review.

II. BACKGROUND

A. *Real Parties-in-Interest*

Petitioner identifies itself as the real party-in-interest. Pet. 79. Patent Owner also identifies itself as the real party-in-interest. Paper 4, 1 (Mandatory Notices of Patent Owner).

B. *Related Matters*

The parties identify *Cortex MCP, Inc. v. Visa, Inc.*, Case No. 5-23-cv-05720 (N.D. Cal.) (originally filed as Case No. 6-23-cv-00048 (W.D. Tex.)) as a related case. Pet. 79; Paper 4, 1. Petitioner has also concurrently filed petitions against three related patents in IPR2024-00486, IPR2024-00487, IPR2024-00489, and IPR2024-00490. Pet. 79.

C. The '854 Patent (Ex. 1002)

The '854 patent is titled “File Format and Platform for Storage and Verification of Credentials” and is generally directed to “a computer-implemented method for generating and verifying officially variable electronic representations [OVER files]” of user credentials. Ex. 1002, codes (54), (57). The method comprises a credential database receiving a request for credential action, where “[t]he credential database may be configured to store one or more credentials comprising a status indicator.” *Id.* at code (57). The credential database may then determine “a response to the credential action based on the . . . user credentials stored in the credential database” and transmit “the response to a client device.” *Id.* at code (57).

Figure 1, reproduced below, illustrates an embodiment of invention identified as the OVER File management platform. Ex. 1002, 2:41–32, 3:60–62.

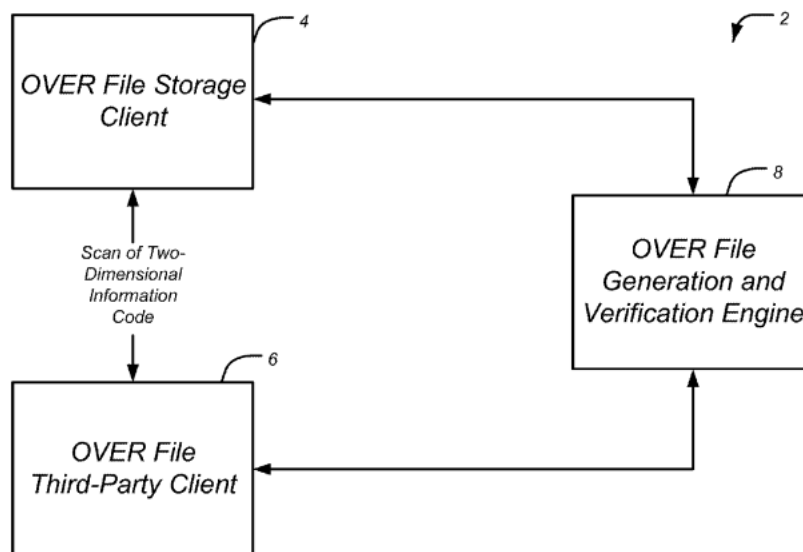


Fig. 1

Figure 1, above, depicts the components of the OVER File management platform, including OVER File storage client 4, OVER File third party client 6, and OVER File generation and authorization engine 8. *Id.* at 3:60–64.

The '854 patent describes that OVER File storage client 4 stores “generated OVER Files representative of the user’s credentials.” Ex. 1002, 3:64–67. “The OVER File credentials may comprise any officially verifiable electronic credential, such as, for example, a government issued identification such as a driver’s license, non-driver’s identification card, or professional license” or “privately issued credentials.” *Id.* at 4:5–14. The '854 patent further describes that “OVER File third party client 6 may be executed by a third party device to verify the existence and validity of OVER File credentials presented by a user.” *Id.* at 4:15–18. In addition, an embodiment of process 100 for generating and storing an OVER File credential, which may be performed by Over File generation and authorization engine 8, is described. Ex. 1002, 4:51–7:43, Fig. 2. The '854 patent also describes an embodiment of an OVER File verification process. *Id.* at 7:44–9:63, Fig. 3.

D. Illustrative Claim

Independent claim 1 is reproduced below, with Petitioner’s identifiers in brackets.

1. [Preamble] A computer-implemented method comprising:

[1.1] accessing, by an officially verifiable electronic representation (OVER) file verifying device, a first OVER file stored on a first OVER file client device, the first OVER file comprising:

a first virtual representation of an original credential of a user that has been verified by an issuing agency to be a first official representation of the original credential of the user for proving the user's identity or qualifications, based on information associated with the original credential of the user, wherein the first OVER file is itself a first new credential of the user;

the first OVER file generated by an OVER engine configured to:

store the information associated with the original credential of the user; and

transmit the first generated OVER file to the first OVER file client device;

[1.2] transmitting, by the OVER file verifying device, to the OVER engine, a first verifying request to verify that the first OVER file accessed from the first OVER file client device authenticates the user;

[1.3] receiving, by the OVER file verifying device, a first authentication message comprising a first indication of whether a first scan associated with the first OVER file on the first OVER file client device of the user corresponds to the information associated with the original credential of the user that is stored in the OVER engine;

[1.4] outputting a first status indicator expressing whether the first OVER file authenticates the user;

[1.5] accessing, by the OVER file verifying device, a second OVER file stored on a second OVER file client device of the user, the second OVER file comprising a second virtual representation of the original credential that has been verified by the issuing agency to be a second official representation of the original credential that is invalid for use in the first OVER file client device for authenticating the user, wherein the second

OVER file is itself a second new credential over the first OVER file and the original credential;

[1.6] transmitting, by the OVER file verifying device, to the OVER engine, a second verifying request to verify that the second OVER file scanned at the second client device authenticates the user;

[1.7] receiving, by the OVER file verifying device, a second authentication message comprising a second indication of whether the second scan associated with the second OVER file on the device of the user corresponds to the information associated with the original credential of the user that is stored in the OVER engine; and

[1.8] outputting a second status indicator expressing whether the second OVER file authenticates the user.

Ex. 1002, 21:46–22:30. Claims 8 and 15 are also independent, and recite similar limitations. *Id.* at 22:57–23:47, 24:4–55.

E. Prior Art and Asserted Challenges to Patentability

Petitioner asserts that claims 1–17 are unpatentable based on the following challenges (Pet. 10):

Claims Challenged	35 U.S.C. § ¹	Basis/References
1–17	103(a)	Osborne ²

¹ Because the earliest possible effective filing date of the '845 patent is before March 16, 2013, patentability is governed by the version of 35 U.S.C. § 103 preceding the Leahy-Smith America Invents Act ("AIA"), Pub L. No. 112–29, 125 Stat. 284 (2011). *See* Pet. 4.

² Osborne, US 2012/0316992 A1, published Dec. 13, 2012 (Ex. 1011). Petitioner contends Osborne is prior art under 35 U.S.C. §§ 102(a) and (e)). Pet. 10, n.1.

Claims Challenged	35 U.S.C. § ¹	Basis/References
1–17	103(a)	Oborne, Neafsey ³
1–17	103(a)	Stafford, ⁴ Purves, ⁵ Neafsey

In support of its proposed challenges, Petitioner relies on the Declaration of Michael Ian Shamos, Ph.D, J.D. *See* Ex. 1005.

III. ANALYSIS

A. *Legal Standards*

A claim is unpatentable under 35 U.S.C. § 103(a) if “the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.” *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 skill in the art; and (4) objective evidence of nonobviousness, i.e., secondary considerations. *See Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

“In an [*inter partes* review], the petitioner has the burden from the onset to show with particularity why the patent it challenges is

³ Neafsey, US 2013/0212248 A1, published Aug. 15, 2013 (Ex. 1015). Petitioner contends Neafsey is prior art under 35 U.S.C. § 102(e). Pet. 10 n.2, 11 (relying on Neafsey, US Provisional Patent App. No. 61/598,219 (Ex. 1016)).

⁴ Stafford., US 2009/0271321 A1, published Oct. 29, 2009 (Ex. 1012) (“Stafford”). Petitioner contends Stafford is prior art under 35 U.S.C. §§ 102(a), (b), and (e). Pet. 10 n.3.

⁵ Purves, US 2013/0054454 A1, published Feb. 28, 2013 (Ex. 1013). Petitioner contends Purves is prior art under 35 U.S.C. § 102(e). Pet. 10 n.4.

unpatentable.” *Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1363 (Fed. Cir. 2016) (citing 35 U.S.C. § 312(a)(3)); *see also Intelligent BioSystems, Inc. v. Illumina Cambridge Ltd.*, 821 F.3d 1359, 1369 (Fed. Cir. 2016). At this preliminary stage, we determine whether the information presented in the Petition shows there is a reasonable likelihood that Petitioner would prevail in establishing that at least one of the challenged claims would have been obvious.

B. Level of Ordinary Skill in the Art

Petitioner contends a person of ordinary skill in the art “would typically have a bachelor’s degree in computer science, computer engineering, or a related field, with at least two years of work involving electronic payment systems, network authentication systems, or related areas.” Pet. 9. Petitioner further asserts that a person of ordinary skill in the art “could have less education but significant professional experience in one or more of these fields.” *Id.* (citing Ex. 1005 ¶¶ 74–79).

At this stage of the proceeding, Patent Owner does not challenge Petitioner’s definition. Prelim. Resp. 22.

We find Petitioner’s proposal is consistent with the level of ordinary skill in the art reflected by the prior art of record, and, therefore, adopt Petitioner’s proposed level of ordinary skill in the art for purposes of this Decision.

C. Claim Construction

A claim “shall be construed 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).” 37 C.F.R. § 42.100(b) (2024). Petitioner identifies three

claim terms for construction: “officially verifiable electronic representation (OVER) file,” “scan,” and “verifying by an issuing agency.” Pet. 11–14.

