

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE INC.,
Petitioner

v.

CARBYNE BIOMETRICS, LLC,
Patent Owner

Case: IPR2024-00330
U.S. Patent No. 10,713,656

PATENT OWNER'S PRELIMINARY RESPONSE

TABLE OF CONTENTS

I. INTRODUCTION	1
II. BACKGROUND	3
A. The '656 Patent (Ex. 1001).....	3
B. Asserted Prior Art.....	7
1. Stone (Ex. 1008).....	7
2. Hoyos (Ex. 1013).....	9
3. Varghese (Ex. 1010).....	9
4. FFIEC Guidance (Ex. 1037).....	12
C. Claim Construction.....	13
D. Person of Ordinary Skill in the Art (POSITA).....	13
E. Claim Table	14
III. LEGAL STANDARDS.....	15
IV. ARGUMENT.....	16
A. The Petition Should Be Denied under <i>Fintiv</i> as the Issues Presented by This Petition and Petitioner's Six Other Petitions Will Be Resolved First in the Parallel District Court Case.	17
B. Ground 1: Petitioner Has Not Established That a POSITA Would Have Been Motivated to Combine Stone with Hoyos and Varghese.	28
1. Petitioner's expert's declaration should be given no weight as to the motivation to combine and reasonable expectation of success analysis.	30
2. Petitioner's conclusory explanation for the motivation to combine Stone, Hoyos, and Varghese is insufficient.....	34
3. Stone is not analogous art.....	39
4. The Stone, Hoyos, and Varghese references teach away from or conflict with each other.	41
C. Ground 2: Petitioner Has Not Established That a POSITA Would Have Been Motivated to Combine Stone and the FFIEC Guidance.....	50
1. Petitioner's expert's declaration should be given no weight as to the motivation to combine and reasonable expectation of success analysis.	50

2. Petitioner’s conclusory explanation for the motivation to combine Stone and the FFIEC Guidance is insufficient.	51
3. Stone is not analogous art.....	53
V. CONCLUSION	54

TABLE OF AUTHORITIES

Cases	Page(s)
<i>Adapt Pharm. Operations Ltd. v. Teva Pharm. USA, Inc.</i> , 25 F.4th 1354 (Fed. Cir. 2022)	29
<i>Airbus S.A.S. v. Firepass Corp.</i> , 941 F.3d 1374 (Fed. Cir. 2019)	40
<i>In re Am. Acad. of Sci. Tech Ctr.</i> , 367 F.3d 1359 (Fed. Cir. 2004)	34
<i>Apple v. Fintiv</i> , IPR2020-00019, Paper 11 (PTAB March 20, 2020)	<i>passim</i>
<i>In re Bigio</i> , 381 F.3d 1320 (Fed. Cir. 2004)	39
<i>Cisco Sys., Inc. v. C-Cation Techs., LLC</i> , IPR2014-00454, Paper No. 12 (P.T.A.B. Aug. 29, 2014).....	15, 16
<i>In re Clay</i> , 966 F.2d 656 (Fed. Cir. 1992)	39, 40, 41
<i>Cloud of Change, LLC v. Lightspeed POS Inc.</i> , Case No. 6-21-cv-01102, Dkt. 80 (W.D. Tex. May 15, 2023) (Albright, J.)	20
<i>E-One, Inc. v. Oshkosh Corp.</i> , IPR2019-00161, Paper 16 (PTAB May 15, 2019)	23
<i>In re Ethicon, Inc.</i> , 844 F.3d 1344 (Fed. Cir. 2017)	39
<i>Facebook, Inc. v. Voxer IP LLC</i> , IPR2021-00399, Paper 8 (PTAB July 21, 2021)	30
<i>Gen. Plastic Indus. Co., Ltd. v. Canon Kabushiki Kaisha</i> , IPR2016-01357, Paper 19 (PTAB Sept. 6, 2017).....	20
<i>In re GPAC Inc.</i> , 57 F.3d 1573 (Fed. Cir. 1995)	39

<i>KSR Int’l Co. v. Teleflex Inc.</i> , 550 U.S. 398 (2007).....	29, 38
<i>Maxlite, Inc. v. Jiaxing Super Lighting Elec. Appliance Co., Ltd.</i> , IPR2020-00208, Paper 32 (PTAB Oct. 12, 2021).....	23
<i>Next Caller, Inc. v. TrustID, Inc.</i> , IPR2019-00961, Paper 10 (PTAB Oct. 16, 2019).....	23
<i>NHK Spring Co. v. Intri-Plex Techs., Inc.</i> , No. IPR2018-00752, Paper 8 (PTAB Sept. 12, 2018).....	22
<i>In re NuVasive, Inc.</i> , 842 F.3d 1376 (Fed. Cir. 2016)	16
<i>Phillips v. AWH Corp.</i> , 415 F.3d 1303 (Fed. Cir. 2005) (en banc)	13
<i>Plas-Pak Indus., Inc. v. Sulzer Mixpac AG</i> , 600 F. App’x. 755 (Fed. Cir. 2015)	38
<i>Regents of Univ. of Cal. v. Broad Inst., Inc.</i> , 903 F.3d 1286 (Fed. Cir. 2018)	28
<i>Rohm and HaasCo. v. Brotech Corp.</i> , 127 F.3d 1089 (Fed. Cir. 1997)	34
<i>Samsung Elecs. Co., Ltd. v. Mojo Mobility Inc.</i> , IPR2023-01091, Paper 11 (PTAB Jan. 8, 2024)	21
<i>Samsung Elecs. Co., Ltd. v. Mojo Mobility Inc.</i> , IPR2023-01094, Paper 11 (PTAB Feb. 9, 2024).....	22, 24
<i>Samsung Elecs. Co.. v. RightQuestion, LLC</i> , IPR2022-0025, Paper 17 (PTAB June 9, 2022)	34
<i>Sand Revolution II, LLC v. Cont’l Intermodal Grp. – Trucking LLC</i> , IPR2019-01393, Paper 24 (PTAB June 16, 2020)	20
<i>Sanofi-Aventis Deutschland GmbH v. Mylan Pharms. Inc.</i> , 66 F.4th 1373 (Fed. Cir. 2023)	39

<i>Satco Prods., Inc. v. Regents of the Univ. of Cali.,</i> IPR2021-00794, Paper 14 (PTAB Nov. 10, 2021).....	22
<i>Sonrai Memory Ltd. v. LG Elecs. Inc.,</i> No. 6:21-cv-00168-ADA, 2022 WL 2307475 (W.D. Tex. June 27, 2022) (Albright, J.).....	21
<i>South-Tek Sys., LLC v. Engineered Corrosion Sols., LLC,</i> 748 F App’x. 1003 (Fed. Cir. 2018).....	45
<i>Stanley Black & Decker, Inc. v. Zircon Corp.,</i> IPR2020-01572, Paper 10 (PTAB April 19, 2021).....	23
<i>Tec Air, Inc. v. Denso Mfg. Mich. Inc.,</i> 192 F.3d 1353 (Fed. Cir. 1999)	41
<i>TQ Delta, LLC v. CISCO Sys., Inc.,</i> 942 F.3d 1352 (Fed. Cir. 2019)	35
<i>In re Urbanski,</i> 809 F.3d 1237 (Fed. Cir. 2016)	41, 47
<i>Vector Flow, Inc. v. HID Glob. Corp.,</i> IPR2023-00353, Paper 8 (PTAB July 27, 2023).....	28
<i>Virtek Vision Int’l ULC v. Assembly Guidance Sys., Inc.,</i> No. 2022-1998, 2024 WL 1292734 (Fed. Cir. Mar. 27, 2024)	38, 53
<i>Volkswagen Grp. of Am., Inc. v. StratosAudio, Inc.,</i> IPR2021-00717, Paper 12 (PTAB Nov. 12, 2021).....	30

Statutes

28 U.S.C. § 1404(a)	1
35 U.S.C. § 101	18
35 U.S.C. § 102	19
35 U.S.C. § 103	19
35 U.S.C. § 112.....	18

35 U.S.C. § 312(a)(3).....	15
35 U.S.C. § 314(a)	1, 15, 18, 22

Other Authorities

37 C.F.R. § 42.10(b)	56
37 C.F.R. §42.24	55
37 C.F.R. § 42.65(a).....	34
37 C.F.R. § 42.100(b)	13
37 C.F.R. § 42.104(b)(4).....	15

TABLE OF EXHIBITS

Exhibit	Description
2001	<i>Carbyne Biometrics, LLC v. Apple Inc.</i> , Case No. 1:23-cv-00324, Dkt 14 (Defendant’s Rule 12(b)(6) Motion to Dismiss the Complaint for Failure to State a Claim Under 35 U.S.C. §101) (W.D. Tex. May 24, 2023)
2002	<i>Carbyne Biometrics, LLC v. Apple Inc.</i> , Case No. 1:23-cv-00324, Dkt 30 (Plaintiff’s Response to Defendant’s Rule 12(b)(6) Motion to Dismiss the Complaint for Failure to State a Claim Under 35 U.S.C. §101) (W.D. Tex. June 1, 2023)
2003	<i>Carbyne Biometrics, LLC v. Apple Inc.</i> , Case No. 1:23-cv-00324, Dkt 31 (Defendant’s Reply Brief In Support of Motion to Dismiss for Failure to State Claim Under 35 U.S.C. §101) (W.D. Tex. June 28, 2023).
2004	<i>Carbyne Biometrics, LLC v. Apple Inc.</i> , Case No. 1:23-cv-00324, Dkt 64 (Defendant’s Opposed Motion to Stay Pending Transfer) (W.D. Tex. November 28, 2023)
2005	<i>Carbyne Biometrics, LLC v. Apple Inc.</i> , Case No. 1:23-cv-00324, Dkt 37 (Defendant’s Opposed Motion to Transfer (redacted)) (W.D. Tex. July 26, 2023)
2006	<i>Carbyne Biometrics, LLC v. Apple Inc.</i> , Case No. 1:23-cv-00324, Dkt 66 (Carbyne’s Response to Motion to Stay Pending Transfer) (W.D. Tex. December 5, 2023)
2007	<i>Carbyne Biometrics, LLC v. Apple Inc.</i> , Case No. 1:23-cv-00324, Dkt 50(Carbyne’s Response to Motion to Transfer Venue) (W.D. Tex. October 27, 2023)
2008	<i>Carbyne Biometrics, LLC v. Apple Inc.</i> , Case No. 1:23-cv-00324, Dkt 55 (Apple’s Reply In Support of Its Motion to Transfer Venue) (W.D. Tex. November 10, 2023)

