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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY.DOCKET NO./TITLE	REQUEST ID
16/773,767	01/27/2020	Bjorn Markus Jakobsson	MJAKP008C4	181538

Acknowledgement of Loss of Entitlement to Entity Status Discount

The entity status change request below filed through Private PAIR on 01/06/2023 has been accepted.

CERTIFICATIONS:

Change of Entity Status:

☒ Applicant changing to regular undiscounted fee status.

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This portion must be completed by the signatory or signatories making the entity status change in accordance with 37 CFR 1.4(d)(4).

Signature:	/Yeu-Ting George Cheng/
Name:	Yeu-Ting George Cheng
Registration Number:	69408

AO 120 (Rev. 08/10)

TO: Mail Stop 8 Director of the U.S. Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450	REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK
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In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been filed in the U.S. District Court Eastern District of Texas, Marshall Division on the following

☐ Trademarks or ☒ Patents. (☐ the patent action involves 35 U.S.C. § 292.);

DOCKET NO. 2:21-cv-00238	DATE FILED 6/29/2021	U.S. DISTRICT COURT Eastern District of Texas, Marshall Division
PLAINTIFF RIGHTQUESTION, LLC		DEPENDANT SAMSUNG ELECTRONICS CO., LTD. and SAMSUNG ELECTRONICS AMERICA, INC.
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1 10,824,696	11/3/2020	RightQuestion, LLC
2 10,929,512	2/23/2021	RightQuestion, LLC
3		
4		
5		

In the above—entitled case, the following patent(s)/ trademark(s) have been included:

DATE INCLUDED	INCLUDED BY ☐ Amendment ☐ Answer ☐ Cross Bill ☐ Other Pleading		
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK	
1			
2			
3			
4			
5			

In the above—entitled case, the following decision has been rendered or judgement issued:

DECISION/JUDGEMENT ORDERED that all claims, counterclaims, and defenses in the above-captioned case are DISMISSED-WITH-PREJUDICE. Each party is to bear its own costs and fees. The Clerk is directed to CLOSE the above-captioned case

CLERK <i>David A. O'Poole</i>	(BY) DEPUTY CLERK ch	DATE 7/22/22
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Copy 1—Upon initiation of action, mail this copy to Director Copy 3—Upon termination of action, mail this copy to Director
 Copy 2—Upon filing document adding patent(s), mail this copy to Director Copy 4—Case file copy

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SAMSUNG ELECTRONICS CO., LTD., and
SAMSUNG ELECTRONICS AMERICA, INC.,
Petitioner,

v.

RIGHTQUESTION, LLC,
Patent Owner.

IPR2022-00251
Patent 10,929,512 B1

Before JAMESON LEE, CHARLES J. BOUDREAU, and
STEPHEN E. BELISLE, *Administrative Patent Judges*.

BELISLE, *Administrative Patent Judge*.

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

I. INTRODUCTION

A. Case Posture

Samsung Electronics Co., Ltd. and Samsung Electronics America, Inc. (collectively, “Petitioner”) filed a Petition (Paper 1, “Pet.”) requesting an *inter partes* review of claims 1–4, 6–15, and 17–21 (“Challenged Claims”) of U.S. Patent No. 10,929,512 B1 (Ex. 1001, “the ’512 patent”). Petitioner identifies itself as a real party in interest. Pet. 2. RightQuestion, LLC (“Patent Owner”) identifies itself as a real party in interest (Paper 6, 2), and timely filed a Preliminary Response to the Petition (Paper 11, “Prelim. Resp.”). In addition, with prior authorization from the Board, the parties filed supplemental briefing concerning the Preliminary Response. Paper 13 (“Reply”); Paper 14 (“Sur-Reply”).

We have authority to determine whether to institute an *inter partes* review. 35 U.S.C. § 314(b) (2018); 37 C.F.R. § 42.4(a) (2021). We may not institute an *inter partes* review “unless . . . 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).

Applying those standards, and upon consideration of the information presented in the Petition and Preliminary Response, we determine that Petitioner has not demonstrated a reasonable likelihood of prevailing with respect to any of challenged claims 1–4, 6–15, and 17–21 of the ’512 patent. *See* 35 U.S.C. § 314; 37 C.F.R. § 42.4(a). Accordingly, constrained by the record before us, we deny institution of an *inter partes* review of the ’512 patent.

B. Related Matters

The parties indicate that the '512 patent is involved in one U.S. district court action, namely, *RightQuestion, LLC v. Samsung Elecs. Co.*, No. 2:21-cv-00238-JRG (E.D. Tex.) ("District Court Case"). Pet. 2; Paper 6, 2.

Patent Owner also indicates that Petitioner requested an *inter partes* review of a patent that issued from a parent application of the '512 patent, namely, U.S. Patent No. 10,824,696 B1 ("the '696 patent"). Prelim. Resp. 1 n.1 (citing IPR2022-00244).

Although not identified by either party under the mandatory notices of 37 C.F.R. § 42.8(b), we note that both the '512 and '696 patents are part of a larger family of continuing applications and patents, including three pending applications. *See, e.g.*, Ex. 1001, code (63).

C. The '512 Patent

The '512 patent is titled "Authentication Translation," and issued on February 23, 2021, from U.S. Patent Application No. 16/773,767, filed January 27, 2020, and claims priority through a series of continuing applications to U.S. Provisional Patent Applications Nos. 61/587,387, filed January 17, 2012, and 61/569,112, filed December 9, 2011. Ex. 1001, codes (21), (22), (45), (54), (60), (63).

The '512 patent relates generally to authentication techniques to provide credentials to a service. Ex. 1001, 1:35–44. The goal is to reduce user practices such as password re-use and/or selection of poor quality passwords. *Id.* Specifically, the '512 patent pertains to authentication translation and states:

Authentication translation is disclosed. A request to access a resource is received at an authentication translator, as is an authentication input. The authentication input corresponds to at least one stored record. The stored record is associated at least with the resource. In response to the receiving, a previously stored credential associated with the resource is accessed. The credential is provided to the resource.

Id. at code (57). Figure 1 of the '512 patent is reproduced below:

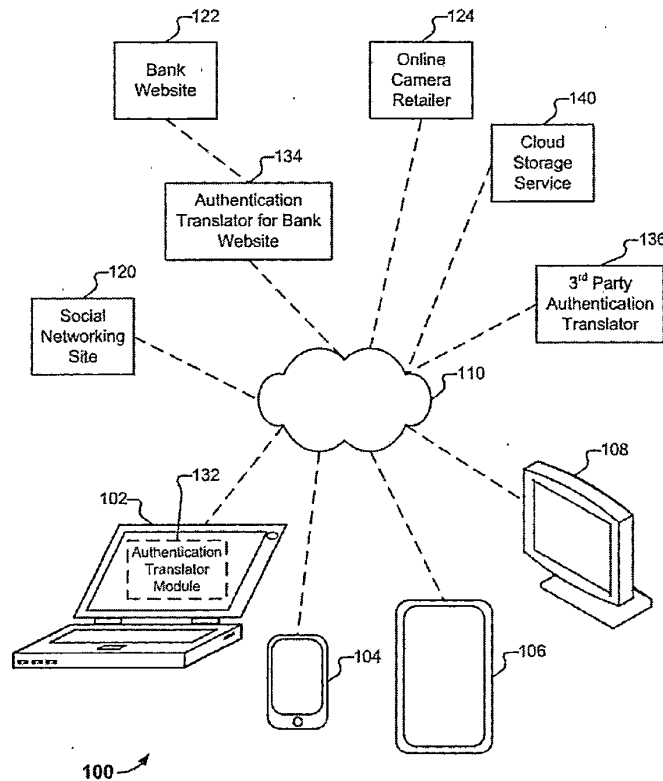


FIG. 1

Figure 1 depicts an embodiment of an environment in which authentication translation is provided.