1. *“Officially Verifiable Electronic Representation (OVER) file”*

Petitioner argues that “[e]ach independent claim recites an ‘officially verifiable electronic representation (OVER)’ file,” and that the ’854 patent Specification “uses the term ‘OVER’ to refer to an ‘Officially Verifiable Electronic Representation.’” Pet. 12 (citing Ex. 1002, 2:33–35). Petitioner asserts that “[t]he specification describes that an OVER file may contain ‘credential information’” and “may also contain or act as a credential, which may in turn be representative of another credential, such as a driver’s license.” *Id.* (citing Ex. 1002, 6:33–35, 6:67–7:3, 12:23–26). Additionally, according to Petitioner, “[t]his ‘OVER file credential’ may include an image from an issuing agency, such as a logo or a card image, and the OVER file may also include a scannable code, like a QR (quick response) code.” *Id.* (citing Ex. 1002, 9:26–30, 14:19–29, Fig. 11; Ex. 1005 ¶¶ 83–85).

Petitioner asserts that “[t]he ’854 patent does not describe that tokens may be either an OVER file or a part of one (such as a representation of a credential),” but “Patent Owner’s complaint expressly identifies tokens as OVER files.” Pet. 12 (citing Ex. 1018, 4, 9, 16–17; Ex. 1005 ¶ 86). Thus, Petitioner states, “[f]or purposes of this petition, [Petitioner] applies a construction that includes Patent Owner’s interpretation of this term.” *Id.* at 12–13. “Accordingly,” Petitioner states, the petition applies “an interpretation of ‘OVER file’ as encompassing a file comprising an image of (or associated with) the credential (as described in the specification and addressed in ground 3), but also encompassing a file comprising a virtual representation in the form of a token (as asserted in Patent Owner’s

infringement complaint and addressed in grounds 1–2).” *Id.* at 13 (citing Ex. 1005 ¶¶ 83–88).

Patent Owner argues that, at this stage of the proceeding, “the Board does not need to construe any terms of the Challenged Claims.” Prelim. Resp. 22. However, Patent Owner asserts that Petitioner has not met its statutory mandate for grounds 1 and 2 based on a claim construction of “OVER file” that “neither Petitioner nor Dr. Shamos assert [is] correct.” *Id.* at 33. More specifically, Patent Owner argues that “the Petition exclusively asserts unpatentability in Grounds 1–2 based on a construction of ‘OVER file’ as ‘encompassing a file comprising . . . a token,’” but “[Petitioner] and Dr. Shamos assert this construction is unsupported.” *Id.* at 33–34. In support, Patent Owner cites the Petition’s statement that “[t]he ’854 Patent does not describe that tokens may be either an OVER file or a part of one . . .” and Dr. Shamos’s statement that “[t]he ’854 patent does not discuss tokens or describe that tokens may be either an OVER file or part of an OVER file . . .” *Id.* at 34 (citing Pet. 12; Ex. 1005 ¶ 86). Patent Owner contends that Petitioner “cannot demonstrate a reasonable likelihood of success” by “proffering claim constructions that it asserts are incorrect.” *Id.* at 34.

We now turn to the evidence of record. Dr. Shamos testifies that “[t]he term ‘officially verifiable electronic representation’ is not a term of art” and “was devised purely for use in the Cortex patents.” Ex. 1005 ¶ 83. Patent Owner does not argue otherwise. Prelim. Resp. 22–23, 33–34. The ’854 patent Specification states that an OVER file “may provide a secure file format and platform for the storage and verification of key user or consumer credentials.” Ex. 1002, 3:57–60. The Specification further explains that the

OVER File is “representative of the user’s credentials” and “[t]he OVER file credentials may comprise any officially verifiable electronic credential, such as, for example, a government issued identification, such as a driver’s license, non-driver’s identification card, or professional license,” as well as “privately issued credentials” or “any other credential that may be electronically verified by an issuing agency.” *Id.* at 3:66–67, 4:5–14. Claim 1 also recites that the OVER file “compris[es] a first virtual representation of an original credential of a user.” *Id.* at 21:50–52. Dr. Shamos states that he “interpret[s] an OVER file as encompassing a file comprising a virtual representation in the form of an image of (or associated with) the credential, but also encompassing a file comprising a virtual representation in the form of a token.” Ex. 1005 ¶ 88.

Based on the ’854 patent Specification, the language of claim 1, and the testimony of Dr. Shamos, we preliminarily determine, at this stage of the proceeding, that the term “OVER file” encompasses a virtual representation of one or more credentials, to be used for verification of those credentials. For purposes of institution, we need not determine whether an “OVER file” necessarily includes “tokens” as a general matter, or further elaborate on what additional characteristics might be required to qualify as an “OVER file.” *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017); *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999) (“[O]nly those terms need be construed that are in controversy, and only to the extent necessary to resolve the controversy.”). However, as discussed further in Section III.E.2(b) below, we determine that Petitioner has made a sufficient showing for purposes of institution that Osborne’s tokens qualify as “OVER files.” We

emphasize that our construction of “OVER file” is preliminary and based on the present record, and we encourage the parties to further develop the record on claim construction during the trial.

We do not agree with Patent Owner’s assertion that we should deny institution because Petitioner does not assert that the construction it proposes is “correct” or because Petitioner “assert[s] this construction is unsupported.” *See* Prelim. Resp. 33–34. The relevant issue is not Petitioner’s subjective belief in its proposed construction, but rather whether the present record contains a sufficient basis for the construction proposed. *See Philip Morris Products, S.A. v. Rai Strategic Holdings, Inc.*, IPR2020-00921, Paper 13 at 42–44 (PTAB Aug. 5, 2021) (explaining that 37 C.F.R. § 42.104(b)(3) “does not require a Petitioner to express a subjective belief in the correctness of its proffered claim constructions”). Here, as discussed above, there is a sufficient basis, based on the claim language and ’854 patent Specification, to construe “OVER file” as encompassing a virtual representation of one or more credentials, to be used for verification of those credentials. Moreover, we do not see Petitioner as disagreeing with the construction it proposes by pointing out that the ’854 patent Specification does not expressly state that an OVER file encompasses “tokens” (*see* Pet. 12–13), because the claims are not limited to the specific embodiments described in the specification, or the precise words used to describe those embodiments. *See Philips v. AWH Corp.*, 415 F.3d 1303, 1323 (Fed. Cir. 2004) (en banc) (explaining that “we have repeatedly warned against confining the claims to those embodiments” described in the specification because “persons of ordinary skill in the art rarely would confine their

definitions of terms to the exact representations depicted in the embodiments”).

2. “*Scan*”

Petitioner argues that “[e]ach independent claim recites a ‘scan associated with the [first/second] OVER file.’” Pet. 13. Petitioner asserts that “[t]he specification describes that an OVER file can include an ‘information code,’ and a third-party device can ‘scan 220 the information code displayed on the user device’” and this “‘scannable code’ can be ‘for example, a barcode or a QR code.’” *Id.* (citing Ex. 1002, 7:65–8:16, 14:19–29, 5:16–35). According to Petitioner, “[t]he specification also refers to using information codes involving radio and electronic transmissions or interactions like Near Field Communication (NFC), Bluetooth, or sensor readings,” but “it does not specify that such interactions involve scans or describes these embodiments as alternatives to other embodiments that use scans.” *Id.* (citing Ex. 1002, 5:16–35, 12:17–50). Therefore, Petitioner contends, “the specification uses ‘scan’ to refer to an optical scan, but it does not use ‘scan’ to refer to other types of interactions like electronic interactions.” *Id.* (citing Ex. 1005 ¶¶ 89–94).

Petitioner states that “Patent Owner has asserted in its complaint that a proximity-payment request (e.g., an NFC interaction) constitutes a scan.” Pet. 14 (citing Ex. 1018, 10, 36). “Accordingly,” Petitioner states, “this petition applies an interpretation of ‘scan’ that encompasses an optical scan” as addressed in Ground 1, “while also encompassing an NFC interaction” as addressed in Grounds 2–3 and asserted in the complaint. *Id.* (citing Ex. 1005 ¶¶ 89–86).

Patent Owner does not directly dispute the contentions related to this term at this stage of the proceeding. Prelim. Resp. 22. However, Patent Owner asserts that Petitioner has not met its statutory mandate for grounds 1 and 2 because Petitioner asserts that a construction of “scan” as “encompassing an NFC interaction” is “wrong.” *Id.* at 34. Patent Owner contends that Petitioner “cannot demonstrate a reasonable likelihood of success” by “proffering claim constructions that it asserts are incorrect.” *Id.*

For similar reasons as discussed above in Section III.C.1., we do not agree with Patent Owner’s assertion that we should deny institution because Petitioner does not assert that interpreting an “NFC interaction” as a “scan” is “correct.” *See* Prelim. Resp. 34. Although the Petition must set forth “[h]ow the challenged claim is to be construed,” this does not “require a petitioner to express a subjective belief in the correctness of its proffered claim constructions, nor prohibit a petitioner from relying on claim constructions that it believes are incorrect.” *Philip Morris*, Paper 13 at 43. Nor is Petitioner prohibited from relying on alternative claim constructions. *Id.* (citing *Changes to Implement Inter Partes Review Proceedings, Post-Grant Review Proceedings, and Transitional Program for Covered Business Method Patents*, 77 Fed. Reg. 48,680, 48,700). We do not see Petitioner as expressly disagreeing with the construction applied in Grounds 1 and 2 by pointing out that the ’854 patent Specification does not expressly state that an “NFC interaction” constitutes a “scan,” (*see* Pet. 13), because the claims are not limited to the specific embodiments described in the specification, or the precise words used to describe those embodiments. *See Philips*, 415 F.3d at 1323. Moreover, “[b]ecause the Petition is the last word by the petitioner at the institution stage, petitioners are often required to anticipate

arguments that may be advanced by the patent owner in a preliminary response, and, as a result, may argue in the alternative.” *Lewis Machine & Tool Co. v. WHG Properties, LLC*, IPR2020-00373, Paper 6 at 33–34 (PTAB July 27, 2020). That is precisely the case here. Petitioner applies one construction of “scan” in Ground 1, and an alternative construction of “scan” in Grounds 2 and 3.