2009	<i>Carbyne Biometrics, LLC v. Apple Inc.</i> , Case No. 1:23-cv-00324, Dkt 60 (Carbyne’s Surreply in Response to Motion to Transfer Venue) (W.D. Tex. November 16, 2023)
2010	<i>Carbyne Biometrics, LLC v. Apple Inc.</i> , Case No. 1:23-cv-00324, Dkt 42 (Apple’s Opening Claim Construction Brief) (W.D. Tex. October 4, 2023)
2011	<i>Carbyne Biometrics, LLC v. Apple Inc.</i> , Case No. 1:23-cv-00324, Dkt 49 (Carbyne’s Response to Apple’s Proposed Claim Construction) (W.D. Tex. October 25, 2023)
2012	<i>Carbyne Biometrics, LLC v. Apple Inc.</i> , Case No. 1:23-cv-00324, Dkt 54 (Apple’s Reply Claim Construction Brief) (W.D. Tex. November 8, 2023)
2013	<i>Carbyne Biometrics, LLC v. Apple Inc.</i> , Case No. 1:23-cv-00324, Dkt 62 (Carbyne’s Sur-Reply to Apple’s Claim Construction Brief) (W.D. Tex. November 22, 2023)
2014	<i>Carbyne Biometrics, LLC v. Apple Inc.</i> , Case No. 1:23-cv-00324, Dkt 69 (Minute Entry re Markman Hearing and Motion to Transfer Venue) (W.D. Tex. December 12, 2023)
2015	<i>Carbyne Biometrics, LLC v. Apple Inc.</i> , Case No. 1:23-cv-00324, Dkt 73 (Apple’s Motion to Stay Pending The Court’s Written Order on Transfer) (W.D. Tex. January 17, 2024)
2016	<i>Carbyne Biometrics, LLC v. Apple Inc.</i> , Case No. 1:23-cv-00324, Dkt 79 (Carbyne’s Response to Motion to Stay Pending Written Order on Transfer) (W.D. Tex. January 24, 2024)
2017	<i>Carbyne Biometrics, LLC v. Apple Inc.</i> , Case No. 1:23-cv-00324, Dkt 80 (Apple’s Reply in Support of Motion to Stay Pending Court’s Written Order on Transfer) (W.D. Tex. January 24, 2024)
2018	<i>In Re Apple</i> , Case No. 2024-111, Dkt 2 (Apple’s Petition for Writ of Mandamus) (Fed. Cir. February 1, 2024)

2019	<i>In Re Apple</i> , Case No. 2024-111, Dkt. 13 (Carbyne’s Response to Writ of Mandamus) (Fed. Cir. February 20, 2024)
2020	<i>In Re Apple Inc.</i> , Case No. 2024-111, Dkt 15 (Apple’s Reply In Support of Petition for Writ of Mandamus) (Fed. Cir. February 27,
2021	<i>In Re Apple Inc.</i> , Case No. 2024-111, Dkt 18 (Order Denying Writ of Mandamus) (Fed. Cir., March 18, 2024)
2022	United States Patent and Trademark Office Memorandum Dated June 21, 2022 re: Interim Procedure for Discretionary Denials in AIA post-grant proceedings with Parallel District Court Litigation
2023	<i>Cloud of change, LLC v. Lightspeed POS Inc.</i> , Case NO. 6:21-cv-0102 Order Denying Lightspeed POS Inc’s Opposed Motion to Stay Pending Resolution of <i>Inter Partes</i> Review (W.D. Tex. Dated May 15, 2023)
2024	<i>Sonrai Memory Limited v. LG Electronics, Inc.</i> 2022 WL 2307475 (W.D. Tex. June 27, 2022)
2025	<i>Carbyne Biometrics, LLC v. Apple Inc.</i> , Case No. 1:23-cv-00324, Apple’s Amended Preliminary Invalidity Contentions (W.D. Tex. October 6, 2023) (excerpts)
2026	Email Correspondence From Counsel Of Petitioner To Counsel of Patent Owner re <i>Sotera</i> Stipulations and <i>Carbyne Biometrics, LLC v. Apple Inc.</i> , 1:23-cv-0032 (W.D. Tex.)
2027	Email Correspondence From Counsel Of Petitioner To The Board re <i>Sotera</i> Stipulations for IPRs IPR2024-00329, -00330, -00331, -00332, -00333, -00334 and-00507
2028	U.S. Patent No. 5,164,992 (“Turk Patent”)

I. INTRODUCTION

The Board should deny institution in its discretion under 35 U.S.C. § 314(a) on either procedural or substantive grounds.

Procedurally, the Petition should be denied under *Fintiv*. Petitioner, Patent Owner, the District Court, and the Federal Circuit have spent considerable time, energy, and resources on the underlying district court litigation. This is not a typical district court case in which a defendant files an IPR petition prior to any briefing occurring and can claim that the parallel district court case is in its “early stages.” To the contrary, as of the writing of this Response, the parties have briefed: (1) Petitioner’s Motion to Dismiss (Exs. 2001, 2002, 2003); (2) Petitioner’s First Motion to Stay based on its transfer motion (Exs. 2004, 2006); (3) Petitioner’s Motion to Transfer Venue Under 28 U.S.C. § 1404(a) (Exs. 2005, 2007, 2008, 2009); (4) Claim Construction (Exs. 2010, 2011, 2012, 2013, 2014); (5) Petitioner’s Second Motion to Stay based on its transfer motion (Exs. 2015, 2016, 2017); and (6) Petitioner’s Writ of Mandamus to the Federal Circuit (Exs. 2018, 2019, 2020). Along with this briefing, the parties have exchanged numerous discovery requests, thousands of documents, and Carbyne’s source code reviewers have spent hundreds of hours reviewing source code—just to name a few discovery-related activities that have already taken place.

By the time the institution decisions issue for all seven Petitions (between July 31 and August 7, 2024), the Parties will have completed claim construction, completed fact discovery, served final infringement and invalidity contentions, and served opening expert reports. And by the time the final written decisions issue (if any) between July 31 and August 7, 2025, the district court trial will have been completed for roughly *eight months*. Instituting the seven Petitions in light of these facts goes against the very core of the America Invents Act and will not limit unnecessary and counterproductive litigation costs.

Substantively, Petitioner has failed to identify a motivation to combine the references for its invalidity grounds. Nor can it. The '656 Patent pioneered combining the use of a graphic interface and biometrics to detect and reduce electronic payment fraud. Stone, Petitioner's primary reference, is not even analogous art, as it provides for a generic currency display not directed to addressing electronic payment fraud. What's more, Petitioner's references also teach away from and conflict with each other in material ways that would have prevented a POSITA from combining them. In the end, this is another case of a Petitioner fishing through the sea of prior art to mash together unrelated references and then manufacture a reason for why someone skilled in the relevant art would have combined them—all in the hopes of invalidating a novel invention. The Supreme Court, Federal Circuit,

and this Board have routinely rejected similar attempts to read into the prior art the teachings of the invention at issue. The Board should do the same here.

II. BACKGROUND

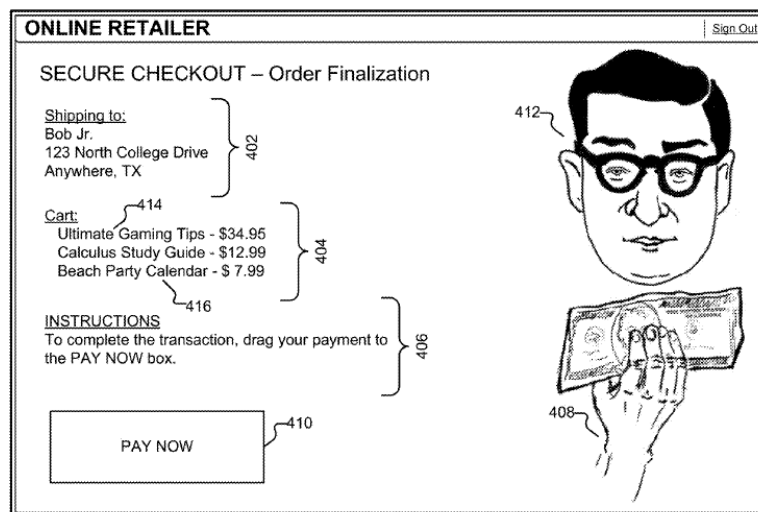
A. The '656 Patent (Ex. 1001)

The '656 Patent claims priority from a provisional application filed on May 6, 2010, and provides systems and methods for preventing or reducing fraud in electronic transactions. *See* Ex. 1001. The '656 Patent recognizes that there are two reasons why people refrain from committing fraud: (1) associated feelings of guilt and (2) the risk of getting caught. *Id.* at 4:24-4:26.

As the '656 Patent explains, electronic payment fraud presents “an ongoing problem” that is “particularly devastating” because it can eliminate these two deterrents by removing the physical aspects of a traditional monetary transaction. *Id.* at 1:22-1:32, 4:24-4:26. Electronic transactions, first, lower this risk of being caught, or at least the fraudster’s perception of this risk, by removing the need for physical access to the victim’s wallet or credit card. *See id.* at 1:28-1:30. Removing the physical access requirement also dehumanizes the transaction and removes associated feelings of guilt. *See id.* at 5:10-5:12 (“The more human the victim is made to be, the more guilty a fraudster might feel when perpetrating the fraud.”). So a faceless, electronic transaction makes it easier for the fraudster to go through with the fraud. *See id.* at 5:8-5:34, 6:10-6:23, 6:52-6:64.

The '656 Patent seeks to curb electronic payment fraud by providing novel systems and methods that bolster the two fraud deterrents just mentioned. *See id.* at 4:24-4:26.

First, the '656 Patent's claimed invention increases a potential fraudster's feelings of guilt by providing an improved interface that includes a virtual likeness of the face of an account holder whose account is engaged in an electronic transaction. *See id.* at 5:8-5:34. Forcing a potential fraudster to complete a transaction while looking at photo or other likeness of the victim's face (or potential recipient of illicit funds in a peer-to-peer cash transfer, *see id.* at 11:6-11:10) humanizes the transaction by emphasizing the identity of the victim or account holder who will be impacted by the fraudulent transaction. *Id.* at 5:23-5:25. The figures below from the '656 Patent are examples of a transaction interface that includes the virtual likeness of an account holder.



400 → FIG. 4

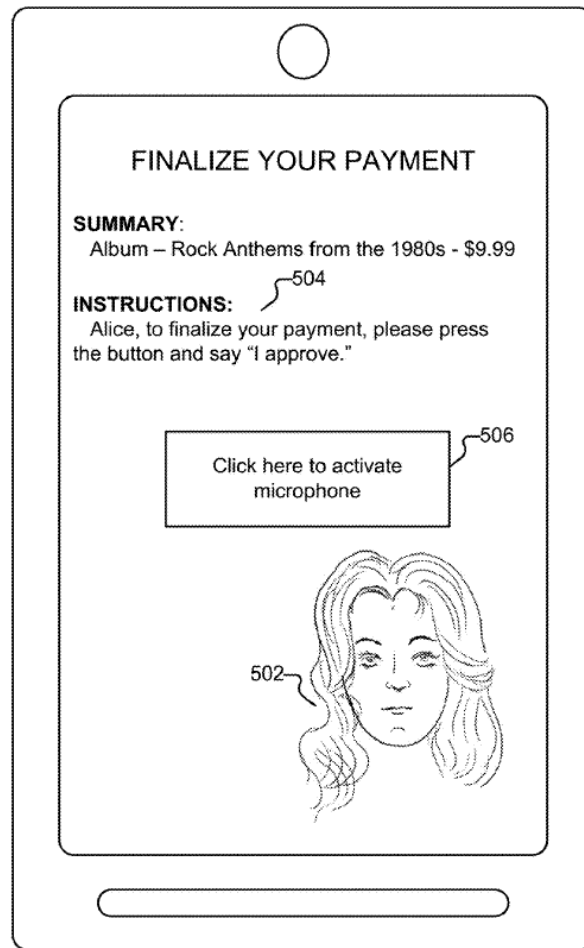


FIG. 6

The '656 Patent's claimed systems and methods also increase the fraudster's risk of being caught—real or perceived—by employing biometric authentication techniques as part of a fraud detection analysis to determine that a user is alive. *See, e.g., id.* at cl.1. Specifically, the '656 Patent's claimed authentication process is as follows. The user interacts with a transaction icon in one or more interfaces containing a virtual likeness of a face associated with an account holder. Following

the user's interaction with the transaction icon, the user's biometric information is captured, along with "location data associated with the user." *Id.* The fraud detection analysis then comprises "performing a comparison based at least in part on the stored biometric information and the captured biometric information; and determining, based at least in part on the captured biometric information, that the user is alive." *Id.* Then the system "based at least in part on both the user interaction with the transaction icon rendered in the interface and performing the fraud detection analysis, complete[s] the electronic transaction." *Id.*

The collected biometric information can include images of the user or an audio recording. *Id.* at 8:51-9:6. For the collection of images, techniques for confirming the object captured in the images is alive (e.g., by taking multiple photographs in rapid succession) "can be employed to help make sure that the fraudster isn't using camera 112 to photograph a printed picture of the legitimate user." *Id.* at 8:61-66. "The application of various rules, such as requiring that a face be detected in the captured image or that a certain amount of flesh tone be present in the picture can also be implemented." *Id.* at 8:66-9:2. "Similar rules can be applied to other types of capture, such as requiring that a GPS be turned on prior to a transaction taking place, or requiring that provided audio conform to general rules that define what human utterances sound like." *Id.* at 9:2-9:6.