Id. at 1:51–52, 2:37–38, Fig. 1. As shown in Figure 1 above, various client devices 102–108 are connected through one or more networks (represented

as single network cloud 110) to various services 120–124, which are also referred to as sites. *Id.* at 2:38–42.

In an exemplary embodiment, client device 102 is a notebook computer owned by user “Alice” and includes a camera, a microphone, and a fingerprint sensor. Ex. 1001, 2:42–45. Client device 104 is a smartphone also owned by user Alice and includes a camera. *Id.* at 2:45–46. Client device 106 is a tablet owned by user “Bob” and includes a camera and a fingerprint sensor, and device 106 is sometimes used by Bob’s son “Charlie.” *Id.* at 2:47–49. Client device 108 is a kiosk located in the lobby of a hotel and it includes a camera and a microphone. *Id.* at 2:49–51.

Service 120 is a social networking site; service 122 is a website of a bank; service 124 is the online store of a boutique camera retailer; and each service requires a username and password (and/or a cookie) from a user prior to giving that user access to protected content and/or other features. Ex. 1001, 2:57–62. A user need not type such usernames and passwords into the devices whenever required by a service, but can authenticate to an “authentication translator” which will provide the appropriate credentials to the service on the user’s behalf. *Id.* at 2:62–3:1.

For example, notebook computer 102 includes authentication translator module 132 that provides authentication translation services. Ex. 1001, 3:4–6. Devices 104–108 can also include, but need not include, their own respective authentication translator modules. *Id.* at 3:6–8. The owner of bank website 122 operates authentication translator 134 associated with the bank. *Id.* at 3:8–10. Authentication translator 136 provides authentication services to a variety of businesses, including online camera retailer 124. *Id.* at 3:10–12.

Figure 2 of the '512 patent is reproduced below:

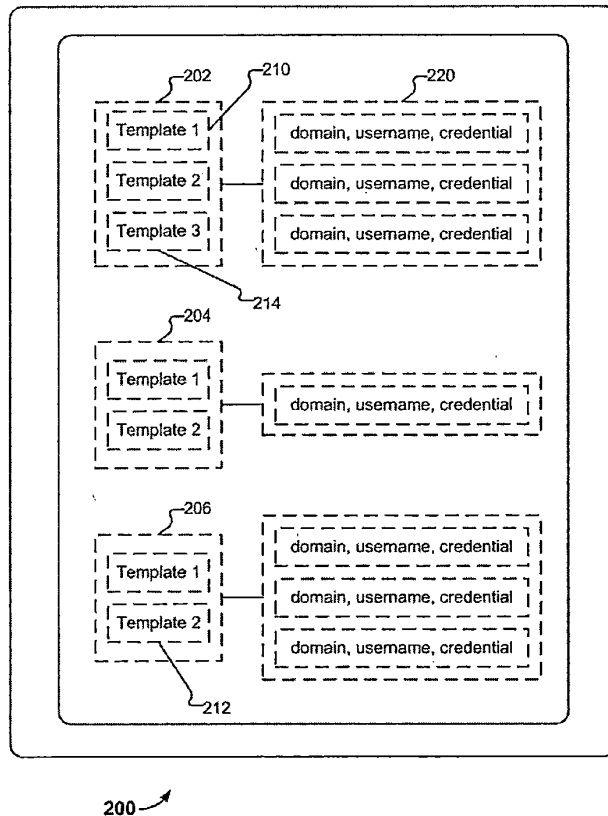


FIG. 2

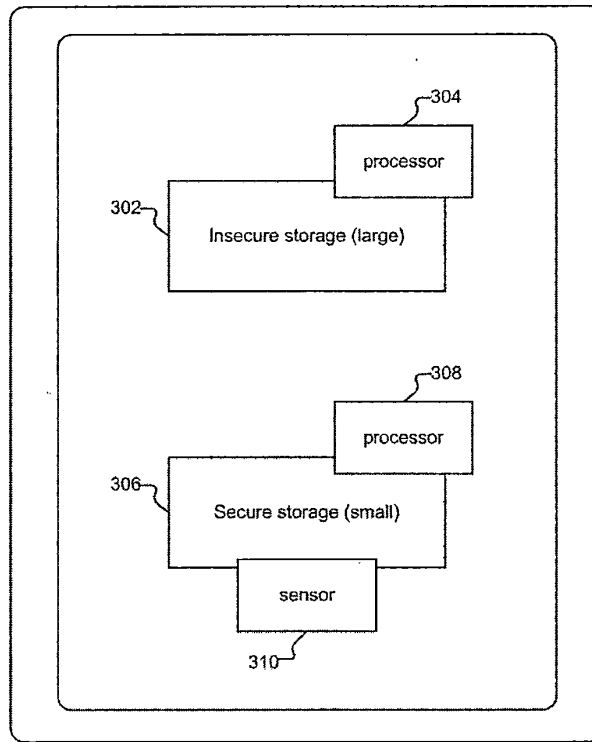
Figure 2 depicts an embodiment of credential information stored on a device.

Ex. 1001, 1:53–54, 3:13–14, Fig. 2. As shown in Figure 2 above, device 200 stores three user profiles 202–206, each of which contains a username and one or more templates associated with the user. *Id.* at 3:14–17. A template is a collection of biometric features, where a fingerprint is an example of a biometric feature. *Id.* at 3:17–19. A representation of a single fingerprint may be included in multiple templates, such as in different

resolutions in accordance with different protocols, e.g., warm or cold conditions and/or by itself or in combination with multiple fingerprints. *Id.* at 3:18–28. When other biometrics are employed, for example facial recognition, voice print, or retina scan, corresponding features are included in the template. *Id.* at 3:28–31.

Policies can be included in a profile that govern how matches are to be performed. Ex. 1001, 3:45–47. Policies can specify thresholds or tolerances for what constitutes a match, and can specify that different levels of matches can result in different levels of access to different resources. *Id.* at 3:47–50. A profile is associated with a vault, for example vault 220. *Id.* at 3:51. A vault, in turn, contains triples specifying a service provider/domain, a username, and a credential. *Id.* at 3:51–53. The credential for a service provider or domain can be a password or a cryptographic key. *Id.* at 3:56–59. The '512 patent describes that profiles, templates, and vaults are collectively referred to as “authentication information” and that in some embodiments secure storage techniques are used to store at least a portion of the authentication information. *Id.* at 3:60–65. Profiles and vaults can be updated while in secure storage, and if that occurs, they are encrypted before being written back to insecure storage, which may in turn propagate them to external backup storage. *Id.* at 4:19–23.