There is a sufficient basis, based on the ’854 patent Specification, to construe “scan” to include an optical scan. *See* Ex. 1002, 7:64–8:16, 14:19–29. Further, the ’834 patent Specification states that “the OVER File storage client may generate an information code in the form of a networked or radio transmission, such as, for example, a Near Field Communication (NFC) or Bluetooth” and, in the context of “a user [] present[ing] a stored OVER File credential to a third party for verification,” the Specification appears to at least suggest that NFC interaction involves a scan of the information code. *See* Ex. 1002, 12:17–50, *see also id.* at 5:17–35.

Accordingly, for purposes of this Decision, we will apply a construction of “scan” that encompasses an optical scan as well as an NFC interaction.

3. “*Verifying by an issuing agency*”

Petitioner states that “[e]ach independent claim recites an OVER file comprising “a virtual representation of the credential that has been verified by an issuing agency to be an official representation of the credential.” Pet. 14. Petitioner argues that “[d]uring prosecution of the [’531] parent application, Applicant argued that this phrase requires that the issuing agency verify that the *virtual representation* is an official representation of the credential.” *Id.* (citing Ex. 1007, 40, 44–45). “Accordingly,” Petitioner

contends, “this petition construes this phrase to require that an issuing agency have verified a *virtual representation* in an OVER file as being an official representation of a credential.” *Id.* (citing Ex. 1005 ¶¶ 97–100). Patent Owner does not appear to dispute this contention at this stage of the proceeding. *See* Prelim. Resp. 22–23. For purposes of institution, we will apply Petitioner’s proposed construction of this term.

D. Discretion to Deny Institution Under § 35 U.S.C. 325(d)

Patent Owner contends that the Board should deny institution under 35 U.S.C. § 325(d) because the Petition “provides nothing beyond the art already considered by the Examiner during multiple rounds of prior art searching and rejections.” Prelim. Resp. 42–43.

1. Framework

In evaluating the exercise of discretion to deny institution under Section 325(d), the Board uses the following two-part framework: (1) determining whether the same or substantially the same art previously was presented to the Office or whether the same or substantially the same arguments previously were presented to the Office; and (2) if either condition of the first part of the framework is satisfied, determining whether the petitioner has demonstrated that the Office erred in a manner material to the patentability of challenged claims. *Advanced Bionics, LLC v. Med-El Elektromedizinische Geräte GmbH*, IPR2019-01469, Paper 6 at 8 (PTAB Feb. 13, 2020) (precedential) (“*Advanced Bionics*”).

Within this two-part framework, the Board considers a number of non-exclusive factors in evaluating whether to exercise its discretion under § 325(d). *See Becton, Dickinson & Co. v. B. Braun Melsungen AG*, IPR2017-01586, Paper 8 (PTAB Dec. 15, 2017) (precedential as to § III.C.5,

first para.) (“*Becton, Dickinson*”); *see also Advanced Bionics* at 9–11. The factors set forth in *Becton, Dickinson* are as follows:

- (a) the similarities and material differences between the asserted art and the prior art involved during examination;
- (b) the cumulative nature of the asserted art and the prior art evaluated during examination;
- (c) the extent to which the asserted art was evaluated during examination, including whether the prior art was the basis for rejection;
- (d) the extent of the overlap between the arguments made during examination and the manner in which petitioner relies on the prior art or patent owner distinguishes the prior art;
- (e) whether Petitioner has pointed out sufficiently how the examiner erred in its evaluation of the asserted prior art; and
- (f) the extent to which additional evidence and facts presented in the petition warrant reconsideration of the prior art or arguments.

Becton, Dickinson, Paper 8 at 17–18. *Becton, Dickinson* factors (a), (b), and (d) relate to whether the art or arguments presented in the Petition are the same or substantially the same as those previously presented to the Office. *Advanced Bionics*, Paper 6 at 10. The art or arguments presented in the Petition are not “substantially the same” as those previously presented to the Office when there are differences between them that are material to the Office’s prior consideration of the art and arguments. *Wolfspeed, Inc. v. Trs. of Purdue Univ.*, IPR2022-00761, Paper 13 at 7–8 (Vidal Mar. 30, 2023) (“*Wolfspeed*”).

Factors (c), (e), and (f) “relate to whether the petitioner has demonstrated a material error by the Office” in its prior consideration of that art or arguments. *Advanced Bionics*, Paper 6 at 10. Only if the same or substantially the same art or arguments were previously presented to the Office do we consider whether petitioner has demonstrated a material error by the Office. *Id.* “At bottom, this framework reflects a commitment to defer to previous Office evaluations of the evidence of record unless material error is shown.” *Id.* at 9.

2. *Whether the Same or Substantially the Same Art or Arguments Were Previously Presented*

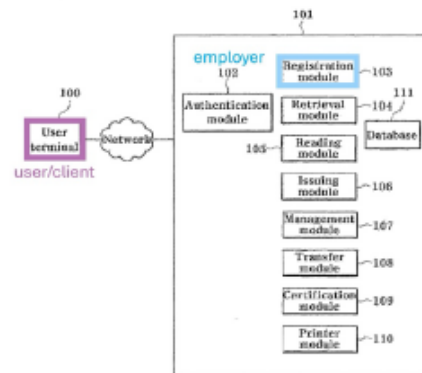
There is no dispute that the Osborne, Stafford, Purves, and Neafsey references asserted in this proceeding were not previously presented to the Office. Pet. 4–5, 77; Prelim. Resp. 44. Patent Owner argues that the art asserted by Petitioner is materially similar to and cumulative of the art considered during prosecution. Prelim. Resp. 44. Specifically, Patent Owner argues that the Examiner concluded that the Kang⁶ and Bhatnagar⁷ references did not teach the claimed “virtual representation of an original credential of a user that has been verified by an issuing agency,”⁸ and, similarly, the Osborne and Stafford references also fail to teach verification of a “virtual representation” of a credential by an issuing agency. *Id.* at 43–45; *see also* Ex. 1008, 25–26 (Examiner’s Reasons for Allowance), 49–60, 130, 155–160. In support, Patent Owner provides the following annotations

⁶ Kang, US 2009/0307756 A1, published Dec. 10, 2009 (Ex. 2005).

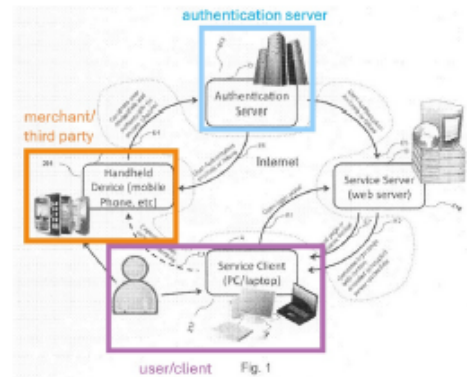
⁷ Bhatnagar et al., US 2012/0240204 A1, published Sept. 20, 2012 (Ex. 2006).

⁸ The Examiner also identified additional limitations not taught by Kang and Bhatnagar, that are not addressed by Patent Owner. Ex. 1008, 25–26.

of Kang's Figure 1, Bhatnagar's Figure 1, Osborne's Figure 4, and Stafford's Figure 1.

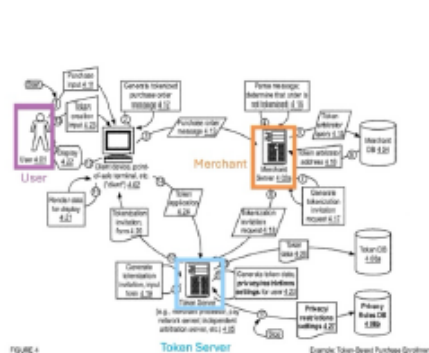


Kang
EX2005, Fig. 1 (annotated)

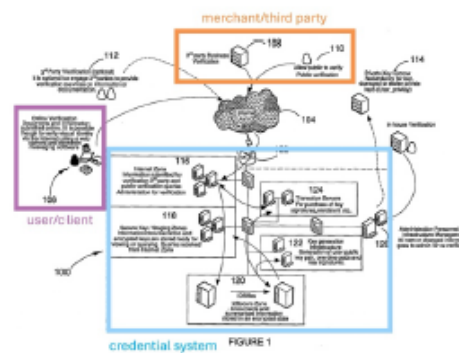


Bhatnagar
EX2006, Fig. 1 (annotated)

References In Visa's Petition



Oborne
EX1011, Fig. 4 (annotated)



Stafford
EX1012, Fig. 1 (annotated)

Id. at 46. Depicted above are Kang’s Figure 1, Bhatnagar’s Figure 1, Osborne’s Figure 4, and Stafford’s Figure 1, with Patent Owner’s color-coded annotations in purple, blue, and orange.

Patent Owner similarly argues that the Examiner concluded that the Ohara⁹ and Chu¹⁰ references did not teach the same claim limitation during

⁹ Ohara, US 2007/0208665 A1, published Sep. 6, 2007 (Ex. 2002).

¹⁰ Chu, US 8,540,149 B1, issued Sept. 24, 2013 (Ex. 2003).

prosecution of US 9,251,531, the parent patent to the '854 patent. Prelim. Resp. 46 (citing Ex. 1007, 20). Patent Owner further argues that Petitioner's arguments overlap with the disclosure of the references considered during prosecution because the Petition does not "fill in the gap or present any new reference that shows this claimed feature." *Id.* at 47.