In sum, the '656 Patent provides a novel approach to preventing fraud in electronic transactions by coupling an interface incorporating the virtual likeness of an account holder to inspire feelings of guilt in a potential fraudster with biometric authentication techniques that increase the likelihood (real or perceived) that the fraud will be detected.

B. Asserted Prior Art

Petitioner asserts four obviousness grounds against the '656 Patent. Pet at 6. But Patent Owner's Response will focus on Petitioner's obviousness Grounds 1 and 2 that attack the independent claims.

Ground	Claims	Basis
1	1, 4-10, and 13-19	§103(a) over Stone in view of Hoyos and Varghese
2	1, 4-10, and 13-19	§103(a) over Stone in view of FFIEC Guidance

Below is an overview of each of the asserted references for Grounds 1 and 2.

1. Stone (Ex. 1008)

Stone is titled "Currency Display" and assigned to eBay. *See* Ex. 1008. Stone discloses systems and methods for the visual display of currency in an electronic transaction. *See id.* at [0002] and [0006]. This is done through a user's device such as a mobile phone that displays the actual currency representing the amount of money subject to an electronic transaction. *Id.* at [0016-17]. As Stone explains,

providing a visual representation of the amount in a transaction reinforces the value of the amount of money in the transaction and provides the user with a “more visually rich interface.” *Id.* at [0016]. A prime aspect of the display envisioned by Stone is that it enables a user’s device to detect its location and use the currency of that country. *Id.* at [0026]. So for example, if the user is a U.S. citizen traveling abroad in South Korea, the device will detect the user’s location, and the currency display will use South Korean won instead of U.S. dollars. *See id.* at [0026-30]. This feature allows a user in a foreign land to understand how much he or she is willing to pay for something when bartering with local merchants. *Id.* at [0030].

The display described in Stone can also include more than just a representation of currency. *Id.* at [0021]. Some embodiments of the display can include the name and picture of the recipient in a peer-to-peer cash transfer or the user’s funding source and account balance before a transaction is initiated. *Id.* at [0024].

That said, at its core, Stone focuses on providing a “more visually rich interface” that gives the user a visual representation of the amount and denomination of currency subject to a transaction, particularly where foreign currencies are involved. *See, e.g., id.* at [0016-17] and [0026-27]. Stone does not address electronic payment fraud or even acknowledge it as a problem.

2. Hoyos (Ex. 1013)

Hoyos discloses systems and methods for biometric authentication in financial transactions. Ex. 1013 at [0002]. In one aspect, Hoyos discloses a method for authenticating financial transactions by acquiring biometric data from a person, then calculating the probability of liveness of the person and probability of a match between the person and known biometric information. *Id.* at [0017]. Examples of the biometric inputs include photos capturing the subject's face and eyes or readings of finger and palm temperature. *Id.* at [0020-22]. In certain embodiments, the authentication decision is calculated using the biometric information collected from a subject to determine both the probability of a match between the subject and a known biometric profile and the probability that the subject is a live person based on a mathematical formula. *Id.* at [0016-22].

While Hoyos describes techniques for biometric authentication, it does not suggest coupling these techniques with an improved digital interface. Nor does Hoyos even mention digital interfaces as being relevant to its claimed authentication techniques. Its proposed claims and specification focus mainly on the above-described probability calculations used for authenticating a user.

3. Varghese (Ex. 1010)

Varghese generally relates to “systems and methods for providing protection against identity theft over a computer network.” Ex. 1010 at [0002]. It discloses

multi-factor authentication for electronic transactions that uses a rules engine to score the transaction based on different criteria, including biometrics (voiceprint) and device “location fingerprint.” *Id.* at Fig. 14. Varghese describes both pre- and post-authentication procedures. *Id.* at [0090]; *see also id.* at Table 3. For “pre-authentication, the most common user request is a login request to access an application or system.” *Id.* at [0074]. “[R]equests usually handled by post-authentication services include, e.g., transaction requests involving large amounts of money.” *Id.* at [0074]; *see also id.* at [0099].

The invention Varghese discloses authenticates a login request (“pre-authorization”) in a manner determined by the identifying information of the device originating the request or information about the identity of the user. *Id.* at [0065]. The Varghese invention authenticates a user workflow (post-authentication, e.g., transaction requests for large amounts of money) using a user’s transaction history. *Id.*

Available security-relevant information related to a user request (the “request attributes”) is broken down into related groupings or “criteria.” *Id.* at [0089]. As a user request is authenticated by the invention claimed in Varghese, more or less criteria are available, and these criteria have varying importance. *Id.* For example, in pre-authentication, a user is seeking to log into an application, so the user’s transaction history is unavailable. *Id.* But for post-authentication, when a user is

making a transaction request (e.g., transaction request for large amounts of money), criteria for initial authentication are usually less important, and the user's transaction history is more important. *Id.*

Table 3 from Varghese presents a list of characteristics that can be used during pre-authentication and post-authentication. Notably, Petitioner's grounds for invalidity rely on Varghese as disclosing the "location" limitations of the '656 Patent's independent claims. Pet. at 39-51 (Limitations [1.6]-[1.8]). As Table 3 (reproduced below) shows, location information is considered in pre-authentication, i.e., for user login requests. Location information characterizes the location of the device from which a request originates. Ex. 1010 at [0072]. Location can most easily be estimated from the device's IP address and the hierarchy of networks linking the device to the internet. *Id.* at [0093].

TABLE 3		
Example of Request Attributes		
Pre-authentication	Location information	City, State, Country information and confidence factors
		Connection type
		Connection speed
		IP address, routing type, and hop times
		Internet service provider flag
		Autonomous system number
		Carrier name
		Top-level domain
		Second-level domain
		Registering organization
		A list of anonymizing proxies
		Hostnames and routers
		Secure Cookies
		Flash Cookies
Post-authentication	Device information	Digitally signed device
		Device & display Characteristics:
		Operating System characteristics
		Browser Characteristics
	User information	User identifications
		Valid or not valid user
		Authentication status
		Key Value Pairs:
		Support multiples
		Keys can be defined using Regular Expressions
		Values can be defined in ranges
		Pages accessed
		Time spent on page
		Transactions sequences

4. FFIEC Guidance (Ex. 1037)

Petitioner's final reference is guidance published by the Federal Financial Institutions Examination Council (FFIEC). Ex. 1037 at 1. The FFIEC is a formal interagency body of five banking regulators established in 1979 and "empowered to prescribe uniform principles, standards, and report forms for the federal examination of financial institutions."¹ In 2005, the FFIEC issued "guidance" for "Authentication in an Internet Banking Environment" ("FFIEC Guidance" or the "Guidance"). *See id.*

The Guidance "addresses why financial institutions regulated by the agencies should conduct risk-based assessments, evaluate customer awareness programs, and develop security measures to reliably authenticate customers remotely accessing their Internet-based financial services." *Id.* at 1. The Guidance suggests that single-factor authentication (such as typed passwords) is inadequate for high-risk transactions involving access to customer information or the movement of funds to other parties. *Id.* The Guidance mentions high-level techniques and methodologies for multifactor authentication that fall into three broad categories: something a person knows (password or PIN), something a person has (a physical token or card), or something a person is (most commonly biometrics). *Id.* at 3.

¹ <https://www.ffiec.gov/about.htm>.

For biometrics, the Guidance provides a basic description of fingerprint and facial recognition techniques and the benefits of employing these methods. But the Guidance stops short of “endors[ing] any particular technology” or explaining how to implement any techniques, specifically as part of a digital interface. *Id.* at 1. The Guidance also does not discuss improvements or upgrades to digital displays in electronic transactions. *Id.* at 9-11.

C. Claim Construction

The Board gives claim terms their ordinary and customary meaning as understood by a POSITA at the time of the invention in light of the patent’s specification. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312-13 (Fed. Cir. 2005) (en banc); 37 C.F.R. § 42.100(b) (applying *Phillips* standard to petitions filed on or after Nov. 13, 2018). Patent Owner accepts Petitioner’s position that none of the claim terms of the ’656 Patent requires construction. *See* Pet. at 5. Patent Owner notes, however, that in the parallel district court case, Petitioner sought construction of multiple claim terms for the ’656 Patent. *See* Ex. 2010. Patent Owner therefore reserves the right to present claim terms for construction should the Board institute this Petition, and in other proceedings involving the ’656 Patent.

D. Person of Ordinary Skill in the Art (POSITA)

Patent Owner accepts Petitioner’s POSITA definition for the sake of this Response. *See* Pet. at 4-5. This Response does not depend on the skill level Petitioner

has identified. *See* Section IV *infra*. Should this Petition be instituted, Patent Owner reserves the right to argue for a different level of skill.

E. Claim Table

For this analysis, Patent Owner will use Petitioner's limitation labels reproduced below:

Claim 1	
[1.0]	A system, comprising:
[1.1]	a processor configured to:
[1.2]	receive biometric information associated with an account holder; store, in a data store, the received biometric information, wherein the biometric information is associated with an account of the account holder;
[1.3]	render, in one or more interfaces, a virtual likeness of a face of a recipient of an electronic transaction;
[1.4]	render, in the one or more interfaces, a transaction icon associated with the electronic transaction;
[1.5]	receive an indication of an action taken by a user, the action comprising a user interaction with the transaction icon rendered in the one or more interfaces;
[1.6]	subsequent to receiving the indication of the action taken by the user, capture contextual information associated with the electronic transaction, the captured contextual information comprising captured biometric information and location data associated with the user;
[1.7.1]	perform a fraud detection analysis of the captured contextual information associated with the electronic transaction, wherein performing the fraud detection analysis comprises:

[1.7.2]	performing a comparison based at least in part on the stored biometric information and the captured biometric information; and
[1.7.3]	determining, based at least in part on the captured biometric information, that the user is alive; and
[1.8]	based at least in part on both the user interaction with the transaction icon rendered in the interface and performing the fraud detection analysis, complete the electronic transaction; and
[1.9]	a memory coupled to the processor and configured to provide the processor with instructions.

III. LEGAL STANDARDS

The Board may institute an IPR only when “the information presented in the petition . . . 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). The petition must “identif[y] . . . with particularity . . . the grounds on which the challenge to each claim is based.” 35 U.S.C. § 312(a)(3). It is the petitioner’s burden to “specify where each element of the claim is found in the prior art Patents or printed publications relied upon.” 37 C.F.R. § 42.104(b)(4).

The Board “will not take on the role of advocate for a party, trying to make out a case the party has not adequately stated.” Standing Order ¶ 121.5.2 (B.P.A.I. Mar. 8, 2011). Rather, it is Petitioner’s duty to provide sufficient grounds for the institution of a review, “focus[ing] on concise, well organized, easy-to-follow arguments supported by readily identifiable evidence of record.” *Cisco Sys., Inc. v.*

C-Cation Techs., LLC, IPR2014-00454, Paper No. 12, at 11 (P.T.A.B. Aug. 29, 2014).