Figure 3 of the '512 patent is reproduced below:



300 ↗

FIG. 3

Figure 3 depicts an embodiment of a device with secure storage to hold authentication information.

Ex. 1001, 1:55–56, 3:66–67, Fig. 3. As shown in Figure 3 above, mobile phone 300 includes large and insecure storage 302 attached to fast processor 304, and smaller but secure storage 306 is attached to dedicated processor 308 and sensor 310, which can be a camera or a fingerprint reader. *Id.* at 3:67–4:4. “Users (and applications) can read from and write to the insecure storage area. However, users cannot access the secure storage area,

and the fast processor can only communicate with the dedicated processor/sensor via a restricted API.” *Id.* at 4:5–8.

D. Illustrative Claim

The ’512 patent includes twenty-one claims, of which claims 1–4, 6–15, and 17–21 are challenged. Claims 1, 11, and 21 are the challenged independent claims. Claim 1 is illustrative and reproduced below.

1. A system, comprising:
 - a first processor of a first device, wherein the first processor is configured to:
 - based at least in part on a request associated with a user to access an external resource, establish a secure connection with the external resource; and
 - communicate with a second processor using a restricted interface, wherein the second processor is configured to:
 - receive a biometric input from a sensor, wherein the biometric input corresponds to at least one of a fingerprint, a feature usable for facial recognition, a voiceprint, a feature usable for a retina scan, or a typing feature; and
 - access a record stored in a secure storage, wherein the record is associated at least with the external resource;
 - retrieve, from the record, at least one of a password, a cookie, or a cryptographic key;
 - perform a cryptographic operation;
 - in response to determining that there is a match between the biometric input and a stored biometric template accessed by the second processor, facilitate a login of the user to the external resource at least in part by transmitting, via the established connection, output based at least in part on the at least one of the password, the cryptographic key, or the cookie retrieved from the record, and wherein the user is logged in to the external resource based at least in part on the output; and
 - perform a secure backup of the record to a storage service, wherein a second device associated with the user is

registered with the storage service, and wherein the record is downloaded from the storage service by the second device; and
a memory coupled to the first processor and configured to provide the first processor with instructions.

Ex. 1001, 10:62–11:31.

E. Applied References

Petitioner relies upon the following references:

Johansson, U.S. Patent No. 8,776,214 B1 (Ex. 1005, “Johansson”), filed August 12, 2009, issued July 8, 2014.

Owen et al., U.S. Patent No. 7,780,080 B2 (Ex. 1006, “Owen”), filed April 23, 2007, issued August 24, 2010.

Shah et al., U.S. Patent Publication No. 2008/0059804 A1 (Ex. 1008, “Shah”), filed August 22, 2007, published March 6, 2008.

Kesanupalli et al., U.S. Patent Publication No. 2011/0138450 A1 (Ex. 1010, “Kesanupalli”), filed June 3, 2010, published June 9, 2011.

Pet. 3–4.

F. Asserted Grounds of Unpatentability

Petitioner challenges the patentability of claims 1–4, 6–15, and 17–21 of the ’512 patent based on the following grounds.

Claims Challenged	35 U.S.C. §	Reference(s)/Basis
1–4, 6–15, 17–21	103 ¹	Johansson, Kesanupalli
1–4, 6–15, 17–21	103	Shah, Owen

¹ The Leahy-Smith America Invents Act (“AIA”), Pub. L. No. 112–29, 125 Stat. 284, 287–88 (2011), amended 35 U.S.C. § 103. Because the ’512 patent claims priority through a series of continuation applications to an application that was filed before March 16, 2013, the effective date of the relevant amendment, the pre-AIA version of § 103 applies.

Pet. 3–4. Petitioner also relies upon the Declaration of Dr. Mark E. Crovella (Ex. 1002).

II. ANALYSIS

A. *Applicable Law*

Petitioner challenges the patentability of claims 1–4, 6–15, and 17–21 of the '512 patent on grounds that the claims would have been obvious under 35 U.S.C. § 103 in light of various references, namely Johansson, Kesanupalli, Shah, and Owen. “In an [*inter partes* review], the petitioner has the burden from the onset to show *with particularity* why the patent it challenges is unpatentable.” *Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1363 (Fed. Cir. 2016) (citing 35 U.S.C. § 312(a)(3) (requiring *inter partes* review petitions to identify “with particularity . . . the evidence that supports the grounds for the challenge to each claim”)) (emphasis added). This burden never shifts to Patent Owner. *See Dynamic Drinkware, LLC v. Nat’l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015) (citing *Tech. Licensing Corp. v. Videotek, Inc.*, 545 F.3d 1316, 1326–27 (Fed. Cir. 2008)) (discussing the burden of proof in *inter partes* review).

A claim is unpatentable under 35 U.S.C. § 103 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) when of record, objective evidence of

obviousness or non-obviousness, i.e., secondary considerations. *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966). Secondary considerations may include the following: “commercial success, long felt but unsolved needs, failure of others, etc.”² *Id.* The totality of the evidence submitted may show that the challenged claims would not have been obvious to one of ordinary skill in the art. *In re Piasecki*, 745 F.2d 1468, 1471–72 (Fed. Cir. 1984). When evaluating a combination of teachings, we must also “determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue.” *KSR*, 550 U.S. at 418 (citing *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)).

We analyze the challenges presented in the Petition in accordance with the above-stated principles.

B. Level of Ordinary Skill in the Art

Petitioner contends that a person of ordinary skill in the art, at the time of the invention of the ’512 patent:

would have had a bachelor’s degree in electrical engineering, computer engineering, computer science, or a related field, and at least two years of experience in the research, design, development, and/or testing of authentication techniques, and related firmware and software, or the equivalent, with additional education substituting for experience and vice versa.

Pet. 6 (citing Ex. 1002 ¶¶ 18, 24–26). Patent Owner states it “will apply the Petitioner’s definition of a [person of ordinary skill in the art] for the purposes of this response, but reserves the right to argue for a different definition should this Petition be instituted.” Prelim. Resp. 7.

² Patent Owner has not presented objective evidence of non-obviousness.

We regard Petitioner’s proposed definition as reasonable and consistent with the prior art before us. *See In re GPAC Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995) (determining that the Board of Patent Appeals and Interferences did not err in concluding that the level of ordinary skill in the art was best determined by the references of record). Accordingly, we apply the level of skill set forth above, which also is consistent with the testimony of Dr. Crovella (Ex. 1002 ¶¶ 18, 24–26).

C. Claim Construction – “Secure Backup Limitation”

We construe claims “using the same claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. 282(b), including construing the claim in accordance with the ordinary and customary meaning of such claim as understood by one of ordinary skill in the art and the prosecution history pertaining to the patent.” 37 C.F.R. § 42.100(b); *see also Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc).

In this context, claim terms “are generally given their ordinary and customary meaning” as understood by a person of ordinary skill in the art in question at the time of the invention. *Phillips*, 415 F.3d at 1312–13; *see CCS Fitness, Inc. v. Brunswick Corp.*, 288 F.3d 1359, 1366 (Fed. Cir. 2002) (There is “a ‘heavy presumption’ that a claim term carries its ordinary and customary meaning.”). “In determining the meaning of the disputed claim limitation, we look principally to the intrinsic evidence of record, examining the claim language itself, the written description, and the prosecution history, if in evidence.” *DePuy Spine, Inc. v. Medtronic Sofamor Danek, Inc.*, 469 F.3d 1005, 1014 (Fed. Cir. 2006) (citing *Phillips*, 415 F.3d at 1312–17). Extrinsic evidence is “less significant than the

intrinsic record in determining ‘the legally operative meaning of claim language.’” *Phillips*, 415 F.3d at 1317.