On this record, we disagree with Patent Owner. Aside from asserting that each of the references fails to teach the same claim limitation, Patent Owner does not provide meaningful argument as to the similarities of the references or arguments. Although Patent Owner provides color-coded annotations of certain figures from Kang, Bhatnagar, Osborne, and Stafford, Patent Owner does not provide further explanation as to these annotated figures, the references themselves, or the similarities of the references. For example, Patent Owner annotates in the color blue Kang's "Registration module 103," Bhatnagar's "Authentication Server," Osborne's "Token Server," and various components of Stafford's Figure 1, but provides no explanation as to how these components are substantially the same, particularly with respect to the asserted missing limitation. Moreover, the fact that these figures may show some basic commonalities, e.g., a user or client terminal, does not establish that the same or substantially the same prior art was presented to the Office. Patent Owner also does not provide any substantive comparison of the references asserted in this proceeding with Ohara and Chu.

As set forth below, at this preliminary stage, we determine that Petitioner has sufficiently shown that Osborne teaches "virtual representation of an original credential of a user," and renders obvious verifying this virtual representation by an "issuing agency." Patent Owner, however, does not

demonstrate that Kang or Bhatnagar include comparable disclosures. Consequently, Patent Owner has not shown that Osborne is cumulative of Kang or Bhatnagar. Additionally, Petitioner relies on the combination of Stafford and Purves to teach “virtual representation of an original credential of a user that has been verified by an issuing agency,” (Pet. 58–60), and Patent Owner does not address the Purves reference or assert that this combination is cumulative of Kang and Bhatnagar.

Therefore, Patent Owner presents no meaningful explanation of how the prior art relied upon in the Petition, in the manner presented by Petitioner, is cumulative of the prior art examined during prosecution. Patent Owner’s argument that substantially the same arguments were presented to the Office fails for the same reasons. Accordingly, we are not persuaded by Patent Owner’s arguments. Because Patent Owner has not demonstrated that the first part of the *Advanced Bionics* framework is met, we need not consider whether the second part of the framework is met. *Advanced Bionics*, Paper 6 at 10.

3. Conclusion on Discretionary Denial Under § 325(d)

For the above reasons, we decline to deny the Petition under 35 U.S.C. § 325(d).

E. Ground 1: Alleged Obviousness Over Osborne

Petitioner contends claims 1–17 would have been obvious over Osborne. Pet. 15–46. Patent Owner disputes Petitioner’s contentions. Prelim. Resp. 23–35. Having considered the arguments and evidence before us, we find that the record establishes a reasonable likelihood that Petitioner would prevail on at least one claim in this asserted ground of unpatentability.

1. *Osborne (Ex. 1011)*

Osborne is titled “Payment Privacy Tokenization Apparatuses, Methods and Systems” and generally describes a payment privacy tokenization (PPT) system that transforms payment token-based purchase orders into multi-issuer purchase payment funds transfers. Ex. 1011, codes (54), (57), ¶ 22. Figure 1A, reproduced below, depicts diagrams illustrating aspects of the payment tokenization in some embodiments of the invention. *Id.* ¶ 7.

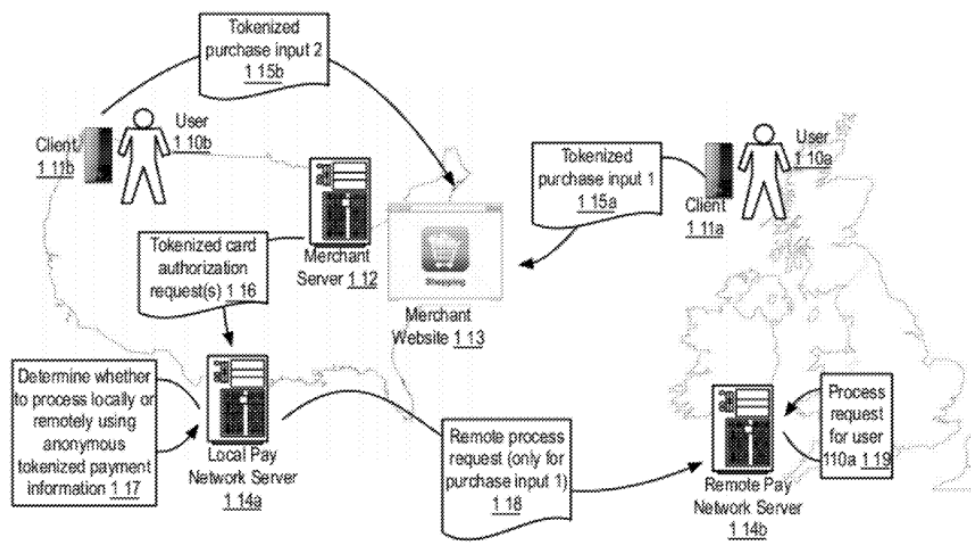


FIGURE 1A

Example: Payment Tokenization

Figure 1A, above, depicts some implementations of the payment tokenization system where “a payment network system, comprised of payment network servers located in distant geographical regions . . . may be required to determine where to process a purchase transaction.” Ex. 1011 ¶ 23. The system of Figure 1A includes local pay network server 114a,

remote pay network server 114b), user 110a, and merchant 112 with website 113. *Id.*

In some implementations of Osborne, a user may wish to purchase a product, service, offering, etc. from a merchant. Ex. 1011 ¶ 35. The user may provide user input for the purchase, and the token server may generate a tokenization invitation and an application form for the user to complete to sign up for tokenization services. *Id.* ¶¶ 36, 39. The user may provide token creation input to complete an application form. *Id.* ¶ 40. “The token server may obtain the application form, and parse the form to extract data fields and values from the form to generate a token data record.” *Id.* ¶ 41. The token server may store the data extracted from the application form to a token database. *Id.* ¶ 44.

Figure 4, reproduced below, depicts this process, that is, “a data flow diagram illustrating an example procedure to enroll in a token-based purchase payment program in some embodiments of the PPT.” Ex. 1011 ¶ 9.

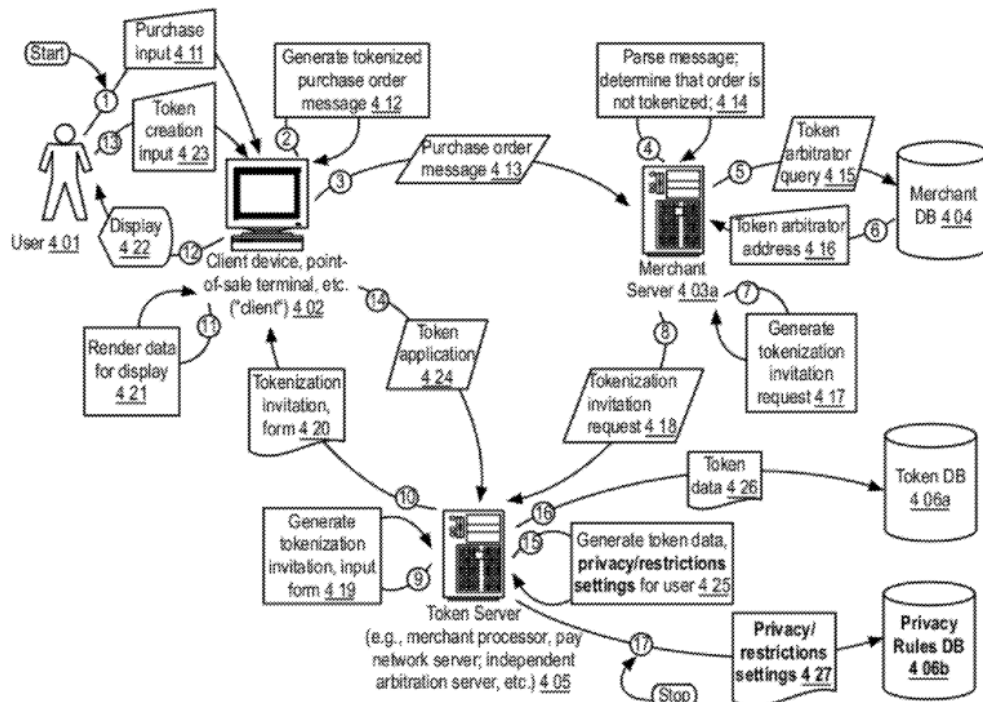


FIGURE 4

Example: Token-Based Purchase Enrollment

Figure 4, above, illustrates an example procedure to enroll in a token-based purchase payment program. Ex. 1011 ¶ 35. Figure 4 illustrates the interactions between user 401, client device 402, merchant server 403a, and a token server 405. *Id.* ¶¶ 35–44.

2. Analysis of Independent Claim 1

Petitioner contends that Osborne teaches each limitation of independent claim 1. Pet. 16–35.

a) Preamble

Petitioner argues that Osborne discloses “[a] computer-implemented method.” Pet. 16 (citing Ex. 1011 ¶¶ 35–38, 114–122; Ex. 1005 ¶ 215). At this stage, Patent Owner does not dispute Petitioner’s contentions. *See* Prelim. Resp. Based on our review and consideration of the current record,

we determine that Petitioner has sufficiently shown that Osborne teaches the preamble for purposes of institution.¹¹

b) Limitation [1.1]

Limitation [1.1] recites:

accessing, by an officially verifiable electronic representation (OVER) file verifying device, a first OVER file stored on a first OVER file client device, the first OVER file comprising:

a first virtual representation of an original credential of a user that has been verified by an issuing agency to be a first official representation of the original credential of the user for proving the user's identity or qualifications, based on information associated with the original credential of the user, wherein the first OVER file is itself a first new credential of the user;

the first OVER file generated by an OVER engine configured to:

store the information associated with the original credential of the user; and

transmit the first generated OVER file to the first OVER file client device.