To meet its burden of proving obviousness, Petitioner “must . . . articulate specific reasoning, based on evidence of record.” *Magnum Oil Tools Int’l, Ltd.*, 829 F.3d 1364, 1380-81 (Fed. Cir. 2016). Mere conclusory statements will not suffice. *Id.* The “factual inquiry” into the reasons for “combin[ing] references must be thorough and searching, and the need for specificity pervades.” *In re NuVasive, Inc.*, 842 F.3d 1376, 1381-82 (Fed. Cir. 2016) (internal quotations and citations omitted).

IV. ARGUMENT

The Board should deny this Petition. First, the issues raised in the Petition will be resolved in the parallel district court case before the Board will issue a final written decision. This fact, along with application of the *Fintiv* factors, favor denial. Beyond efficiency, Petitioner’s obviousness grounds crumble on the merits. For example, Stone is not analogous art. It is a reference that promotes the generic goal of providing a “more visually rich interface.” It does not grapple with, or even recognize, the problem of electronic payment fraud—the ’656 Patent’s specific field of invention. But not only is Stone not analogous, Petitioner points to no reason, other than hindsight, for why a POSITA would have been motivated to combine Stone’s teachings with those of Hoyos and Varghese or the broad-stroke FFIEC Guidance. The references simply do not mesh: Stone concerns giving a user a richer

visual experience, while Hoyos and the Guidance do not discuss visual interfaces or improving them. All these considerations spell denial for Petitioner.

A. The Petition Should Be Denied under *Fintiv* as the Issues Presented by This Petition and Petitioner’s Six Other Petitions Will Be Resolved First in the Parallel District Court Case.

Petitioner has taken a single district court litigation and sought to turn it into seven proceedings before this Board, which would issue final written decisions (if any) roughly *eight months after the scheduled trial*. Far from simplifying matters, Petitioner and its seven IPR petitions have needlessly complicated the parties’ invalidity dispute. The Board should use its discretion to deny institution of Petitioner’s seven IPR petitions because the district court will resolve all issues raised in the petitions.

As Director Vidal has pointed out, “Congress designed the America Invents Act (AIA) post-grant proceedings ‘to establish a more efficient and streamlined patent system that will improve patent quality and limit unnecessary and counterproductive litigation costs.’” Ex. 2022 at 1 (citing H.R. Rep. No. 112-98, pt. 1, at 40 (2011), 2011 U.S.C.C.A.N. 67, 69; *see* S. Rep. No. 110- 259, at 20 (2008)). Instituting Petitioner’s seven IPR petitions undermines this goal as “[p]arallel district court and AIA proceedings involving the same parties and invalidity challenges *can increase, rather than limit*, litigation costs.” *Id.* (emphasis added).

Instituting these seven IPR petitions will have the same outcome as the *single*

district court case: upholding the validity of the asserted patents or invalidating them. Institution will multiply litigation costs over a district court case that has consumed money and resources of the parties, the district court, and the Federal Circuit. Petitioner has asserted the same references in the district court case with even more invalidity grounds, such as system references that allegedly could not have been raised in an IPR petition and other invalidity grounds based on 35 U.S.C. §§101 and 112. Institution of Petitioner's seven petitions will not streamline the parties' validity dispute: it will expand it. The Board should therefore exercise its discretion to deny institution.

Under 35 U.S.C § 314(a), the Board may deny a petition based on the status of a related litigation. The Board considers six factors to determine whether efficiency, fairness, and the merits of the Petition support denial:

- **Factor 1:** whether the court granted a stay or evidence exists that one may be granted if a proceeding is instituted;
- **Factor 2:** proximity of the court's trial date to the Board's projected statutory deadline for a final written decision;
- **Factor 3:** investment in the parallel proceeding by the court and the parties;
- **Factor 4:** overlap between issues raised in the petition and the parallel proceeding;
- **Factor 5:** whether the petitioner and the defendant in the parallel proceeding are the same parties; and

- **Factor 6:** other circumstances that impact the Board’s exercise of discretion, including the merits.

Apple v. Fintiv, IPR2020-00019, Paper 11 at 5-6 (PTAB March 20, 2020) (precedential).

Each of the six *Fintiv* factors favors denying institution. The current advanced state of the parallel district court case, as well as district court’s denying Petitioner’s previous stay motions, favor denial. By the time the Board will issue an institution decision across all seven IPR petitions (expected between July 31 and August 7), the district court case will be well on its way to trial. By then, claim construction will be complete, fact discovery will have closed; and opening expert reports will have been exchanged. The parties’ venue dispute has also been resolved with the Federal Circuit denying Petitioner’s writ of mandamus seeking to transfer the case. The trial in the district court is scheduled for December 2024, *eight months before* the earliest of the Final Written Decisions for the seven IPR petitions will be issued. *See* Ex. 1028 (WDTX Scheduling Order). The district court is unlikely to stay a trial already scheduled to be completed well before a final written decision on any petition would be issued by the Board.

Petitioner can offer no argument that supports instituting seven IPRs—that would issue narrow invalidity rulings under 35 U.S.C. §§ 102 and 103 months after the district court trial—rather than letting the parties resolve all these issues in a

single district court case already scheduled to be completed in December of this year. Accordingly, the Board should deny institution to promote efficiency and efficacy. *See Gen. Plastic Indus. Co., Ltd. v. Canon Kabushiki Kaisha*, IPR2016-01357, Paper 19 at 16-17 (PTAB Sept. 6, 2017).

Factor 1: Judge Albright has denied Petitioner’s multiple stay requests and likely will not grant an IPR stay under these circumstances.

Petitioner states that this factor is neutral. Pet. at 82. But Petitioner disregards the totality of the evidence. The Board has held that “[i]n the absence of specific evidence, we will not attempt to predict how the district court in the related district court litigation will proceed because the court may determine whether or not to stay any individual case.” *Sand Revolution II, LLC v. Cont’l Intermodal Grp. – Trucking LLC*, IPR2019-01393, Paper 24 at 7 (PTAB June 16, 2020) (informative) (emphasis added). Not only does Petitioner provide no evidence, as Patent Owner shows below, all the evidence points to Judge Albright declining to stay the case.

Petitioner has filed multiple motions to stay the district court litigation and ***none*** of them has been granted. *See* Exs. 2004 and 2015. But even if instituted, Judge Albright will almost certainly deny a motion to stay here, where the trial of the parallel district court case is set to end more than eight months before the Board will issue a final written decision. As just one example, in *Cloud Change* Judge Albright denied a stay where ***all*** of the asserted claims in the district court case were instituted,

and a final decision was set to issue one month after the trial date. *See* Ex. 2023 (citing *Cloud of Change, LLC v. Lightspeed POS Inc.*, Case No. 6-21-cv-01102, Dkt. 80 at 1-3 (W.D. Tex. May 15, 2023) (Albright, J.) (The Board instituted IPRs on all claims in the parallel district court case and Judge Albright denied the motion to stay when the trial was set for September 2023 and the final written decisions were set to issue in October 2023)). And in *Sonrai*, Judge Albright denied a motion to stay where “[t]he Court expect[ed] to reach a verdict in th[at] Action by the end of February 2023 . . . while the PTAB [wa]s expected to issue its final written decision . . . by March 4, 202[3].” *See* Ex. 2024 (citing *Sonrai Memory Ltd. v. LG Elecs. Inc.*, No. 6:21-cv-00168-ADA, 2022 WL 2307475, at *1 (W.D. Tex. June 27, 2022) (Albright, J.)).

The Board has previously rejected arguments similar to Patent Owner’s on the grounds that it will not “speculate.” *See, e.g., Samsung Elecs. Co., Ltd. v. Mojo Mobility Inc.*, IPR2023-01091, Paper 11 at 11 (PTAB Jan. 8, 2024) (denying institution). But at this point, given Petitioner’s prior multiple stay requests and the precedent set by Judge Albright even when IPR petitions are instituted, there is no speculation based on the facts in this case and Judge Albright’s history. And Petitioner has presented no evidence to the contrary. The underlying district court trial will occur *roughly eight months prior to any final written decision*, and even if all seven Petitions are instituted, Judge Albright won’t stay the parallel district court

case. Factor 1 thus favors denial.

Factor 2: The single district court case will resolve all of the issues presented in the seven Petitions (and more) roughly eight months before any final written decision.

The Board generally denies institution when the trial date is months before the projected statutory deadline of the Board’s final written decision (FWD). *Fintiv*, IPR2020-00019, Paper 11 at 9 (“If the court’s trial date is earlier than the projected statutory deadline, the Board generally has weighed this fact in favor of exercising authority to deny institution.”). Trial is set for December 4, 2024, which would be *roughly eight months* before the earliest expected date of a FWD (between July 30 and August 7, 2025). This factor weighs heavily in favor of denial.

The Board regularly finds that fewer than eight months between the expected date of the FWD and trial supports denial. *See, e.g., id.* (5-6 months based on the time-to-trial evidence); *Samsung Elecs. Co., Ltd. v. Mojo Mobility Inc.*, IPR2023-01094, Paper 11 at 8 (PTAB Feb. 9, 2024) (“As the Texas Litigation is scheduled to go to trial in August 2024, approximately six months before a final written decision would be entered, we determine that Factor 2 weighs in favor discretionary denial.”); *NHK Spring Co. v. Intri-Plex Techs., Inc.*, No. IPR2018-00752, Paper 8 at 20 (PTAB Sept. 12, 2018) (precedential) (denying a petition 35 U.S.C. § 314(a) where institution would have led to a final written decision about six months after a scheduled trial in a pending civil action involving the same patent); *Satco Prods.*,

Inc. v. Regents of the Univ. of Cali., IPR2021-00794, Paper 14 at 19 (PTAB Nov. 10, 2021) (five months); *Maxlite, Inc. v. Jiaxing Super Lighting Elec. Appliance Co., Ltd.*, IPR2020-00208, Paper 32 at 5 (PTAB Oct. 12, 2021) (four months); *Stanley Black & Decker, Inc. v. Zircon Corp.*, IPR2020-01572, Paper 10 at 12 (PTAB April 19, 2021) (three months); *Next Caller, Inc. v. TrustID, Inc.*, IPR2019-00961, Paper 10 at 14-15 (PTAB Oct. 16, 2019) (three months); *E-One, Inc. v. Oshkosh Corp.*, IPR2019-00161, Paper 16 at 6 (PTAB May 15, 2019) (one month). Thus, Factor 2 strongly favors denial.

Factor 3: The parties have and continue to invest significant resources in the district court litigation.

The Board has exercised its discretion to deny institution when, as here, there is significant investment in the parallel district court proceeding. Petitioner would have this Court believe the parallel district court case is in its “early stages” and that only preliminary contentions have been exchanged and a *Markman* hearing held. Pet. at 83-84. Petitioner’s framing of the case downplays the sheer amount of time, energy, and resources spent by the parties, the district court, *and the Federal Circuit*.

The district court case is already in its advanced stages and will be completed before the Board issues a final written decision. For example:

1. The Parties have briefed Petitioner’s motion to dismiss;

2. Petitioner's transfer motion has been resolved, with the Federal Circuit denying Petitioner's mandamus petition²;
3. The Parties have exchanged initial and final infringement and invalidity contentions;
4. The Parties have completed five months of fact discovery (with fact discovery set to close July 3, 2024);
5. The district court has decided claim construction; and
6. The district court has denied two motions to stay filed by the Petitioner.

The Board consistently finds this third factor favors denial where the parallel district court case is far less advanced. *See, e.g., Samsung Elecs. Co.*, IPR2023-01094, Paper 11 at 9 (“Although there is still much work to be done on the Texas Litigation” including claim construction briefing and a *Markman* hearing “we find that this factor favors exercising our discretion to deny institution”). This case is anything but in its “early stages.” Accordingly, Factor 3 favors denial.