Only those claim terms that are in controversy need to be construed, and only to the extent necessary to resolve the controversy. *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (stating that “we need only construe terms ‘that are in controversy, and only to the extent necessary to resolve the controversy’” (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999))).

In this case, “Petitioner does not believe that any term requires explicit construction to resolve the issues presented in this Petition.” Pet. 7. Patent Owner also does not provide any express constructions for any claim terms. *See generally* Prelim. Resp. However, in the District Court Case, the parties proposed constructions for certain limitations, including “perform a *secure backup* of the record to a storage service,” as recited for example in independent claim 1, which is relevant to this Decision. Ex. 2020, 13–15, 19. Hereinafter, we refer to this limitation as the “Secure Backup Limitation.”

In the District Court Case, Petitioner argued the Secure Backup Limitation is indefinite. Ex. 2020, 13. Patent Owner argued the limitation should be given its “[p]lain and ordinary meaning; no construction necessary.” *Id.* After the filing of the Petition and Preliminary Response, the district court in the District Court Case entered a *Markman* order construing the Secure Backup Limitation, among others. *Id.* at 13–15, 19. The district court construed the Secure Backup Limitation to mean “create a backup of the record that is protected from unauthorized access and transmit

it to a storage service.” *Id.* at 15. In adopting this construction, the district court found “[t]he words of this disputed phrase have well-understood meanings:”

Generally, a “backup” may be either (1) the act of backing up, or (2) a backup copy of data. *See, e.g.,* <https://www.yourdictionary.com/backup> (last visited Mar. 29, 2022) (defining “backup” as “the act or an instance of backing up computer data, files, etc.” and, alternatively, as “[a] backup copy of data, a file, etc.”). Here, the claims recite “performing a . . . backup,” which aligns only with the former—performing the *act* of backing up. The limitation is silent as to whether the storage is secure or insecure, but requires the *act* be “secure.” “Secure” in this context, as already determined with respect to “secure storage,” means “protected from unauthorized access.”

Ex. 2020, 14–15.

We have reviewed the district court’s reasoning, as well as the ’512 patent and other evidence of record before us, and agree that, for reasons given by the district court, the Secure Backup Limitation should be given the same construction as determined by the district court.

We therefore adopt the district court’s construction for that limitation.

Ex. 2020, 13–15, 19. Accordingly, we construe the Secure Backup Limitation to mean “create a backup of the record that is protected from unauthorized access and transmit it to a storage service.” *See id.*

We do not find that the express construction of any other limitation is necessary for this decision. *See Vivid Techs.*, 200 F.3d at 803.

D. Obviousness of Claims 1–4, 6–15, and 17–21 over Johansson and Kesanupalli

Petitioner contends claims 1–4, 6–15, and 17–21 are unpatentable under 35 U.S.C. § 103 as obvious over the combination of Johansson

(Ex. 1005) and Kesanupalli (Ex. 1010). Pet. 21–44. Patent Owner opposes Petitioner’s contentions. Prelim. Resp. 24–43. Based on our review of the Petition and Preliminary Response, we determine that Petitioner has not demonstrated a reasonable likelihood that it would prevail in showing that any of claims 1–4, 6–15, and 17–21 is unpatentable as obvious over the combination of Johansson and Kesanupalli, as discussed below. We begin with an overview of Johansson and Kesanupalli.

1. Overview of Johansson

Johansson discloses an authentication manager that generates a security credential based at least in part on a security credential specification associated with a network site. Ex. 1005, code (57). Johansson describes that many problems associated with using passwords as a security credential are caused by humans not being able to process the type of data that passwords represent. *Id.* at 1:54–56. Johansson states that passwords are often not a single chunk of information and can stretch the limits of human working memory, and that the system it discloses “largely separates the user from the password, thereby resolving many of the issues.” *Id.* at 1:58–61.

Figure 1 of Johansson is reproduced below:

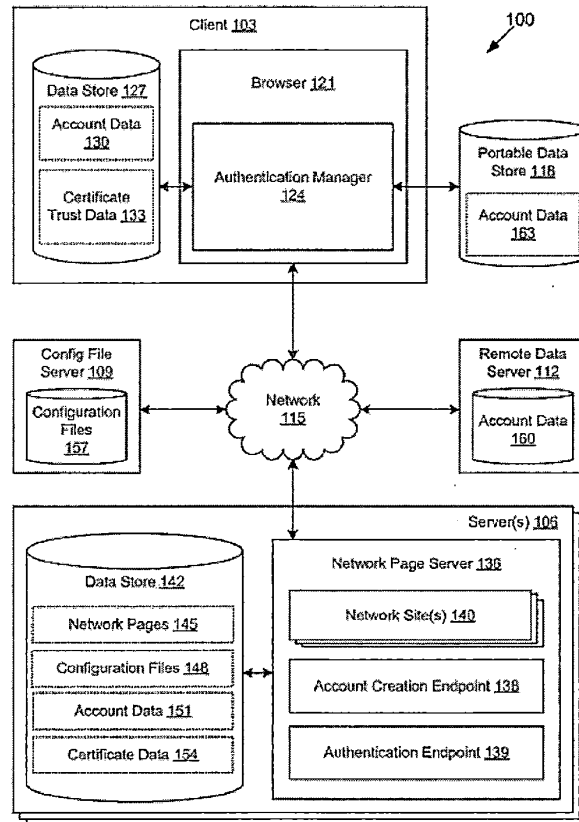


FIG. 1

Figure 1 depicts a network environment of an embodiment disclosed by Johansson.

Ex. 1005, 1:23–24, 2:5–6, Fig. 1. As shown in Figure 1 above, client device 103 is processor-based and, as such, includes a processor and a memory. *Id.* at 2:25–27. Client device 103 in networked environment 100 is in data communication with servers 106, configuration file server 109, and remote data server 112 by way of network 115. *Id.* at 2:5–10. Network 115 includes the Internet, intranets, extranets, wide area networks (WANs), local

area networks (LANs), wired networks, wireless networks, or other suitable networks, or any combination thereof. *Id.* at 2:10–14. Client device 103 may also communicate with portable data store 118 via a local interface. *Id.* at 2:14–17. Client device 103 can be a desktop computer, laptop computer, personal digital assistant, cellular telephone, set-top box, or other system with like ability. *Id.* at 2:18–22. Client device 103 includes data store 127, which may comprise data and applications configured to provide access to the data. *Id.* at 2:45–47. Data store 127 stores account data 130 which may include security credentials used to access various network sites or network pages, information regarding authentication endpoints, and/or other information. *Id.* at 2:49–52. Account data 130 may be stored in encrypted format. *Id.* at 2:52–54.