Ex. 1002, 21:47–63.

Petitioner contends that Osborne's "payment privacy tokenization apparatus" (PPT), which includes a "token server" or "token arbitrator," a "merchant server," a "merchant point-of-sale device in communication with

¹¹ Because we are persuaded that Petitioner has shown that Osborne teaches the subject matter recited in the preamble, we need not decide whether the preamble is limiting for purposes of this Decision.

a merchant server” (i.e., *an OVER file verifying device*), and a “user device” (i.e., *a first OVER file client device*) teaches the claimed *OVER engine*. Pet. 17–19 (citing e.g., Ex. 1011 ¶¶ 22, 35, 53, 166, Fig. 4).

Petitioner contends that tokens used for transactions that are generated and verified by the PPT apparatus (i.e., the *OVER engine*) teach the recited *OVER file*. Pet. 19 (citing Ex. 1011 ¶ 25; Ex. 1005 ¶¶ 220–221). Petitioner contends that the token is a *virtual representation of a credential*, such as a credit card. Pet. 22 (citing Ex. 1011 ¶ 25, Fig. 1B). Petitioner contends that Osborne’s token application form provides *information associated with the original credential of the user* that the PPT stores in a database, such as account number, type, billing address, etc., for the user’s credit cards. Pet. 20; *see id.* at 21 (citing Ex. 1011 Fig. 15). Therefore, Petitioner contends that Osborne’s “token is a *virtual representation of an original credential of a user* that is generated based on information associated with the credential.” Pet. 22 (citing Ex. 1005 ¶ 223). Petitioner contends that the token is a first new credential used for proving the user’s identity or qualifications, by standing in for an original credential because a user may use tokens in lieu of payment information, “using the token to provide identity to a merchant as a stand-in for credit card or account information.” *Id.* at 22–23 (Ex. 1011 ¶ 25; Ex. 1005 ¶ 223).

Petitioner contends that “Osborne teaches or at least suggests that the token would be verified by the issuing agency as the official representation.” Pet. 23. According to Petitioner, “any entity can operate as the token server,” for example, the “credential’s ‘funding source’ – that is, by the agency that issued the credential.” *Id.* (citing Ex. 1011 ¶¶ 29, 47, 48, 53, 58). According to Petitioner “[b]y generating the token and providing it to

the user to represent the credential it has issued, the issuer would be verifying it to be an official representation of the credential.” *Id.* (citing Ex. 1005 ¶ 224).

Petitioner also contends that a person of ordinary skill in the art “would have found it obvious for an issuer, upon generating the token, to verify that it was an official representation of the credential, using stored credential information identified by the token application form when generating the token, since verifying the token would be a routine step based on the credential data received and doing so would increase confidence that the token legitimately represented the credential.” *Id.* at 23–24 (citing Ex. 1005 ¶ 225).

Petitioner also argues that if Patent Owner argues that the claim requires that the credential, rather than the token, be verified by the issuer, a person of ordinary skill in the art “would have found it obvious that a credential is verified by virtue of being issued by an official issuer.” *Id.* at 24. Petitioner argues that “since the purpose of a credential is to be an official representation from the issuer, an issuer would make such a verification as a matter of course when issuing the credential.” *Id.* (citing Ex. 1005 ¶ 226).

Petitioner further contends that Osborne’s token is provided to the client device, i.e., *transmitted to the client device*, after receiving the token application. Pet. 24–25 (citing Ex. 1011, Fig. 5). Petitioner also contends that Osborne’s token (*OVER file*) is *accessed* by the merchant server (*OVER file verifying device*) when the user triggers a tokenized purchase with the merchant, passes the token to the merchant, and the merchant passes the

token to a transaction arbitrator. *Id.* at 25–26 (Ex. 1011 ¶¶ 25, 49–50; Ex. 1005 ¶¶ 228–229).

Patent Owner responds by making three arguments: (1) that Osborne does not disclose a virtual representation that has been “verified by an issuing agency to be a first official representation of the credential”; (2) that Petitioner improperly maps both the “OVER engine” and “issuing agency” on the same token server in Osborne; and (3) that we should deny institution because Petitioner “fails to meet its burden to show unpatentability based on a construction of ‘OVER file’ it refuses to endorse.” Prelim. Resp. 23–24.

With respect to the first argument, Patent Owner argues that “Osborne does not disclose verification by an issuing agency.” Prelim. Resp. 24. Patent Owner argues that “none of [the five cited paragraphs in Osborne] show an issuing agency providing tokens, let alone issuer verification.” *Id.* at 25 (citing Ex. 1011 ¶¶ 29, 47, 48, 53, 58). Patent Owner also argues that (1) the token server carries out a simple lookup query, not any verification by a bank or independent issuing agency and (2) payment processing at the back end is distinct from verification by an issuing agency. *Id.* at 26 (citing Ex. 1011 ¶ 53; Ex. 1002, 21:51–57, 23:1–8, 24:9–16); *id.* at 27 (citing Ex. 1011 ¶ 58). Patent Owner also argues that Petitioner fails to meet its burden to show either “how or why” a person of ordinary skill in the art would have modified Osborne to teach this limitation, and that Petitioner offers only conclusory assertions that it would have been “obvious for an issuer, upon generating the token, to verify” it, and that “verification was ‘a routine step.’” Prelim. Resp. 27–29. Patent Owner further criticizes as “hindsight” Petitioner’s contention that adding verification “would increase confidence that the token legitimately represented the credential” because this is

“exactly the problem the ‘854 Patent sought to address.” *Id.* at 29 (citing Pet. 23–24; Ex. 1005 ¶ 225; Ex. 1002, 1:38–48).

In its second argument, Patent Owner argues that Petitioner has improperly argued that Osborne’s PPT apparatus (which includes a token server) teaches the recited “OVER engine” and also argues that the same token server teaches the recited “issuing agency.” Prelim. Resp. 32–33. According to Patent Owner, “[t]he claims requiring the distinct ‘OVER engine’ and ‘issuing agency’ create a presumption that they are distinct components of the invention.” *Id.* at 32. Patent Owner further contends that Petitioner “does not attempt to overcome [this] presumption by pointing to anything in the claims or written description showing the claimed ‘OVER engine’ and ‘issuing agency’ are one and the same.” *Id.* at 33.

Based on the present record, we determine that Petitioner has made a sufficient showing for this limitation for purposes of institution. In particular, we determine, based on the present record, that Osborne’s tokens qualify as “OVER files” because they include a virtual representation of one or more credentials, to be used for verification of those credentials, as we have preliminarily construed the term “OVER file.” *See* § II.C.1, *supra*. Petitioner has also made a sufficient showing that Osborne’s tokens are generated by the PPT token server (the “OVER engine”), and that it would have been obvious for an issuer of the token to verify that the token is an official representation of the credential to provide added security.

We do not agree with Patent Owner that Osborne fails to disclose “an issuing agency providing tokens.” *See* Prelim. Resp. 25. To the contrary, Osborne discloses “a funding source from whom to obtain a token” (Ex. 1011 ¶ 29), explains that the “token requesting channel” may include an “issuer”

(*id.* ¶ 47), that “the source of the token” may be an “issuer” (*id.*), that the token server may operate “in conjunction with” the “issuer” (*id.* ¶ 53), and that “the user’s payment token may be linked to one or more issuer financial institutions (‘issuers’), such as banking institutions, which issued the account(s) for the user linked to the payment token” (*id.* ¶ 58). *See also* Ex. 1005 ¶ 218. Based on these disclosures, Petitioner has sufficiently shown on this record that Osborne discloses that tokens can be provided by an issuer, such as a bank or financial institution. To the extent Patent Owner is asserting that the term “issuing agency” has additional requirements above and beyond an “issuer” that are not met by the Osborne’s disclosures, Patent Owner may flesh those arguments out at trial.

We also determine that Petitioner has sufficiently shown for purposes of institution that one of ordinary skill would have found it obvious for the issuer of Osborne’s tokens to verify the token. We find logical Petitioner’s contention, supported by Dr. Shamos’s testimony, that one of ordinary skill would have found it obvious for an issuer, after generating the token, to verify that it was an official representation of the credential using the credential information it already has, because such verification would increase confidence that the token legitimately represented the credential. Pet. 23–24; Ex. 1005 ¶ 225. Dr. Shamos provides further support by testifying that this verification would be a “routine step,” and would mitigate the problems caused by “[t]he existence of unofficial, forged or altered tokens in the marketplace,” which “would create problems for both issuers and users.” Ex. 1005 ¶ 225. We find that these arguments, at this stage of the proceeding, provide sufficient “articulated reasoning with some rational underpinning to support the legal conclusion of obviousness” for purposes of

institution. *KSR*, 550 U.S. at 418 (quoting *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)). Although Patent Owner criticizes these arguments as “hindsight,” Patent Owner fails to provide any reasoning explaining why one of ordinary skill would not have been motivated to have the issuer verify the token as Petitioner and Dr. Shamos contend. *See* Prelim. Resp. 29–30.

At this stage of the proceeding, we also do not agree with Patent Owner’s argument that Petitioner is improperly mapping both the “OVER engine” and “issuing agency” on the same token server in Osborne. *See* Prelim. Resp. 30–33. Petitioner maps the “OVER engine” to Osborne’s PPT apparatus, which includes a token server (Pet. 17–18), and maps the “issuing agency” to the entity that operates the token server (Pet. 17–18, 23–24). The token server and the entity that operates it are not one and the same, any more than a bank and a server operated by the bank are the same thing. Therefore, we do not agree that Petitioner is mapping both the “OVER engine” and the “issuing agency” on the same disclosure in Osborne.