Factor 4: There is significant overlap between issues raised in the Petition and in the parallel district court case.

“[I]f the petition includes the same or substantially the same claims, grounds, arguments, and evidence as presented in the parallel proceeding, th[at] fact has favored denial.” *Fintiv*, IPR2020-00019, Paper 11 at 12. Petitioner challenges the

² *See, e.g., Ex. 2021.*

same claims in its Petition—and across the other six Petitions—that it does in its invalidity contentions at the district court. *See* Ex. 2025. In fact, Petitioner relies on the same principal references in the Petition as it does in the parallel litigation. *See generally Id.* Thus, the Petition includes substantial overlap with the claims and evidence asserted in the parallel litigation.

In addition, Petitioner’s stipulation does not mitigate the overlap between the district court and the Petition. Pet. at 83-84; *see also* Ex. 2027 at 4. Petitioner originally offered a stipulation that fell well short of the *Sotera* standard. *See* Pet. at 83-84. Following the “denial, on March 19, 2024, of Petitioner’s petition for writ of *mandamus* to direct the U.S. District Court for the Western District of Texas to transfer Patent Owner’s infringement case against Petitioner to the U.S. District Court for the Northern District of California,” *see* Ex. 2026 at 4, Petitioner moved the Board to add a new *Sotera* style stipulation, Ex. 2027 at 1-2. Petitioner’s *Sotera* stipulation is thus not being added to simplify the proceedings. Rather, it is a last gasp effort to have these proceedings instituted before the upcoming Western District of Texas trial scheduled for December 2024 that Petitioner was not expecting when it filed its original stipulations.

Petitioner’s attempts to simplify the proceedings now ring hollow especially given that Petitioner failed to respond to multiple requests for clarification on the scope of the stipulation. Given that the district court case will likely go to trial in

December 2024, regardless of whether the seven IPR petitions are instituted, Patent Owner requested clarification *several* times on whether Petitioner's stipulation would preclude it from raising the prior art in the petition in the district court case (assuming that the petitions are instituted and the district court case is not stayed). *See* Ex. 2026 at 2 ("In the meantime, can you please let us know if Petitioner's stipulations will prevent it from raising the prior art in the petitions in the district court litigation if the IPRs are instituted and the district court litigation is not stayed?"); *id.* at 1 ("This response does not answer the question which is material to our response"); *id.* ("Patent Owner opposes Petitioner's stipulations. In the correspondence leading up to this Petitioner's request, Petitioner would not confirm that it would not raise the prior art in the Petitions in the district court litigation if the Petitions are instituted and the district court litigation is not stayed. Without that confirmation, it is unclear what the new stipulations would accomplish."). Each time, Petitioner ignored Patent Owner's requests and still has not taken a clear position on whether it will be precluded from raising this art in the district court.

Regardless of Petitioner's actions, Petitioner's stipulation does not in fact guarantee the reduction of *any* duplicate effort. Petitioner has already positioned itself to combine the petitioned art with art that Petitioner will argue it "could *not* have reasonably been raised" in the IPR petitions, such as system art, in the district court to avoid the consequences of its stipulation. For example, Petitioner could

allege in the district court a combination of a system art reference such as the “FaceCash” in combination with the grounds in this Petition.

There is no reason to believe Petitioner will not try to make an end-around its stipulation. Petitioner’s district court invalidity contentions make clear that there is no limit to combinations of art it can assert, *see* Ex. 2025 (“alone and/or with one or more of the following”), and Petitioner’s failure to clarify the extent of its stipulation, despite multiple requests from Patent Owner, demonstrate that Petitioner does not want to have to address the issue in writing.

Accordingly, Petitioner’s statements that its *Sotera* stipulation is dispositive of the *Fintiv* analysis are misplaced and misleading. Without further clarification from Petitioner, Petitioner’s stipulation does not guarantee that there will be no duplication of efforts between the district court case and the IPR proceedings. Petitioner is using its late “stipulation” to game the *Fintiv* process and get two bites at the invalidity apple. Thus, this factor supports denying the Petition.

Factor 5: The Petitioner and the Defendant in the parallel district court case are the same party.

Factor 5 favors denial because both Parties to this proceeding are the same parties in the related district court litigation. *Fintiv*, IPR2020-00019, Paper 11 at 15 (“Because the petitioner and the defendant in the parallel proceeding are the same party, this factor weighs in favor of discretionary denial.”). This is not a controversial

factor; however, Petitioner attempts to fold this into the Factor 2 analysis. *See* Pet. at 82-83. Patent Owner is unaware of any authority from this Board (and Petitioner cites none) that supports analyzing Factor 2 and Factor 5 together.

Factor 6: The merits of the Petition are weak.

The final factor favors denial because the merits of the Petition present no “compelling challenge” of invalidity. Interim Procedure, 4 (“[C]ompelling, meritorious challenges will be allowed to proceed at the PTAB even where district court litigation is proceeding in parallel.”). As shown below, Petitioner’s arguments fail to show a reasonable probability that even one claim of the ’656 Patent is invalid. *Id.* (“Compelling, meritorious challenges are those in which the evidence, if unrebutted in trial, would plainly lead to a conclusion that one or more claims are unpatentable by a preponderance of the evidence.”); *see also Vector Flow, Inc. v. HID Glob. Corp.*, IPR2023-00353, Paper 8 at 23-24 (PTAB July 27, 2023) (same).

B. Ground 1: Petitioner Has Not Established That a POSITA Would Have Been Motivated to Combine Stone with Hoyos and Varghese.

“An obviousness determination requires finding that a person of ordinary skill in the art would have been motivated to combine or modify the teachings in the prior art *and* would have had a reasonable expectation of success in doing so.” *Regents of Univ. of Cal. v. Broad Inst., Inc.*, 903 F.3d 1286, 1291 (Fed. Cir. 2018) (emphasis added). The “motivation to combine may be found explicitly or implicitly in market

forces; design incentives; the interrelated teachings of multiple patents; any need or problem known in the field of endeavor at the time of invention and addressed by the patent; and the background knowledge, creativity, and common sense of the person of ordinary skill.” *Adapt Pharm. Operations Ltd. v. Teva Pharm. USA, Inc.*, 25 F.4th 1354, 1365 (Fed. Cir. 2022) (internal citations and quotations omitted); *see KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 418-21 (2007).

As explained below, Petitioner has not provided a persuasive justification for why a POSITA would have combined the Stone, Hoyos, and Varghese references to achieve the invention claimed by the ’656 Patent, or explained why a POSITA would have believed the combination would have succeeded. Instead, Petitioner has offered conclusory assertions that a POSITA would have combined the references because the elements they disclose and the problem of fraud in electronic transactions were “well known.” Compounding this problem, Petitioner seeks to support these assertions by offering an expert declaration that is a copy-and-paste of the Petition, which the Board should give no weight. Moreover, Petitioner’s references teach away from or conflict with each other in material ways that would preclude a POSITA from combining them. So in the end, Petitioner’s motivation-to-combine and expectation-of-success analyses amount to conclusory, attorney argument based on pure hindsight that the Supreme Court and Federal Circuit have rejected and that the Board should reject here.

1. Petitioner’s expert’s declaration should be given no weight as to the motivation to combine and reasonable expectation of success analysis.

The Board has previously denied institution, in part, because a petitioner’s expert declaration was given no probative weight. For example, in *Kinetic Technologies*, the Board denied institution, in part, because the petitioner’s expert declaration was given “no probative weight” because it contained arguments identical to arguments set forth in the petition and merely added the phrase “it is my opinion that,” and the Board found that “merely repeating an argument from the Petition in the declaration of a proposed expert does not give that argument enhanced probative value.” *See Kinetic Techs., Inc. v. Skyworks Sols., Inc.*, IPR2014-00529, Paper 8 at 14-15 (PTAB Sep. 23, 2014). In *Volkswagen*, the Board denied institution, in part because the petitioner’s expert declaration “provide[d] little additional probative value” because it contained arguments identical to those set forth in the petition. *Volkswagen Grp. of Am., Inc. v. StratosAudio, Inc.*, IPR2021-00717, Paper 12 at 36-38 (PTAB Nov. 12, 2021); *see also Facebook, Inc. v. Voxer IP LLC*, IPR2021-00399, Paper 8 at 22 (PTAB July 21, 2021) (“Petitioner cites [Expert’s] declaration to support is arguments . . . [Expert’s] arguments, however, mirror the arguments set forth in the Petition and do not provide further support for Petitioner’s position that Munje discloses or suggests ‘[a]n embeddable communications software module that allows a software application to access a communications

system.’ Thus, Petitioner fails to show how Munje discloses or suggests this limitation.”).

Here, Petitioner’s expert’s analysis of the motivation to combine and the reasonable expectation of success is virtually identical to the analysis in the Petition. *Compare* Pet. at 21-26 with Ex. 1003 ¶¶ 69-79 (the first and last paragraphs are reproduced below). In fact, most of the differences appear to result from the Petition citing the declaration and cutting text of parentheticals following citations to the references or other documents, likely to conserve the word count.

Petition at 21-26	Ex. 1003 (Expert Declaration) ¶¶ 69-79
A POSITA would have been motivated to apply Varghese’s teaching of multifactor real-time authentication for user transaction requests, including authentication based on physical location associated with the user and voice authentication, in Stone-Hoyos for improved security for financial transactions. APPL-1003, ¶¶69-79.	¶ 69. A POSITA would have been motivated to apply Varghese’s teaching of real-time multi-factor authentication for user transaction requests, including authentication based on physical location associated with the user and voice authentication, in Stone-Hoyos for improved security for financial transactions.

In particular, a POSITA would have been motivated to implement the fraud detection analysis based on location locally on the user device of Stone for the benefits including reduced latency (e.g., by minimizing communication delays between the user device and network server), offline analysis capabilities (allowing for analysis even when the user device is offline or has limited connectivity), enhanced privacy (by reducing the amount of data that needs to be transmitted to the server and minimizing potential privacy concerns), efficient resource utilization (helping distributing the processing load to the user device), customization for device characteristics (enhancing fraud detection by	¶ 79. In particular, a POSITA would have been motivated to implement the fraud detection analysis based on location locally on the user device of Stone for the benefits including reduced latency (e.g., by minimizing communication delays between the user device and network server), offline analysis capabilities (allowing for analysis even when the user device is offline or has limited connectivity), enhanced privacy (by reducing the amount of data that needs to be transmitted to the server and minimizing potential privacy concerns), efficient resource utilization (helping distributing the processing load to the user device), customization for device characteristics (enhancing fraud detection by
---	---

considering user device specific characteristics and capabilities), improved security (where a malicious actor needs to comprise the user device system), and reduced server load for cost savings and improved scalability (especially where the system has a large user base). APPL-1003, ¶79 (citing APPL-1015, APPL-1016, APPL-1038).	considering user device specific characteristics and capabilities), improved security (where a malicious actor intends to comprise the user device system), and reduced server load for cost savings and improved scalability (especially where the system has a large user base). APPL-1015, FIG. 3, 4:4-10; APPL-1016, [0040], [0042]; (Bhargav-Spantzel) APPL-1038, 64 (“Biometric authentication can be implemented through systems performing the matching either on the server or on the client side,” where describing “security and privacy problems” and CPU-intensiveness of server side implementation, and “relatively simple and cheap” with security and privacy benefits of client side implementation).
---	---

The Board has previously held that where, as here, an expert adds nothing beyond what is in the Petition, the expert's testimony should be given little to no weight. *Samsung Elecs. Co.. v. RightQuestion, LLC*, IPR2022-0025, Paper 17 at 24 (PTAB June 9, 2022) ("Petitioner's declarant also makes this same statement verbatim, without more, and with no further explanation or additional citations to evidence . . . We give such conclusory, unsupported assertions by Petitioner's expert little or no weight."); *see also In re Am. Acad. of Sci. Tech Ctr.*, 367 F.3d 1359, 1368 (Fed. Cir. 2004) ("[T]he Board is entitled to weigh the declarations and conclude that the lack of factual corroboration warrants discounting the opinions expressed in the declarations."); *Rohm and HaasCo. v. Brotech Corp.*, 127 F.3d 1089, 1092 (Fed. Cir. 1997) (noting that a fact finder need not "credit the unsupported assertions of an expert witness"); 37 C.F.R. § 42.65(a) ("Expert testimony that does not disclose the underlying facts or data on which the opinion is based is entitled to little or no weight."). Accordingly, Petitioner's expert's support for its motivation to combine and reasonable expectation of success analysis should be given no weight, and the Board should consider each of Patent Owner's arguments in that light.