Regarding portable data store 118, Johansson describes:

The portable data store 118 may be configured to store account data 163. The account data 163 may include, for example, security credentials used to access various network sites 140 or network pages 145, information regarding authentication endpoints 139, and/or other information. In various embodiments, the account data 163 may be mirror of the account data 130. In other embodiments, the account data 163 may take the place of account data 130. The account data 163 may be stored in an encrypted format.

Ex. 1005, 4:59–67. Johansson further describes portable data store 118 as including a processor and a memory. *Id.* at 4:53–55.

Regarding servers 106, Johansson describes:

The server 106 is configured to execute various applications such as, for example, a network page server 136, an account creation endpoint 138, an authentication endpoint 139, and other applications. The network age server 136 is configured

to serve up network pages, such as web pages, and other files from the server 106 to various clients 103.

Ex. 1005, 3:3–8.

Account creation endpoint 138 may comprise a network page and/or software to facilitate creation of one or more accounts for one or more users at client device 103 for one or more network sites 140. Ex. 1005, 3:28–31. Authentication manager 124 communicates with account creation endpoint 138 through network page server 136. *Id.* at 3:31–33.

Configuration file server 109 includes a data store to store configuration files 157, which may include one or more security credential specifications and/or describe an interface of one or more account creation endpoints 138 and/or authentication endpoints 139. Ex. 1005, 4:18–23. Configuration file server 109 may be a system configured to provide configuration files 157 corresponding to plurality of servers 106. *Id.* at 4:23–25. Remote data server 112 includes a data store used to store account data 160 which may include security credentials used to access various network sites 140 or network pages 145. *Id.* at 4:40–43. Account data 160 may be stored in encrypted format. *Id.* at 4:46–48.

Figure 2 of Johansson is reproduced below:

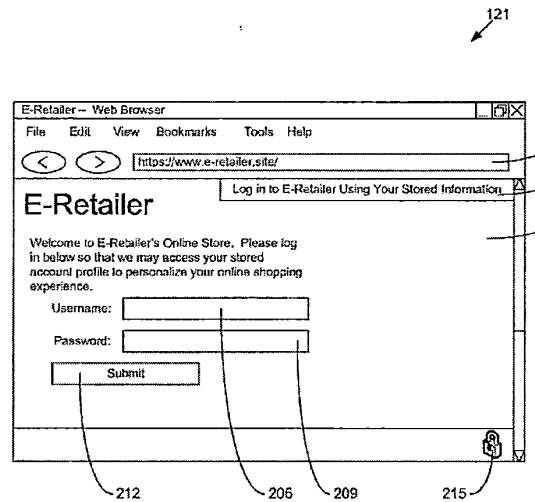


FIG. 2

Figure 2 shows an example of network pages rendered by a browser executed in a client device in the network environment of Figure 1.

Ex. 1005, 1:25–28, Fig. 2.

Johansson describes:

When a stored account exists for a network 140, the authentication manager 124 determines whether to provide the security credentials to the network site 140. As a preliminary matter, the authentication manager 124 may require that the user be authenticated to the authentication manager 124 by way of a master security credential such as a password, presence of the portable data store 118 at the client 103, biometric identification, native operating system identification, or some other authentication. Responsive to the authentication, the authentication manager 124 may decrypt the stored account data 130, 160, 163.

Ex. 1005, 8:21–31. In the example shown in Figure 2 above, network page 145 provided by network site 140 at the entered URL includes an

authentication form having username field 206, password field 209, and submit button 212. *Id.* at 9:48–54. Johansson further describes:

In FIG. 2, the authentication manager 124 (FIG. 1) has verified the identity of the network site 140 and is presenting an authentication button 218. The authentication button 218 indicates that account information associated with the network site 140 is stored in account data 130, 160, 163.

Once a user selects the authentication button 218, the authentication manager 124 may fill in the username field 206 and the password field 209. The authentication manager 124 may also automatically submit the logon request by programmatically pressing the submit button 212. In some embodiments, the username field 206 and password field 209 may be prefilled automatically with the security credential upon verification of the identity of the network site 140.

Id. at 9:58–10:4.

We further discuss below the disclosure of Johansson in connection with the parties' arguments.

2. Overview of Kesanupalli

Kesanupalli relates generally to “biometric authentication of users.”

Ex. 1010 ¶ 24. Kesanupalli summarizes its secure transaction system using user authenticating biometric information as follows:

A user transaction request is received at a client device. A web browser plug-in communicates the user transaction request to a server that determines whether the user transaction request is a secure transaction. Transaction data is received from the server via the web browser plug-in. If the received transaction data indicates a secure transaction, the user is prompted to provide biometric data from a user using a biometric device and related security protocols. The web browser plug-in then communicates a transaction confirmation to the server.

Id. at codes (54), (57).

Figure 9 of Kesanupalli is reproduced below:

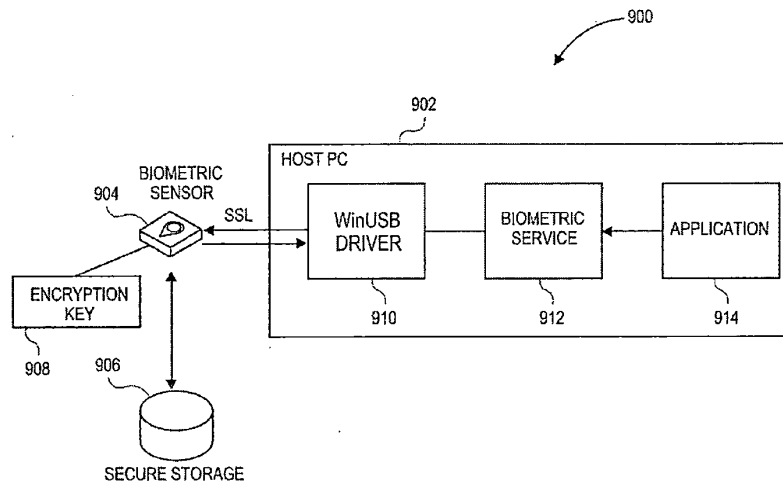


FIG. 9

Figure 9 depicts an exemplary system capable of performing biometric user authentication using biometric sensor 904.

Ex. 1010 ¶¶ 13, 57, Fig. 9. As shown in Figure 9 above, system 900 includes Host PC 902, WinUSB driver 910, biometric service 912, and application 914. *Id.* ¶ 57. Biometric sensor 904 decrypts user credentials only after a successful biometric reading, such as a fingerprint swipe or fingerprint scan (using a placement style fingerprint sensor). *Id.* In a successful fingerprint swipe, for example, the swiped fingerprint information matches a fingerprint template associated with the fingerprint sensor. *Id.* Biometric sensor 904 “creates a secure communication with Host PC 202 using SSL v3 protocol or other secure communication technique.” *Id.* In an exemplary embodiment, biometric sensor 904 includes “a ‘match on chip’ functionality that releases a user’s credentials only upon a successful fingerprint swipe or other biometric reading.” *Id.*

Such user credentials and other information may be stored within biometric sensor 904, in secure storage 906, or any other storage mechanism. *Id.*

We further discuss below the disclosure of Kesanupalli in connection with the parties' arguments.