Finally, we disagree with Patent Owner’s argument that we should deny institution because Petitioner is purportedly offering a construction of “OVER file” that it does not believe is correct. *See* Prelim. Resp. 33–34. For the reasons discussed previously in Section III.C.1, we disagree with Patent Owner’s contention that the construction proposed by Petitioner warrants denial of institution under the facts of this case.

Consequently, based on the present record, we determine that Petitioner has sufficiently shown that this limitation would have been obvious over Osborne.

c) Limitation [1.2]

Limitation 1.2 recites “transmitting, by the OVER file verifying device, to the OVER engine, a first verifying request to verify that the first OVER file accessed from the first OVER file client authenticates the user.” Ex. 1002, 21:64–67.

Petitioner contends that this limitation is taught as part of Osborne’s “merchant’s token arbitration request (*first verifying request*) triggered by a purchase order request from a user.” Pet. 26. According to Petitioner, the *first verifying request* is when the merchant server sends a “token arbitration request . . . to a token server.” *Id.* (citing Ex. 1011 ¶¶ 51–52). Petitioner contends that Osborne teaches that the “token server may parse the token arbitration request message” and “determine whether the user token is authenticated.” *Id.* at 27 (citing Ex. 1011 ¶¶ 25, 53–55; Ex. 1005 ¶ 230).

Patent Owner does not present arguments regarding this limitation at this stage of the proceeding. *See generally* Prelim. Resp.

We determine that, on the record before us, Petitioner’s cited evidence sufficiently supports its contentions regarding this limitation.

d) Limitation [1.3]

Limitation [1.3] recites “receiving, by the OVER file verifying device, a first authentication message comprising a first indication of whether a first scan associated with the first OVER file on the first OVER file client device of the user corresponds to the information associated with the original credential of the user that is stored in the OVER engine.” Ex. 1002, 22:1–6.

Petitioner contends that that the RFID/NFC activation that occurs when a user communicates with a merchant server via a client (e.g., the mobile device or point of sale terminal) teaches a “*scan associated with the*

first OVER file on the first OVER file client device of the user.” Pet. 28 (citing Ex. 1005 ¶ 231). According to Petitioner, “[t]his NFC interaction triggers a tokenized purchase with the merchant, via the OVER file verifying device (the merchant server, alone or in conjunction with the merchant’s point-of-sale device interacting with the user’s device via NFC”). *Id.*

Petitioner argues that when “a token arbitration request is sent from the merchant server based on the user’s purchase order . . . the token server processes the token arbitration request triggered by the scan by looking up the account number in a token database.” Pet. 29 (citing Ex. 1011 ¶¶ 51–52). According to Petitioner, “the token server ‘extract[s] the payment token from the message,’ then issues a query to a database ‘using the payment token as a search term in the query,’” and in response, “the database produces ‘instructions for the token on how to proceed with payment processing,’” including “credential information such as user account numbers.” *Id.* at 29–30 (citing Ex. 1011 ¶ 53; Ex. 1005 ¶ 232). Petitioner contends that the “token server may determine whether the user token is authenticated.” *Id.* at 30 (citing Ex. 1011 ¶¶ 54, 69). Therefore, Petitioner contends that “the query determines whether the *scan* (RFID/NFC interaction) *associated with the first OVER file* (token) *corresponds to the information associated with the original credential* (whether the database query for the token returns the user’s account details or not).” *Id.* at 30–31 (citing Ex. 1005 ¶ 232). In addition, Petitioner contends that “an authenticating message is sent to the merchant server comprising a first indication of the determination,” including, for example, an “authentication fail message” or continuation of processing. *Id.* at 31–32 (citing Ex. 1011 ¶ 63, 69, Figs. 7A–7C; Ex. 1005 ¶¶ 233–234).

Patent Owner does not present arguments regarding this limitation at this stage of the proceeding. *See generally* Prelim. Resp.

We determine that, on the record before us, Petitioner’s cited evidence sufficiently supports its contentions regarding this limitation.

e) Limitation [1.4]

Limitation [1.4] recites “outputting a first status indicator expressing whether the first OVER file authenticates the user.” Ex. 1002, 22:7–8.

Petitioner contends Osborne teaches initiation of an error handling routine and/or a user enrollment routine, which “would be a status indicator expressing non-authentication.” Pet. 32–33 (citing Ex. 1011 ¶ 69, Fig. 7A; Ex. 1005 ¶ 235). In addition, Petitioner contends that “after successful authentication and an authorization success, ‘merchant server may add a record of the transaction for the user’ and also ‘provide the purchase receipt to the client,’ which renders it for the user,” which are also “status indicator[s] expressing successful authentication.” *Id.* at 33 (citing Ex. 1011 ¶ 73; Ex. 1005 ¶¶ 203–205, 235).

Patent Owner does not present arguments regarding this limitation at this stage of the proceeding. *See generally* Prelim. Resp.

We determine that, on the record before us, Petitioner’s cited evidence sufficiently supports its contentions regarding this limitation.

f) Limitations [1.5]–[1.8]

Petitioner contends that limitations [1.5] through [1.8] repeat limitations [1.1] through [1.4] with several modifications, including, for example, reciting a “second” OVER file and “second” OVER file client device (limitations [1.5]–[1.8]), “scann[ing]” rather than “accessing” at the “second” OVER file device (limitation [1.6]), and requiring that the second

OVER file be a “second new credential” that is “invalid for use in the first OVER file client device for authenticating the user” (limitation [1.5]). Pet. 33. In addition, Petitioner contends that “it is not specified whether the OVER engine generates the second OVER file.” *Id.*

Petitioner contends that “[t]he existence and use of a second OVER file is satisfied by a user having two devices and receiving respective OVER files to be used on each device.” Pet. 33. According to Petitioner, a person of ordinary skill in the art “would have expected users to use multiple devices,” and “Oborne teaches that the token server may keep a device table with various identifiers for a user’s devices.” *Id.* at 33–34 (citing Ex. 1011 ¶ 148; Ex. 1005 ¶ 237). Petitioner argues that Oborne teaches that the “second OVER file scanned at the second client device authenticates the user” for the same reasons as discussed in limitation [1.3]. *Id.* at 34. Finally, Petitioner argues that it would have been obvious to a person of ordinary skill in the art that the second OVER file be a new, device specific-credential that is invalid on the first OVER file client device because Oborne teaches using device fingerprinting to provide additional security of Oborne’s tokens, which a person of ordinary skill in the art would have been motivated to employ to tie a given token to a given device. *Id.* at 34–35 (citing Ex. 1011 ¶¶ 26, 47; Ex. 1005 ¶ 239).

Patent Owner does not present arguments regarding these limitations at this stage of the proceeding. *See generally* Prelim. Resp.

We determine that, on the record before us, Petitioner’s cited evidence sufficiently supports its contentions regarding these limitations.

g) Conclusion for Independent Claim 1

Based on our review and consideration of the current record, we determine that Petitioner has adequately shown that Osborne teaches the limitations in claim 1 for purposes of institution. Accordingly, we determine, on the current record and for purposes of this Decision, that the information presented in the Petition demonstrates a reasonable likelihood that claim 1 is unpatentable under 35 U.S.C. § 103(a) over Osborne.

3. Claims 2–17

At this stage, Patent Owner does not separately challenge Petitioner’s contentions as to claims 2–17. *See generally* Prelim. Resp. Because we preliminarily determine above that Petitioner has demonstrated a reasonable likelihood of prevailing in its challenge to at least one claim of the ’854 patent, we institute *inter partes* review on all claims and grounds. *See* 37 C.F.R. § 42.108(a) (“When instituting . . . 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, and because Petitioner meets the threshold for institution for claim 1 under this ground, we need not decide whether Petitioner’s other challenges to the other independent and dependent claims demonstrate the same. Those challenges, in our view, are best left for trial after full development of the record.

F. Ground 2: Alleged Obviousness over Osborne and Neafsey

Petitioner contends that claims 1–17 would have been obvious over the combination of Osborne and Neafsey. Pet. 47–48. Patent Owner does not separately dispute Petitioner’s contentions as to this challenge. Prelim. Resp. 23–35. Having considered the arguments and evidence before us, we

find that the record establishes a reasonable likelihood that Petitioner would prevail on at least one claim in this asserted ground of unpatentability.

1. Neafsey (Ex. 1015)

Neafsey is titled “Credential Management System” and is generally directed to a system where a server may generate a credential, transmit the credential to a mobile device for use in an access control system, payment system, transit system, vending system, or the like. Ex. 1015, codes (54), (57). Neafsey describes, for example, virtual credentials that “can be generated by the cloud credential management service . . . in multiple formats,” including optical, bar code, or Quick Response (QR) code. *Id.* ¶¶ 49, 61.

2. Analysis of Independent Claim 1

This challenge is identical to the challenge over Osborne, except that Petitioner applies the alternative construction of “scan,” that is, an optical scan. Pet. 47–48. Therefore, rather than relying on Osborne’s NFC interactions to teach “scan,” as recited in limitations [1.3] and [1.6], Petitioner relies on Neafsey’s optical scan. *Id.* Specifically, Petitioner contends that “Neafsey teaches various formats of virtual credentials that may be used for conducting transactions,” including “optically scannable codes such as QR and bar codes.” *Id.* at 47 (citing Ex. 1015 ¶ 61; Ex. 1016, 12; Ex. 1011 ¶ 32).