2. Petitioner's conclusory explanation for the motivation to combine Stone, Hoyos, and Varghese is insufficient.

Besides the issues with Petitioner's expert declaration, Petitioner's "explanations" for why a POSITA would have combined Stone, Hoyos, and

Varghese offer no explanation at all. “[C]onclusory assertion[s] with no explanation [are] inadequate to support a finding that there would have been a motivation to combine.” *TQ Delta, LLC v. CISCO Sys., Inc.*, 942 F.3d 1352, 1356 (Fed. Cir. 2019). So too here. Petitioner’s stated reasons supporting the Stone-Hoyos combination lack any explanation for *why* a POSITA would have combined their teachings in a way that results in the ’656 Patent’s claims.

First, take Stone and Hoyos. Petitioner’s alleged motivation to combine boils down to two sentences:

- “[I]t was well-known that financial transactions of Stone had a need for authentication including fraud detection (e.g., with higher levels of security for higher-risk transactions).” Pet. at 16.
- “A POSITA would have been motivated to implement Hoyos’ spoofing-resistant biometric authentication for fraud detection in the system of Stone for ‘improved deterrent against attempted fraudulent transactions, and decreased rejection of valid customers.’” Pet. at 16.

These are naked assumptions—not motivations to combine; they are missing the word “because” with an explanation as to why and how a POSITA would have combined the references. These limited assertions, again, do not explain *why* a POSITA would have combined the references. Taking the first sentence: even if the need for fraud detection in electronic transactions was supposedly “well-known,” Stone does not identify electronic payment fraud as a problem needing to be solved. In fact, Stone does not mention fraud, and certainly does not discuss any techniques

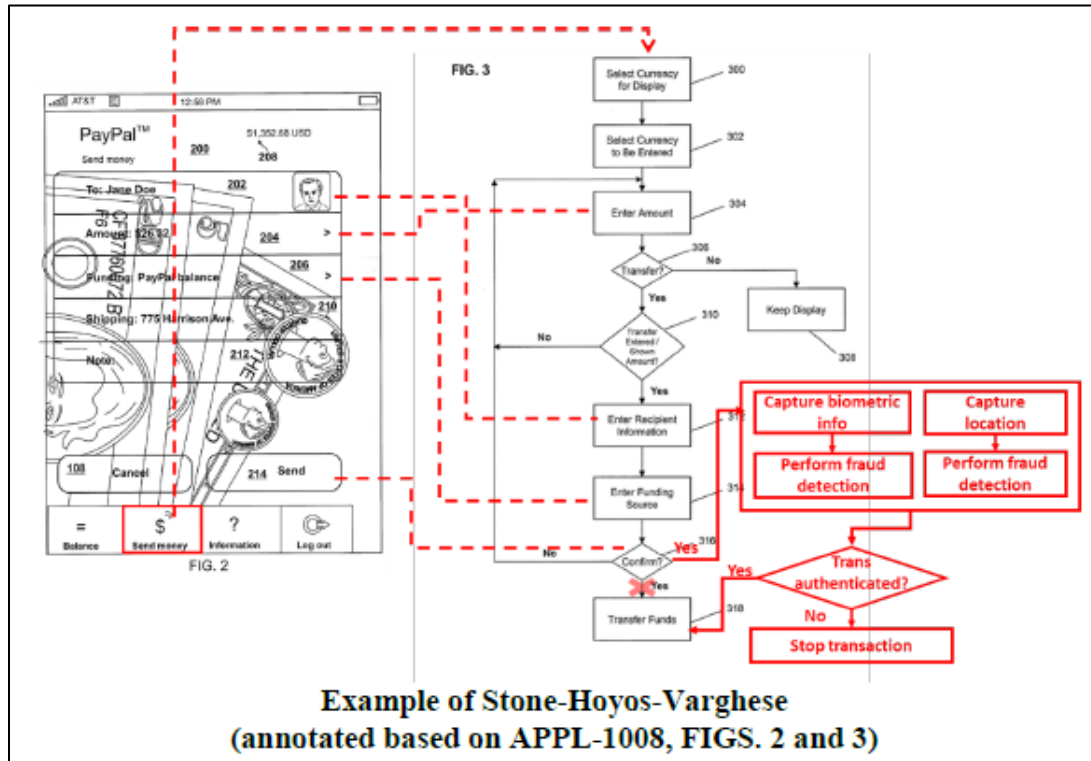
for preventing fraud, particularly biometric authentication techniques described in Hoyos. So there is simply nothing in the teachings of Stone that would lead a POSITA to implement its teachings for fraud detection.

On the other side of the coin, Hoyos contains nothing to suggest a POSITA would apply its teachings to Stone. The Hoyos reference has an extremely narrow focus—improving known biometric matching techniques by incorporating a method to determine the probability that the subject is alive. Ex. 1013 at [0016-22]. Hoyos is not concerned with improving an electronic display, specifically an electronic currency display (like that of Stone), or improving a user’s experience based on providing a richer interface (like Stone). Nothing in Hoyos would lead a POSITA to combine its biometric authentication methods with an interactive interface, particularly a currency display like the one Stone provides.

Petitioner’s justifications for adding Varghese to Stone and Hoyos fares no better:

- “In view of Stone’s need to implement fraud detection with high levels of accuracy and the regulatory drive for using multifactor authentication for financial transactions, a POSITA would have implemented Varghese’s multifactor real-time authentication including location authentication for user transaction requests in Stone-Hoyos for improved security.” Pet. at 22.
- “Techniques implementing multifactor real-time authentication (including e.g., location authentication, voice authentication) to provide additional security for financial transactions, as taught in Varghese, were well-known.
...

Based on the combined functionality of Stone, Hoyos, and Varghese, a POSITA would have been motivated to implement the following example Stone-Hoyos-Varghese for performing a financial transaction.”



Pet. at 23.

The first bulleted statement attributes to Stone a need to implement fraud detection, specifically multifactor authentication, but Stone does not identify fraud in electronic transactions as a problem, nor does Stone even discuss fraud or security. Petitioner also fails to explain why a POSITA would have combined location authentication mentioned in Varghese with Hoyos’s biometric authentication techniques. Hoyos is focused narrowly on techniques and formulas for authenticating transactions based on probabilities of biometric matching and

liveness, not location-based authentication techniques. *See* Ex. 1013 at abstract and [0002].

At its core, Petitioner’s argument for the motivation to combine the references in Ground 1 is that electronic payment fraud was a known problem, and the ’656 Patent’s independent claims consist of elements that could be found in Stone, Hoyos, and Varghese. *See* Pet. at 15-26. Known elements and a known problem without more do not establish a motivation to combine. *See Virtek Vision Int’l ULC v. Assembly Guidance Sys., Inc.*, No. 2022-1998, 2024 WL 1292734, at *4 (Fed. Cir. Mar. 27, 2024) (finding no motivation to combine where limitations were merely “known” in the prior art). Petitioner’s boilerplate statements apply the same hindsight bias that the Supreme Court and Federal Circuit have routinely rejected. The Board should do the same here. *See KSR Int’l Co.*, 550 U.S. at 421 (warning against a “temptation to read into the prior art the teachings of the invention in issue” and instructing courts to “guard against slipping into use of hindsight” (quoting *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 36 (1996))); *Plas-Pak Indus., Inc. v. Sulzer Mixpac AG*, 600 F. App’x. 755, 758 (Fed. Cir. 2015) (“[C]ombinations that change the basic principles under which the [prior art] was designed to operate . . . may fail to support a conclusion of obviousness.” (quoting *In re Ratti*, 46 CCPA 976, 270 F.2d 810, 813 (1959), *In re Gordon*, 733 F.2d 900, 902 (Fed. Cir. 1984))).

3. Stone is not analogous art.

Beside its conclusory assertions, Petitioner’s alleged motivation to combine fails because Stone is not analogous art. The analogous art test is a “threshold” question in an obviousness analysis. *See, e.g., In re Clay*, 966 F.2d 656, 658 (Fed. Cir. 1992); *In re GPAC Inc.*, 57 F.3d 1573, 1577 (Fed. Cir. 1995) (analogous art inquiry is a “threshold issue”). “Generally, a skilled artisan would only have been motivated to combine analogous art.” *In re Ethicon, Inc.*, 844 F.3d 1344, 1349 (Fed. Cir. 2017). The Petitioner bears the burden of establishing that a reference is analogous art. *Sanofi-Aventis Deutschland GmbH v. Mylan Pharms. Inc.*, 66 F.4th 1373, 1377 (Fed. Cir. 2023). Under the relevant test, “[p]rior art is analogous where either (1) ‘the art is from the same field of endeavor, regardless of the problem addressed’ or (2) even if the reference is not within the same field of endeavor, ‘the reference still is reasonably pertinent to the particular problem with which the inventor is involved.’” *In re Ethicon*, 844 F.3d at 1349 (quoting *In re Clay*, 966 F.2d at 658-59).

Petitioner cannot show that Stone satisfies either prong of this test. First, Stone is not in the same field of endeavor as the ’656 Patent. To determine the appropriate field of endeavor, the Board refers to explanations of the invention’s subject matter in the patent application, including the embodiments, function, and structure of the claimed invention. *In re Bigio*, 381 F.3d 1320, 1325-26 (Fed. Cir. 2004). The

background of the invention of the '656 Patent states that the claimed invention relates to improved techniques to prevent and detect fraud, particularly within electronic transactions. *See Airbus S.A.S. v. Firepass Corp.*, 941 F.3d 1374, 1380 (Fed. Cir. 2019) (“[S]tatements in the Background of the Invention section of the applicant's specification may be relied upon to delineate the field of endeavor.”) (citations and quotations omitted). The '656 Patent's claims are also solely focused on detecting and preventing fraud—by increasing feelings of guilt and the likelihood a perpetrator will be caught—as are the specification and the disclosed embodiments. *See generally* Ex. 1001. Stone, on the other hand, is simply, as its title states, a “Currency Display.” *See* Ex. 1008. It “relates to electronic visual displays, and in particular, to such displays that show a visual representation of financial instruments.” *Id.* at [0002]. And a primary goal of Stone's claimed invention is to provide a “more visually rich interface.” *Id.* at [0016]. It is not in the field of electronic fraud prevention. In fact, Stone never discusses fraud.

As for the second prong, Stone is not pertinent to the particular problem that the '656 Patent is concerned with solving—electronic payment fraud. “A reference is reasonably pertinent if . . . it is one which, because of the matter with which it deals, logically would have commended itself to an inventor's attention in considering his problem.” *In re Clay*, 966 F.2d at 659. “If a reference disclosure has the same purpose as the claimed invention, the reference relates to the same

problem.” *Id.* As just explained, the driving focus of the ’656 Patent’s claims is addressing the problem of electronic payment fraud. *See, e.g.*, Ex. 1001 at cl.1. Stone does not even recognize payment fraud as a problem needing to be solved. Stone is therefore not analogous art, and this provides an independent basis to deny institution on Ground 1.