3. *Independent Claim 1: “[a first processor configured to] communicate with a second processor using a restricted interface”*

Independent claim 1 requires, in relevant part, a first processor configured to “communicate with a second processor using *a restricted interface.*” Ex. 1001, 10:62–11:2 (emphasis added). The parties dispute, *inter alia*, whether Petitioner's cited evidence adequately supports Petitioner's contention that the combination of Johansson and Kesanupalli teaches a “restricted interface” in this context. *See, e.g.*, Prelim. Resp. 38–40; Pet. 28–29. Independent claims 11 and 21 also recite this limitation. Ex. 1001, 11:63–12:2, 12:61–13:2.

Petitioner contends “Johansson discloses that its first processor (i.e., of client 103) communicates with a second processor (i.e., of portable data store 118), *using a restricted interface.*” Pet. 28 (emphasis added). Petitioner's entire alleged support for this contention is that “Johansson discloses that client 103 connects with portable data store 118, which ‘may include a processor circuit comprising a processor and a memory,’ by way of, e.g., ‘*a local interface, data bus, or another network 115.*’” Pet. 28 (citing Ex. 1005, 2:15–17, 4:50–59) (emphasis added). Petitioner's declarant makes these same statements verbatim, without more, and with no additional citations to evidence. *See* Ex. 1002 ¶ 100.

Patent Owner argues “[n]one of [a local interface, data bus, and another network 115] are a ‘restricted interface’ and petitioner has not offer[ed] a single piece of evidence to the contrary.” Prelim. Resp. 38. Patent Owner argues “Petitioner’s ‘expert’ does not even opine on whether [the skilled artisan] would have viewed a local interface, data bus, or another network as a restricted interface.” *Id.* (citing Ex. 1002 ¶¶ 100–101); *see id.* at 40. Indeed, neither Petitioner nor its expert provides any express construction for what a “restricted interface” *is* in the context of the ’512 patent, and as argued by Patent Owner (*id.*), neither explains sufficiently, let alone with particularity, how or why Johansson’s “local interface, data bus, or another network 115” discloses or teaches the claimed “restricted interface.” *See* 35 U.S.C. § 312(a)(3) (“particularity”); 37 C.F.R. § 42.104(b)(3) (“How the challenged claim is to be construed.”).

Petitioner also contends “Kesanupalli discloses that a first processor (Host PC 202) communicates with biometric sensor [9]04 using *a restricted interface*.” Pet. 28 (emphasis added). Petitioner’s entire alleged support for this contention is that “Kesanupalli discloses that ‘biometric sensor 904 creates a secure communication with Host PC 202 using SSL v3 protocol or other secure communication technique.’” *Id.* But Petitioner’s argument here begs the question: Given Petitioner already argued Johansson itself “discloses” “a restricted interface” (Pet. 28), why turn to Kesanupalli for this feature (i.e., what is missing from Johansson)? We find Petitioner’s argument here reinforces our determination that Petitioner does not explain sufficiently how or why Johansson discloses or teaches the claimed “restricted interface.” *See* Prelim. Resp. 39 (“Essentially acknowledging

that Johansson does not disclose a restricted interface between the two processors, Petitioner turns to Kesanupalli to supply the missing link.”).

Patent Owner argues “Petitioner has failed to establish that . . . the SSL v3 protocol used in Kesanupalli [is a] restricted interface[] between the processors.” Prelim. Resp. 40. We agree. Again, neither Petitioner nor its expert provides any express construction for what a “restricted interface” *is* in the context of the ’512 patent. Despite claim 1 reciting features such as “a secure connection” (Ex. 1001, 10:66–67), “a secure storage” (*id.* at 11:9), and “a secure backup” (*id.* at 11:25), and doing so separate and distinct from “a restricted interface” (*id.* at 11:1–2), neither Petitioner nor its expert explains how or why “a secure communication” such as one using SSL v3 protocol is (or teaches) a “restricted interface” between processors. Thus, we agree with Patent Owner that Petitioner does not explain sufficiently, let alone with particularity, how or why Kesanupalli’s secure communication using SSL v3 protocol (alone or in combination with Johansson) discloses or teaches the claimed “restricted interface.”

Petitioner further contends “using a restricted interface in a biometrically-secured device would have been a logical and routine implementation choice for [the skilled artisan].” Pet. 29. Petitioner’s declarant also makes this same statement verbatim, without more, and with no further explanation or additional citations to evidence. *See* Ex. 1002 ¶ 101. We give such conclusory, unsupported assertions by Petitioner’s expert little or no weight. *See 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 Haas*

Co. v. Brotech Corp., 127 F.3d 1089, 1092 (Fed. Cir. 1997) (noting that a fact finder is not required to “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.”). Furthermore, the premise for this contention is Petitioner’s allegation that Johansson and Kesanupalli each disclose or teach the claimed “restricted interface” between processors, which Petitioner does not sufficiently support on the present record. Thus, we have no basis to credit Petitioner’s contention here.

For the foregoing reasons, and constrained by the Petition, we are not persuaded that the cited evidence adequately supports Petitioner’s contention that Johansson, Kesanupalli, or the combination thereof teaches a “restricted interface” between processors, as recited in independent claims 1, 11, and 21.

4. Summary

For the foregoing reasons, we determine that Petitioner has not demonstrated a reasonable likelihood of success in establishing the unpatentability of claims 1, 11, or 21, or claims 2–4, 6–10, 12–15, and 17–20 which depend therefrom, as obvious over the combination of Johansson and Kesanupalli.

E. Obviousness of Claims 1–4, 6–15, and 17–21 over Shah and Owen

Petitioner contends claims 1–4, 6–15, and 17–21 are unpatentable under 35 U.S.C. § 103 as obvious over the combination of Shah (Ex. 1008) and Owen (Ex. 1006). Pet. 44–67. Patent Owner opposes Petitioner’s contentions. Prelim. Resp. 43–47. Based on our review of the Petition and

Preliminary Response, we determine that Petitioner has not demonstrated a reasonable likelihood that it would prevail in showing that any of claims 1–4, 6–15, and 17–21 is unpatentable as obvious over the combination of Shah and Owen, as discussed below. We begin with an overview of Shah and Owen.

1. Overview of Shah

Shah discloses a method and apparatus for password management and single sign-on (SSO) access, which uses a trusted platform module (TPM) to interact with a proxy SSO unit and web-accessing applications to provide a secure, trusted mechanism to generate, store, and retrieve passwords and SSO credentials. Ex. 1008, code (57).

Figure 8 of Shah is reproduced below:

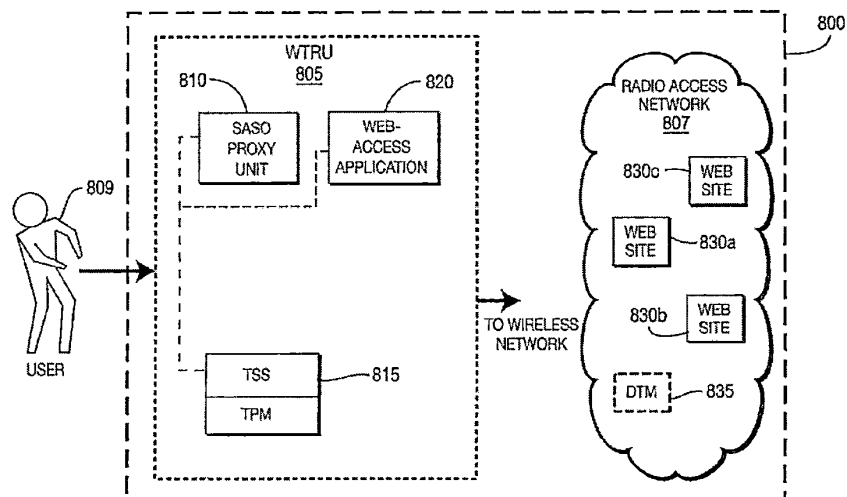


FIG. 8

Figure 8 depicts a wireless communication system.