According to Petitioner, a person of ordinary skill in the art “would have been motivated to incorporate an optically scannable code into an OVER file to be used to trigger the use of tokens to purchase goods,” as it would be a “simple substitution of known elements to achieve predictable results,” that is, substituting Osborne’s NFC or mag stripe interactions with

Neafsey’s optically scannable code, which serves a similar role. Pet. 47 (citing Ex. 1005 ¶ 269); *see also id.* at 48 (citing Ex. 1005 ¶ 271). Petitioner contends that the substitution “would provide greater flexibility to users, increasing convenience and allowing a greater range of mobile devices to be employed.” *Id.* (citing Ex. 1005 ¶ 269). Petitioner contends that a person of ordinary skill in the art would have had a reasonable expectation of success in the combination because “Oborne expressly teaches the use of optical codes such as QR and bar codes in conjunction with similar transactions,” so a person of ordinary skill in the art “would have expected success in using optically scannable codes to stand in for credentials (e.g., as a scannable part of an OVER file) to trigger a tokenized transaction as taught by Osborne.” *Id.* at 47–48 (citing Ex. 1011 ¶¶ 80, 93, 104; Ex. 1005 ¶ 270).

Patent Owner does not present separate arguments regarding this challenge at this stage of the proceeding. *See generally* Prelim. Resp.

Based on our review and consideration of the current record, we determine that Petitioner has adequately shown that the combination of Osborne and Neafsey teaches the limitations in claim 1 for purposes of institution. Accordingly, we determine, on the current record and for purposes of this Decision, that the information presented in the Petition demonstrates a reasonable likelihood that claim 1 is unpatentable under 35 U.S.C. § 103(a) over Osborne and Neafsey. We need not decide at this time whether Petitioner’s other challenges to the other independent and dependent claims demonstrate the same.

G. Ground 3: Alleged Obviousness Over Stafford, Purves, and Neafsey

Petitioner contends claims 1–17 would have been obvious over the combination of Stafford, Purves, and Neafsey. Pet. 48–76. Patent Owner

asserts that the claims are not obvious under this ground. Prelim. Resp. 35–42. In particular, Patent Owner alleges that the combination of Stafford and Purves fails to teach limitation [1.1] and Petitioner fails to establish a rationale to combine Stafford and Purves.¹² *Id.*

As we discuss further below, although we have determined that Petitioner has met the threshold for institution of review, we address certain aspects of this ground for guidance purposes.

1. Stafford (Ex. 1012)

Stafford is directed to “a system [] for storing, validating, and disseminating credential information about an entity.” Ex. 1012, code (57). Stafford’s system “generates data representing at least part of the credential information and a data representation of at least part of a document supporting that information and stores the credential information and data representation in a database . . . in an encrypted form.” *Id.* Figure 2, reproduced below, depicts “a flow chart illustrating a process for preparing information for release to a third party in an embodiment of the present invention.” *Id.* ¶ 31.

¹² At this stage, Patent Owner does not assert any arguments with respect to Petitioner’s contentions regarding Neafsey, or the combination of Stafford and Neafsey.

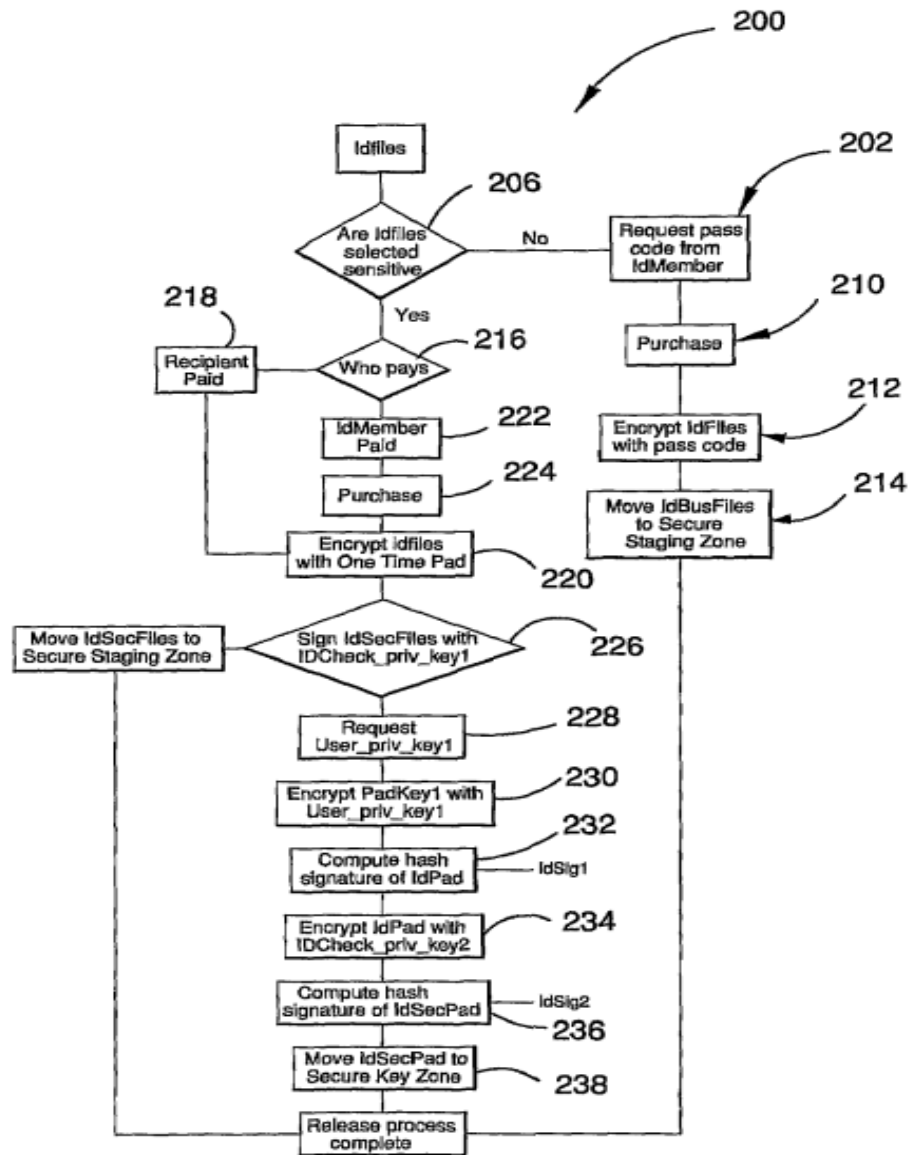


FIGURE 2

Figure 2, above, “shows a flowchart of a method of releasing credential information stored in the Secure[Z]one (120) to a party (called the recipient).” Ex. 1012 ¶ 73. Specifically, Figure 2 details the steps of process 200 for releasing securely stored credential information from the Secure Zone to a Secure Staging Zone where the credential can be released

to the entity that owns the credential information or another recipient. *Id.* ¶¶ 40, 84, 85, 103–106. The process starts by digitally signing original files, and additional steps are used to secure information that contains sensitive information. *Id.* ¶¶ 86–88, 93–105. For sensitive information, “a highly secure symmetric or similar encryption process” is used that employs one-time pads and hash values. *Id.* ¶¶ 88, 102–106.

Figure 3, reproduced below, depicts a method of transmitting released data to a third party in an embodiment of the invention. Ex. 1012 ¶ 32.

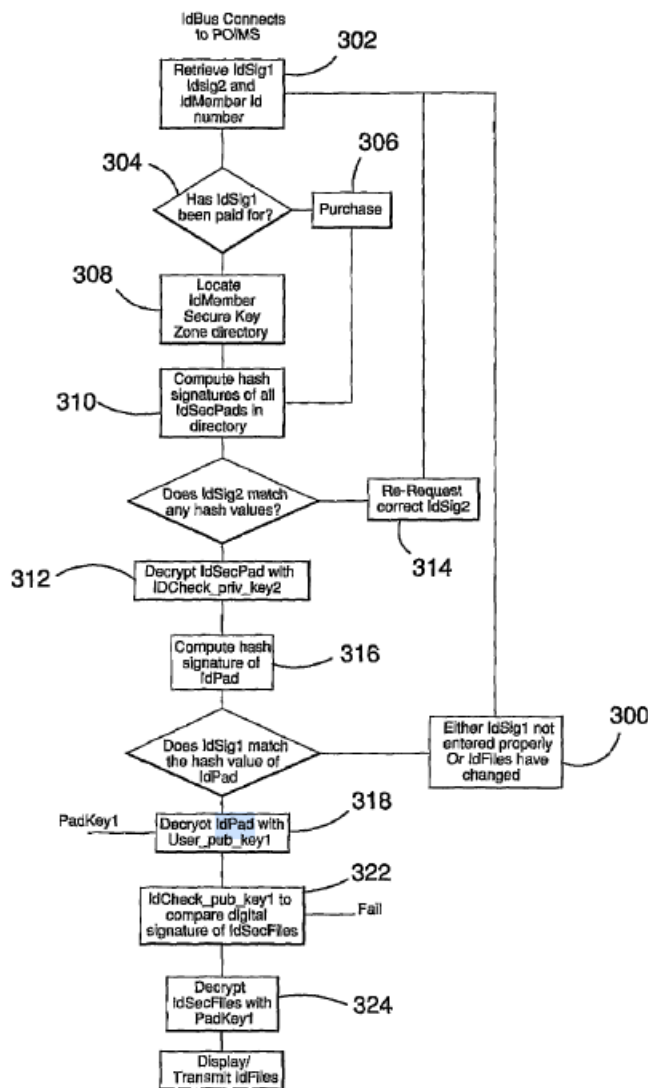


FIGURE 3

Figure 3, above, shows the steps for allowing a third party to obtain secured credentials. Ex. 1012 ¶¶ 107–125.