4. The Stone, Hoyos, and Varghese references teach away from or conflict with each other.

“There is no suggestion to combine, however, if a reference teaches away from its combination with another source.” *Tec Air, Inc. v. Denso Mfg. Mich. Inc.*, 192 F.3d 1353, 1360 (Fed. Cir. 1999). “A reference may be said to teach away when a person of ordinary skill, upon reading the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path that was taken by the applicant.” *In re Urbanski*, 809 F.3d 1237, 1244 (Fed. Cir. 2016). The Stone, Hoyos, and Varghese references teach away from or conflict with each other in material ways such that a POSITA would not have been motivated to combine them.

a) Stone and Hoyos teach away from each other because they are directed to different computing environments.

Stone and Hoyos teach away from each other and are incompatible because their inventions are directed to different computing environments. The entire Stone reference is premised on a client-server structure for communication to populate the

currency display and complete electronic transactions. *See* Ex. 1008 at [0040-48] and Fig. 4. Hoyos, however, proposes user verification that occurs only on the client device. Hoyos does not mention applying its authentication techniques to a client-server structure. *See id.* at [0016-22].

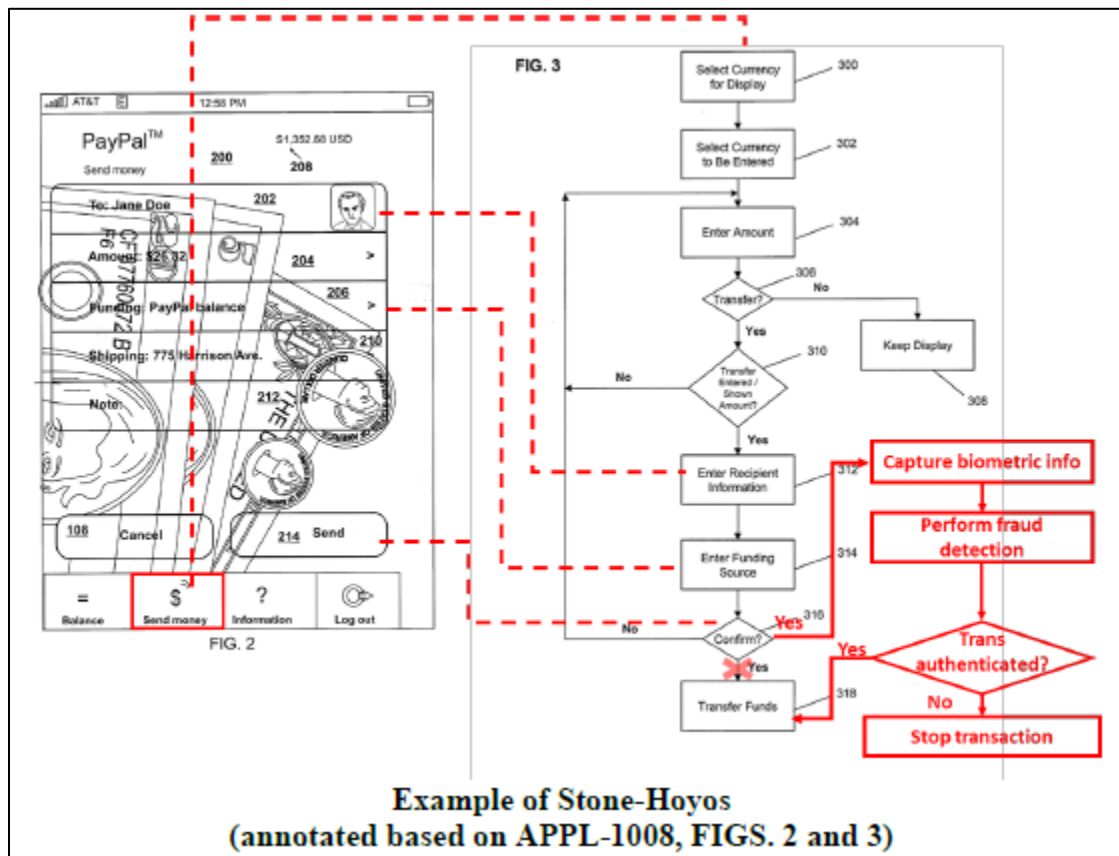
Besides Hoyos not mentioning a client-server environment, Hoyos is not compatible with such an environment because of *how* it employs its disclosed biometric identification techniques. Hoyos authenticates a transaction by analyzing biometric information of a user (e.g., a photo) to determine the probability the user is alive and the probability that the collected biometric information matches the user's known biometric information. *Id.* The “match” probability is calculated using an eigenface recognition procedure described in U.S. Patent No. 5,164,992 (Ex. 2028, the “Turk Patent”). *See* Ex. 1013 at [0038].

The Turk Patent employs an eigenvector-based facial recognition system to identify and track a group of known users, for example, determining which family members are watching a given television program. Ex. 2028 at 3:17-3:25. The eigenvector-based identification method described in the Turk Patent is computationally intensive and intended to handle a much smaller number of users, as the computational effort becomes more burdensome as the population of known users grows. *See id.* at 8:16-8:24. The intent to limit this identification method to a small pool of known users is exemplified by Turk's use of a group of ten users to

explain how to apply this identification method. *Id.* at 7:41-47. Turk also makes clear that it performs these identification tasks for limited groups of known users on the client, not a server environment that may consider thousands, if not millions, of potential users. *See id.* at 8:16-8:24.

Given the computationally intensive nature of Turk's identification method that Hoyos employs for its matching probability and its intention to apply it to a small number of identified in a known pool, a POSITA would not have applied this method to the client-server structure that Stone envisions. It also would not make sense to add the Hoyos client-only identification method as an extra step to Stone's transaction process as Petitioner describes in the Petition. *See Pet.* at 21-26. Petitioner contends that a POSITA would have been motivated to implement Hoyos' "authentication phase" of the transaction process described in Stone "after a user confirms a user transaction request, which is **at least after** a user interaction with an icon (e.g., user clicking the '\$Send money' icon of FIG. 2) to initiate the transaction request, and **after user interactions** with icons to continue (e.g., blocks 300-314) and confirm (e.g., block 316) the transaction request." *Id.* at 24.

The figure below illustrates Petitioner's Stone-Hoyos electronic transaction model. The Stone interface is on the left (Fig. 2), the transaction flow chart from Stone is to the right (Fig. 3), and the biometric "authentication process" from Hoyos is inserted into the flowchart represented by the red text on the far right.



Pet. at 17.

There are several problems with this cobbled-together transaction model. For one thing, it would require multiple rounds of user verification or authentication. As Stone Figure 2 shows, the user's account balance (**208**) is displayed on the interface *before* the user completes the transaction. Displaying an account balance would require authentication of the user's by the payment server where the user's account information is stored, *see* [0046], well before the end of the transaction where Petitioner inserts the Hoyos "authentication process." Inserting the Hoyos client-only authentication process as the final step before completing the transaction would

require a second round of authentication, to be done locally on the device no less, followed by more communication with the payment server to complete the transaction. These multiple rounds of authentication would be redundant and would slow down the transaction time, which undermines a goal of Hoyos (transaction speed) to address a problem that Stone does not even identify as a concern (payment fraud). Ex. 1013 at [0009] and [0011]; *see South-Tek Sys., LLC v. Engineered Corrosion Sols., LLC*, 748 F App'x. 1003, 1006 (Fed. Cir. 2018) (finding lack of motivation to combine where resulting feature will be merely redundant to what the prior art device already had).

Besides slowing the transaction time, duplicating authentication efforts on both the client and server also would be inefficient. Employing the Hoyos verification on the client device would use considerable processing power and memory, which a client-server model, as Stone envisions, is meant to conserve. Such a waste of processing power makes even less sense in this context when it would be used to address issues of payment fraud and security that Stone does not even recognize as problems.

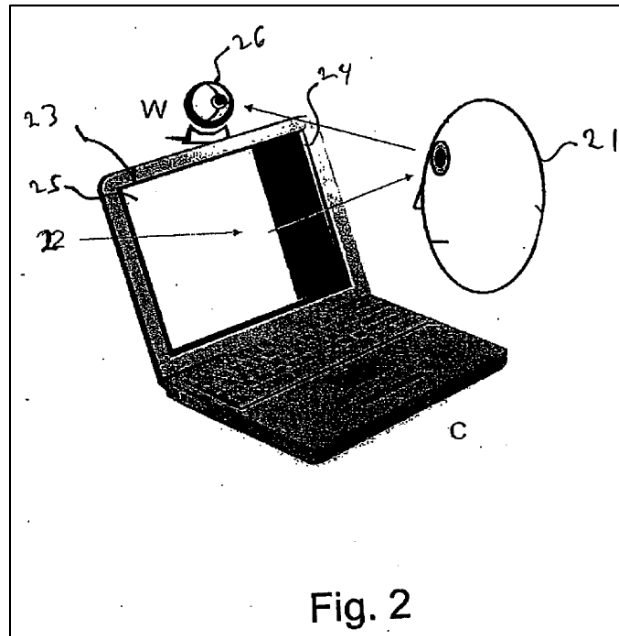
Ultimately, from any angle the Board chooses to look at it—whether the references are not in the same field, not directed at the same problem, or simply not compatible—a POSITA would not have been motivated to combine Stone and Hoyos.

b) A POSITA would not have been motivated to combine Varghese's software-only solution with Hoyos's hardware-based biometric solutions.

Petitioner also cannot show that a POSITA would have been motivated to combine Varghese with Stone and Hoyos. For one thing, Varghese amplifies the disconnect between Stone and Hoyos regarding the server and client distinction. Varghese, like Stone, envisions a client-server structure. *See* Ex. 1010 at [0005-06]. User authentication in Varghese involves information transferred from the client to the server. So for the reasons explained in the analysis of Stone-Hoyos, it would not make sense to combine multiple parts of the fraud analysis provided for in the '656 Patent's claims by combining techniques performed using a client-server structure (Varghese) with techniques performed only on a client device (Hoyos).

But perhaps more importantly, one of the goals of Varghese is to provide a “purely software based solution to identify theft that does not require hardware devices to be issued and maintained.” Ex. 1010 at [0022]. Varghese recognizes that such systems and methods were “currently lacking in the art” at the time. *Id.* at [0016]. This software-only goal of Varghese excludes the use of many sensor-based biometrics, such as fingerprints and facial biometrics, both of which need hardware sensors to function (e.g., fingerprint scanners and forward-facing cameras). *See* Ex. 1013 at Fig. 2, [0018-19], [0034-36] (using camera to collect images of user for biometric authentication), [0022] (noting probability of biometric match can be

calculated by “iris recognition, fingerprint image recognition, finger vein image recognition, or palm vein image recognition”).