Ex. 1008 ¶ 57, Fig. 8. As shown in Figure 8 above, wireless communication system 800 includes wireless transmit/receive unit (WTRU) 805 that

interacts with user 809. *Id.* ¶ 64. The WTRU includes single automatic sign-on (SASO) proxy unit 810, TPM/TSS (TPM software stack) 815, and web access application (WAA) 820. *Id.* TPM/TSS 815 interacts with both SASO proxy unit 810 and WAA 820 to provide a secure, trusted mechanism to generate, store, and retrieve passwords and SSO credentials. *Id.* Shah describes that TPM stands for “trusted platform module” and is a core platform module. *Id.* ¶ 37. Published U.S. Patent Application No. 11/745,697, incorporated by reference into the disclosure of Shah (*see id.* ¶ 73), states:

The TPM is a microcontroller that stores keys, passwords, performs ciphering and hashing functions and forms the basis of a root of trust mechanism. It potentially can be used in any computing device or platform that requires these functions, particularly a wireless transmit/receive unit (WTRU).

Ex. 1011 ¶ 5.

Figure 7 of Shah is reproduced below:

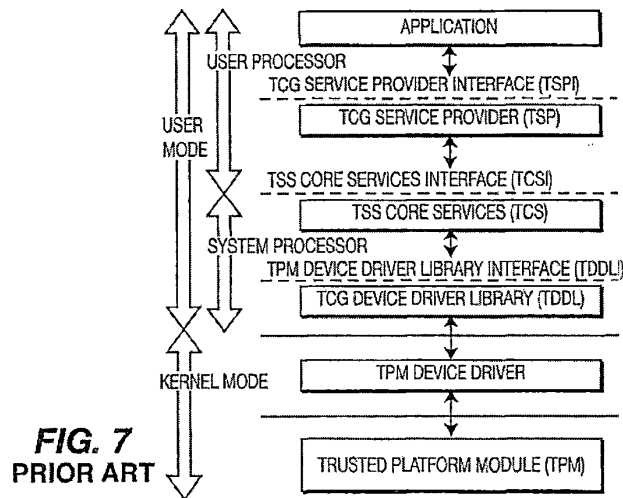


Figure 7 depicts a block diagram of the different layers within a TPM and TSS.

Ex. 1008 ¶ 56, Fig. 7. Figure 7 above shows the interface architecture of TPM and TSS layers between an application and a TPM. *Id.* ¶ 40. Shah describes:

TSS modules include the following components: 1) TSS device driver library interface (TDDLI) that interfaces to the standardized TPM device driver library (TDDL); 2) TSS core service interface (TCSI) that interfaces to the TPM's TCS commands (not shown); and 3) TCG service provider interface (TSPI) that interfaces with the TCG's TSP commands (not shown) and sits just below the application. On the TPM side, the TDDL sits on top of the vendor specific TPM device driver, which is in communication with the TPM.

Id.

Figure 11 of Shah is reproduced below:

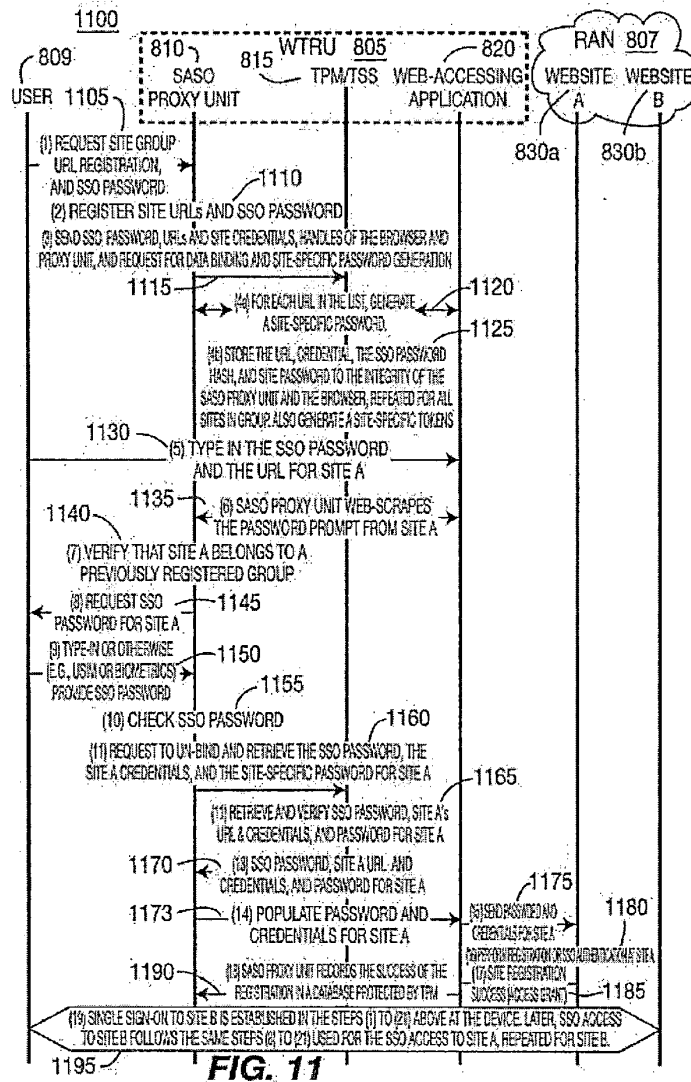


Figure 11 depicts a flow diagram of a SSO for web access using a TPM/TSS based on group-wise passwords using a TPM.

Ex. 1008 ¶ 60, Fig. 11. Shah explains that user 809 configures a group of sites, the access to each of which is controlled by the SASO proxy unit 810

and with a common, group-specific log-in/password furnished by the user 809. *Id.* at ¶ 88. By using such a procedure, user 809 can control the access to particular groups of websites using group-specific passwords. *Id.* Shah describes the procedure, in part, as follows:

The user 809 initiates the procedure 1100, possibly upon prompt by the SASO proxy unit 810, by sending to the SASO proxy unit 810 a request for establishment of a website group, at step 1105. The request may include website A 830a and website B 830b, and also a SSO password he has made for the website group, and the URLs of the websites belonging to the group. This step could be done in an incremental manner, whereby the user 809 starts the group by having only the website A 830a, and then later adding or deleting other websites. If such website list update is performed at any point, the SASO proxy unit 810 will need to request procedures for adding, deleting, or even un-binding and re-binding, certain data held by the TPM/TSS 815 (and some of them also by the SASO proxy unit 810).