2. *Purves (Ex. 1013)*

Purves is directed to a wallet service enrollment platform (“WSEP”). Ex. 1013, code (57). Purves uses a platform that “facilitates the enrollment of payment accounts in a consumer’s virtual wallet.” *Id.* In Purves, a “consumer may be logged into their payment account issuer’s web site” and designate “payment accounts for enrollment in a virtual wallet.” *Id.* The issuer can then share relevant information with the virtual wallet provider to facilitate the enrollment of the accounts into the virtual wallet. *Id.* In Purves, “[t]he WSEP may also be configured to facilitate the creation and funding of pre-paid accounts in a consumer’s virtual wallet.” *Id.* A QR code scan may be used to trigger a wallet account connection or login during a point-of-sale interaction. *Id.* ¶ 64.

3. *Discussion of Certain Issues for Independent Claim 1*

As discussed, we have found sufficient basis for institution of trial based upon Petitioner’s challenges under Osborne and the combination of Osborne and Neafsey. However, in order to provide guidance to the parties, we address some issues on this ground for independent claim 1 on a preliminary basis, focusing on issues related to limitation [1.1].

Petitioner asserts that limitation [1.1] is taught by the combination of Stafford, Purves, and Neafsey because “Stafford’s system generates key signatures to release sensitive files” which “can comprise hash values (IdSig1 and IdSig2), which can either be displayed to the user or transmitted electronically to the user’s device.” Pet. 58 (citing Ex. 1012 ¶¶ 97–99).

Petitioner contends that:

The release of the credential is authorized by comparing the hash values to the IdSecPad and IdPad corresponding to the credential, with a match indicating that release is authorized. [Ex. 1012 ¶¶ 166–122]; Ex. 1005 ¶ 293. *A hash value thus acts as a virtual credential representation of the stored credential, derived based on the information associated with the credential, so generating the hash values or similar key signature corresponds to the step of generating the OVER file.* Ex. 1005 ¶ 293.

Id. (emphasis added).

Petitioner argues that “Stafford teaches that its encrypted credentials may be verified by the issuer and may include storing an image of the credential (e.g., a scanned copy).” Pet. 59 (citing Ex. 1012 ¶¶ 62, 65, 67). Petitioner asserts, however, that to the extent that Stafford does not expressly teach that the key signature files include a virtual representation *verified by the issuing agency*, Purves would teach the verification. *Id.* (citing Ex. 1005 ¶ 294).

Petitioner contends that Purves teaches that a user device “may be sent an image of a credential such as a credit card to conveniently represent a real credential,” where confidential information may be obscured. Pet. 59 (citing Ex. 1013 ¶¶ 102, 108–109, 111, 112, 122). Petitioner asserts that this card image is from an issuer. *Id.* (citing Ex. 1013 ¶ 85). Petitioner argues that the “representative image provided ‘from an issuer’ would be *verified by the issuing agency to be an official representation*, as would an image produced from an actual credential, since an actual credential naturally represents itself.” *Id.* (citing Ex. 1005 ¶ 295).

Petitioner asserts that in view of Purves’s teaching to provide user devices with images representing a credential, “it would have been obvious to use similar images in the context of Stafford.” Pet. 59. Petitioner argues

that providing an image of the user's credential, with optionally-obscured confidential information, along with the encoded key signature would "remind users which credential the key signature represents and enable quick selection from among a plurality of options available on the user's device." *Id.* at 59–60 (citing Ex. 1013 ¶¶ 85, 122; Ex. 1005 ¶ 296).

Petitioner contends that this image would be "a virtual representation verified by the issuer as being an official representation of the credential." *Id.* at 60 (citing Ex. 1005 ¶ 296).

Petitioner additionally argues that a person of ordinary skill in the art "would have been motivated to incorporate such representations with Stafford's key signatures to provide user devices convenient images of the credentials that may be selected by the user." *Id.* at 49–50 (citing Ex. 1005 ¶ 277). According to Petitioner, a person of ordinary skill in the art "would have recognized various benefits from incorporating Purves's credential images into Stafford's system," such as "the images would improve ease-of-use and reduce user error by providing users images matching the credentials the user seeks to provide to third parties." *Id.* at 52 (citing Ex. 1005 ¶ 282).

Limitation [1.1] requires the generation of an "OVER file" comprising

a . . . virtual representation of an original credential of a user that has been verified by an issuing agency to be a first official representation of the original credential of the user for proving the user's identity or qualifications, based on information associated with the original credential of the user, wherein the first OVER file is itself a first new credential of the user.

Ex. 1002, 21:49–58. In the claim construction discussion above, we preliminarily determined that the term "OVER file" encompasses a virtual

representation of one or more credentials, to be used for verification of those credentials. *See* § III.C.1, *supra*. Petitioner asserts that Stafford’s hash value “acts as a virtual credential representation of the stored credential” and is “*derived based on the information associated with the credential.*” Pet. 58 (emphasis added). Our preliminary view is that Stafford’s hash values are not a virtual representation associated with the credential because it does not appear that its hash values are derived based on information associated with the credential.

Stafford discloses that in its process for managing sensitive documents and information, at Step 226 as shown in Figure 2, encrypted sensitive files are digitally signed using IdCheck_priv_key1 (the system’s private signature key), and are moved to the Secure Staging Zone. *See* Ex. 1012 ¶¶ 34, 94. At Steps 232 and 236, hash signatures IdSig1 and IdSig2 are computed, which are components of the key signature, and which are provided to the entity that owns the credential information. *Id.* ¶¶ 40, 97, 99. IdSig1 is a hash value of the IdPad, which is an encrypted one-time pad or symmetric key by User_priv_key_1 (the private key of an entity that owns the credential information). *Id.* ¶¶ 40, 46, 51, 95, 97. IdSig2 is a hash value of IDSecPad, which is an encrypted one-time pad or a symmetric key by User_priv_key1 and IdCheck_Pub_key2. *Id.* ¶¶ 46, 99. As part of the process to get a credential released, hash value IdSig2 is checked to see if there is a match to hashes of all IDSecPads in the directory (Step 310 of Figure 3 of Stafford) and, if there is a match, then IdSecPad is decrypted to retrieve the IdPad, which is then hashed and compared to IdSig1 (Steps 312 and 316). *Id.* ¶¶ 119–121. If this is successful, PadKey1 (another one-time key) may be retrieved and sent to the Secure Staging Zone servers, allowing

connection to the directory of the entity owning the credential information. *Id.* ¶¶ 123–124. There is further comparison of hash values, and if successful, PadKey1 may be used to decrypt the credential, and the sensitive credential may be transmitted. *Id.* ¶¶ 124–126.

At this stage of the proceeding and on a preliminary basis, we do not agree with Petitioner that Stafford’s hash values IdSig1 and IdSig2 “act[] as a virtual credential representation of the stored credential.” *See* Pet. 58. Our reading of Stafford is that hash signatures are derived values from one-time pads, which may be used to encrypt the credential, but the pads do not appear to include any information related to the credential or its contents. Further, comparisons of derived hash values may lead to a location where a credential is stored in a secure location—but, our preliminary view is that any alleged “association” with the credential appears to be extremely attenuated, at best.

Petitioner takes Stafford’s teaching of a key signature, which is comprised of hash values, and then asserts that it would have been obvious to further provide an image of the user’s credential along with the encoded key signature based upon Purves’s teachings. Pet. 59–60. Petitioner’s rationale to combine Stafford with Purves’s is that providing an image of a credential would be remind users which credential the key signature represents and enable a quick selection among options. Pet. 52, 60 (citing Ex. 1013 ¶¶ 85, 122; Ex. 1005 ¶¶ 282, 296). Patent Owner argues Petitioner does not establish a motivation to modify Stafford’s credential release platform with Purves’s wallet enrollment system. Prelim. Resp. 35–36, 41–42. Patent Owner contrasts Purves’s teaching of a virtual wallet containing different payment methods and Stafford’s one-time key signatures, and

argues that because Petitioner never established that there would ever be selection between Stafford's one-time-use signatures there is no motivation for the combination. *Id.*

We recognize the application of “an expansive and flexible approach” to the question of obviousness. *KSR*, 550 U.S. at 415. However, one must “determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue.” *Id.* at 418. “It is impermissible to use the claimed invention as an instruction manual or ‘template’ to piece together the teachings of the prior art so that the claimed invention is rendered obvious.” *In re Fritch*, 972 F.2d 1260, 1266 (Fed. Cir. 1992) (citing *In re Gorman*, 933 F.2d 982, 987 (Fed. Cir. 1991)). At this stage of the proceeding and on a preliminary basis, we agree with Patent Owner that Petitioner has not set forth a sufficiently persuasive rationale to combine Stafford and Purves. As Patent Owner points out, Stafford teaches the use of one-time key signatures, while Purves is directed to a virtual wallet with multiple payment accounts. Moreover, Petitioner relies on Stafford's teachings relating to managing sensitive documents where extensive encryption is used to protect specific documents, and in this context, we question the rationale to add elements of Purves which could compromise the security of the key signature. These issues include, for instance, the addition of an image of the user's credential because, even with some obscured confidential information, this addition may add some risk to the secure handling of the key signature.

We invite the parties to provide further briefing during trial on Stafford's alleged teaching of an OVER file comprising a virtual

representation of the credential and the rationale to combine Stafford and Purves.

IV. CONCLUSION

After considering the evidence and arguments presented in the Petition and Preliminary Response, we determine Petitioner has established a reasonable likelihood of prevailing on its assertion that at least one claim of the '854 patent is unpatentable on at least one ground, and we institute an *inter partes* review on all the challenged claims and challenges presented 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”).

V. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that pursuant to 35 U.S.C. § 314, *inter partes* review is instituted as to the challenged claims of the '854 patent and all challenges of unpatentability presented in the Petition; and

FURTHER ORDERED that *inter partes* review is commenced on the entry date of this Order, and 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.

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