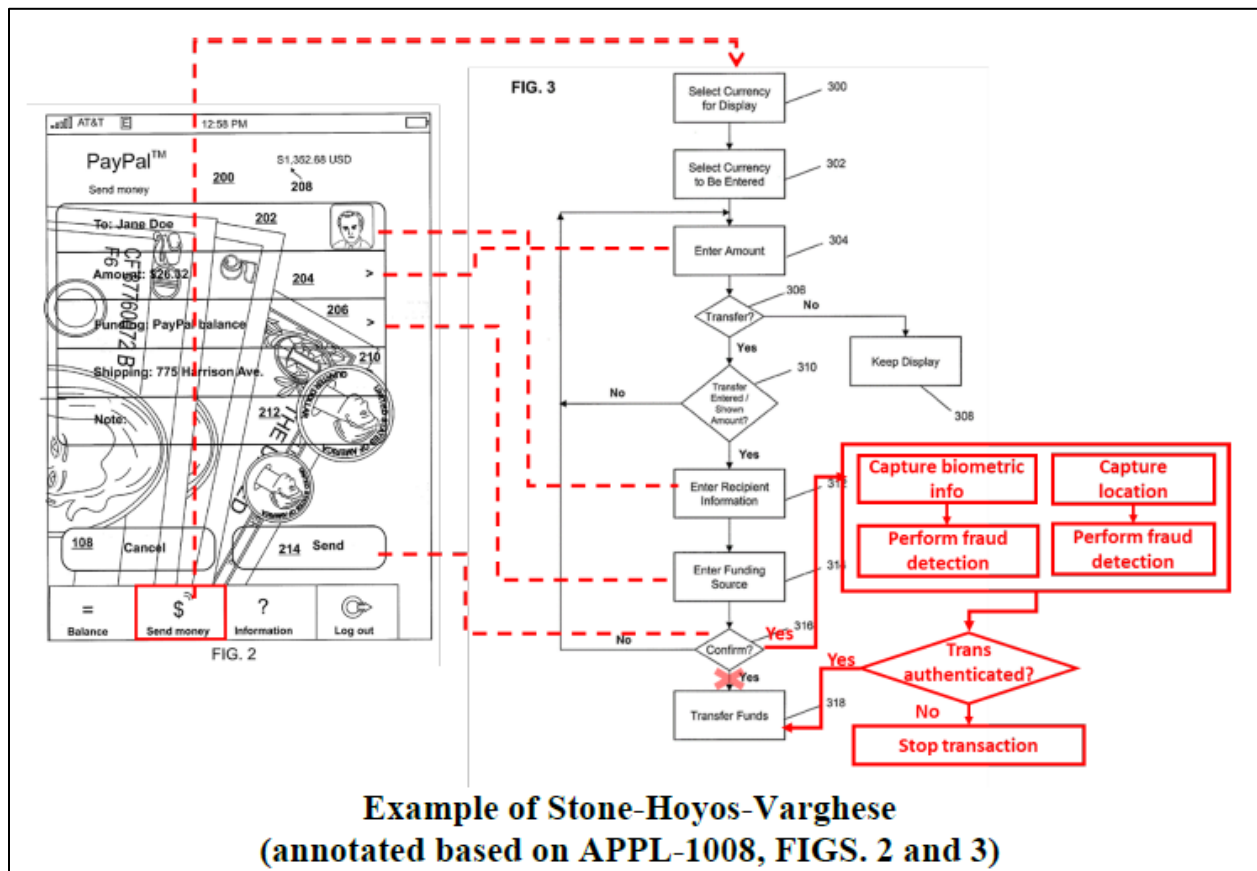


Ex. 1013 at Fig. 2 (using external webcam hardware for biometric collection). Because the hardware-based biometrics collection and authentication techniques described in Hoyos conflict with Varghese’s stated goal of providing a “purely software based solution to identify theft” (i.e., fraud detection), a POSITA would not have been motivated to combine these references. *See In re Urbanski*, 809 F.3d at 1244 (finding reference teaches away where a POSITA “would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path that was taken by the applicant”).

- c) **A POSITA would not have been motivated to combine Stone with Hoyos and Varghese to collect biometric information and location data associated with a user and complete an electronic transaction subsequent to a user's interaction with a transaction icon.**

Petitioner has not established that a POSITA would have been motivated to combine Stone with Hoyos and Varghese to arrive at the authentication process claimed by the '656 Patent. The independent claims of the '656 Patent provide for a process in which a user interacts with a transaction icon that provides an indication to the system to collect biometric information and location data associated with the user. Following this collection, fraud detection analysis is performed, and the electronic transaction is completed based, at least in part, on the fraud detection analysis and the user's interaction with the transaction icon. *See* Ex. 1001 at cl.1.

A POSITA would not have been motivated to combine Petitioner's prior art references to achieve this transaction process, as laid out in the '656 Patent's independent claims. For one, there is nothing in the teachings of Hoyos to suggest it would be employed with a user interface, or more specifically, that its biometric collection and authentication procedures would occur at the final stages of an electronic transaction as the Petitioner's transaction model (reproduced below) suggests.



Pet. at 23.

Petitioner has also not established that a POSITA would have been motivated to add the location collection of Varghese to the transaction flow laid out in Stone, particularly at the final confirmation stage. In fact, Varghese specifically teaches against this. Varghese discloses a multifactor authentication framework divided into pre-authentication and post-authentication stages. Ex. 1010 at [0074] and [0090]. Pre-authentication involves the collection of information related to the user and the user's device to authenticate a user logging into a web application, for example. *Id.* at [0074]. A user login is not even depicted on Petitioner's combined transaction

model above. But it would undoubtedly occur at a stage before the first step listed in the flowchart of Stone Fig. 3, as well as before the interface in Stone Fig. 2 would be presented to a user.

But perhaps most critical, Varghese teaches that post-authentication is for completing monetary *electronic transactions*, which are authenticated using a user's transaction history. Ex. 1010 at [0065] (“User workflow sequences are authenticated (referred to herein as ‘post-authentication’) using a user’s transaction history.”). And “when a user is engaged in requesting transactions [post-authentication], criteria related to initial authentication [e.g., pre-authentication location data] are usually less important.” Ex. 1010 at [0089]. So based on Varghese’s teaching, a POSITA would not have been motivated to collect location data (a pre-authentication technique for user login requests) to authenticate an *electronic transaction* [post-authentication request], particularly as the last step of a transaction.

C. Ground 2: Petitioner Has Not Established That a POSITA Would Have Been Motivated to Combine Stone and the FFIEC Guidance.

1. Petitioner’s expert’s declaration should be given no weight as to the motivation to combine and reasonable expectation of success analysis.

Petitioner has not met its burden of establishing that a POSITA would have had a reasonable expectation of success in combining Stone and the FFIEC Guidance. Petitioner’s support for its motivation-to-combine and reasonable-

expectation-of-success arguments in its expert's declaration, which is, like with Stone-Hoyos-Varghese, a virtual copy-and-paste of the arguments raised in the Petition. *Compare* Ex. 1003 ¶¶ 199-202 *with* Pet. at 62-63. The Board routinely gives little to no weight to expert declarations that parrot arguments from the petition, finding they have no probative value. *See supra* Section IV.B.1. (collecting cases). Accordingly, Petitioner's expert's support for its motivation to combine and reasonable expectation of success analysis should be given no weight, and the Board should consider each of Patent Owner's arguments for this Ground in that light.

2. Petitioner's conclusory explanation for the motivation to combine Stone and the FFIEC Guidance is insufficient.

Like with Stone-Hoyos-Varghese, Petitioner's alleged motivation to combine Stone and the FFIEC Guidance is also conclusory. If anything, it is even more superficial. It consists of four paragraphs that recite functionality and give boilerplate statements. *See* Pet. at 62-63. For example, Petitioner states that a POSITA would have understood based on the Guidance that multifactor authentication can reduce fraud and improve customer protection. *Id.* Based on this understanding, Petitioner then states that "a POSITA would have been motivated to apply, multifactor, real-time risk-based authentication taught by the Guidance in Stone, because Stone had a need for authentication for fraud detection (e.g., with higher levels of security for higher-risk financial transactions)," and "because the

Guidance was a recognized driver for implementing multifactor authentication by a POSITA as shown in numerous articles and patent disclosures.” *Id.*

Petitioner’s assertions are conclusory and fail to explain *why* a POSITA would have combined Stone and the Guidance. Again, Petitioner presumes that Stone had a need for authentication for fraud detection. But Stone is not concerned with the security of transactions. Rather it is concerned with providing an improved display for the user and richer interface that provides a currency display. Stone also does not view fraud as a problem that needs to be addressed with increased security, nor does it even mention electronic payment fraud. *See supra* IV.B.2.-3. In fact, it is telling that whenever Petitioner states the proposition that the electronic transactions of Stone had a need for fraud detection, Petitioner never once cites the Stone reference. *See, e.g.,* Pet. at 63.

The Guidance is also not concerned with the goals and purpose of Stone’s disclosures. The Guidance is not concerned with conveying amounts of funds, providing visual representations of currency, or even providing a digital interface. It simply discusses biometrics and security in broad, general terms. *See* Ex.1037 at 1-2, 9-11. The Guidance also never discusses using multifactor or biometric authentication with a digital interface, or combining these components in an ordered manner like the claims of the ’656 Patent.

Ultimately, as with Stone-Hoyos-Varghese, Stone and the Guidance are compartmentalized references concerned with different objectives—Stone (currency display and an improved interface) and Guidance (providing a high-level overview of multifactor authentication techniques, including biometrics). There is no overlap in the teachings of these references. And Petitioner’s argument for combining them, again, amounts to mashing together two unrelated references that identify limitations of ’656 Patent’s independent claims without giving anything more than perfunctory statement for *why* a POSITA would have combined them. Pointing out that a patent’s limitations were simply known across multiple prior art references does not explain *why* a POSITA would combine them. *See Virtek Vision Int’l ULC*, 2024 WL 1292734, at *4 (finding no motivation to combine where limitations were “known” in the prior art). Rather, like Stone-Hoyos-Varghese, the Stone-Guidance combination was constructed in hindsight by taking the ’656 Patent’s claims and working backward to find the claim limitations in unrelated prior art references and then manufacturing a reason to combine them. The Board should therefore see Petitioner’s Ground 2 for what it is—hindsight bias—and reject it.

3. Stone is not analogous art.

For the reasons explained in Section IV.B.3., Stone is not analogous art, and the Board should deny institution for Ground 3 on this basis.

V. CONCLUSION

For the reasons stated above, Petitioner has not established a reasonable likelihood that any challenged claim of the '656 Patent is unpatentable. Patent Owner requests that the Board deny institution of *inter partes* review.

Dated: May 7, 2024

Respectfully submitted,

/s/Richard A. Kamprath
Richard A. Kamprath
Reg. No. 65,320
rkamprath@mckoolsmith.com
McKool Smith, P.C.
300 Crescent Court, Suite 1500
Dallas, Texas 75201
Telephone: (214) 978-4000
Facsimile: (214) 978-4044

George Fishback
Reg. No. 76,345
gfishback@mckoolsmith.com
McKool Smith, P.C.
303 Colorado Street, Suite 2100
Austin, Texas 78701
Telephone: (512) 692-8700
Facsimile: (512) 692-8744

*Counsel for Patent Owner, Carbyne
Biometrics, LLC*

CERTIFICATION OF WORD COUNT

The undersigned hereby certifies that the portions of the above-captioned **PATENT OWNER'S PRELIMINARY RESPONSE** specified in 37 C.F.R. §42.24 have 11,419 words, in compliance with the 14,000 word limit set forth in 37 C.F.R. §42.24(b)(1). This word count was prepared using Microsoft Word 2010.

Dated: May 7, 2024

Respectfully submitted,

/s/Richard A. Kamprath
Richard A. Kamprath
Reg. No. 65,320

CERTIFICATION OF SERVICE

The undersigned hereby certifies that a copy of this **PATENT OWNER'S PRELIMINARY RESPONSE PURSUANT TO 37 C.F.R. § 42.10(b)** has been served on Petitioner via email on the following counsel of record for Petitioner:

David W. O'Brien
David.obrien.ipr@haynesboone.com

Kelly Gehrke Lyle
Kelly.lyle@haynesboone.com

Hong Shi
Hong.shi.ipr@haynesboone.com

Dated: May 7, 2024

Respectfully submitted,

/s/Richard A. Kamprath
Richard A. Kamprath
Reg. No. 65,320