Next, the SASO proxy unit 810 registers the website URLs and the single SSO password for each website in the website group, at step 1110. The SASO proxy unit 810 then sends the TPM/TSS 815 the SASO password, the URLs and the website credentials for all the websites belonging to the group, the address handle of the WAA 820 and the SSO proxy unit 810, and also a request for data binding and for website-specific password generation to the TPM/TSS 815, at step 1115. For each URL in the list of websites, the TPM/TSS 815 generates a cryptographically strong password, using the TPM random number generator (RNG), at step 1120. At step 1125, the TPM/TSS 815 then binds the website-specific URL, any credentials (including site certificates), the SSO password, and the site-specific password that it generated, in a data blob encrypted with a TPM storage key. Such a key is 'bound' to the platform (e.g. WTRU, or computer) that houses the TPM. If in step 1105 the user 809 has indicated an update (add, delete, or change) of the list of the group of websites with its associated information (URLs, credentials, etc.), there must be an indication

from the SASO proxy unit 810 and the TPM/TSS 815 to either add or delete the website-specific records for the affected websites.

Id. ¶¶ 89–90.

We further discuss below the disclosure of Shah in connection with the parties' arguments.

2. Overview of Owen

Owen discloses a biometrically-secured device for facilitating various different types of in-person and online transactions. Ex. 1006, code (57). The in-person transactions can be credit card transactions, in which the user's identity is biometrically authenticated. *Id.* The device also can be used to create a secure platform from which to make online transactions by loading a secure operating system from the device to a host computer's volatile memory. *Id.* Biometrically secured online transactions can then be performed using the host computer. *Id.* Figure 1 of Owen is reproduced below:

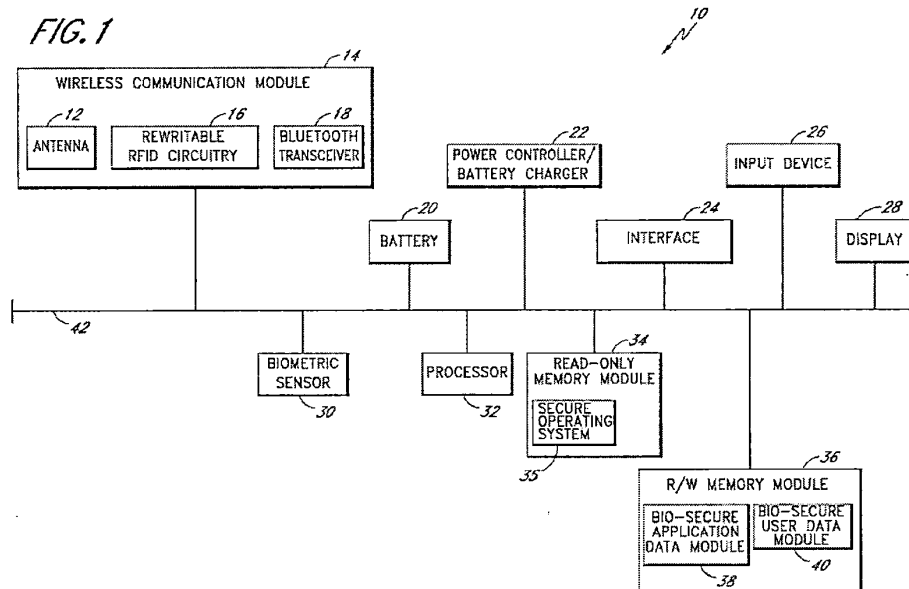


Figure 1 is a block diagram of portable biometrically-secured device 10 for facilitating biometrically-secured in-person or online transactions.

Id. at 6:62–65, 9:65–67, Fig. 1.

As shown in Figure 1 above, biometrically-secured device 10 includes biometric sensor 30 to biometrically authenticate the identity of a user. *Ex.* 1006, 13:20–23. It also includes two physically separate memory modules 34 and 36, both of which are biometrically secured so that access to them is at least partially restricted based on whether a user has biometrically authenticated his or her identity. *Id.* at 11:7–13. Biometrically-secured device 10 also includes interface 24 which couples device 10 to a host computer (not shown), and processor 32 which controls interface 24 and access to memory modules 34 and 36. *Id.* at 10:4–6, 10:63–11:2. Biometrically-secured device 10 further includes display 28, user input

device 26, battery 20, power controller/battery charger 22, and wireless communications module 14. *Id.* at 10:11–27.

Figure 13 of Owen is reproduced below:

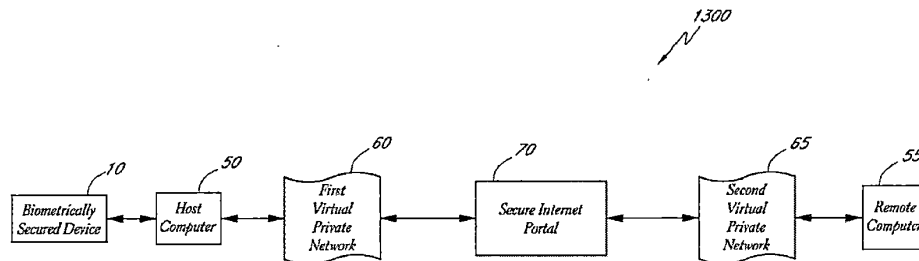


FIG. 13

Figure 13 depicts a dataflow chart of communications between the biometrically-secured device of Figure 1, a host computer, a secure internet portal, and a remote computer.

Ex. 1006, 7:39–41; 25:47–49, Fig. 13. As shown in Figure 13 above, remote access system 1300 includes biometrically-secured device 10, host computer 50, secure internet portal 70, and remote computer 55. *Id.* at 25:49–52. Device 10 is communicatively coupled to host computer 50 which is communicatively coupled to secure internet portal 70 through VPN 60, and secure internet portal 70 is communicatively coupled to remote computer 55. *Id.* at 27:52–58.

The remote computer is configured to accept access requests from the host computer that is in communication with a user's portable, biometrically-secured device 10 when the user is away from the remote computer. Ex. 1006, 26:12–17. The remote computer can be the user's home computer or a corporate file server, or some other network attached electronic data storage device. *Id.* at 25:59–63.

After being granted access to remote computer 55, a user is permitted “to access and modify electronic files stored by the remote computer 55.”

Ex. 1006, 27:34–36. The electronic files can be downloaded to the user’s portable, biometrically-secured device for offline work. *Id.* at 27:49–51.

Owen describes:

In the case where the remote computer 55 is, for example, a corporate file server, the company can be given the ability to change permission settings that control which files on the corporate file server are accessible by the user. If at any time the company removes access privileges to a file from a user after he has stored the file on his portable device 10, then, in certain embodiments, the secure internet portal 70 can be configured to send a command to the user’s portable device 10 to delete the file from the user’s device 10 once the device 10 is again used to establish a connection with the secure internet portal 70.

Id. at 27:56–66.

Additional security is provided to protect the secrecy of the user’s data on biometrically-secured device 10. For instance, an old device can be added to a “banned list.” Ex. 1006, 30:27–29. Specifically, Owen describes:

After being added to the banned list, the next time that the old device 10 is coupled to a host computer 50, the secure internet portal 70 can issue a “scorched earth” command to the old portable device 10, causing the processor 32 to erase the device’s memory modules and/or otherwise disable the old device 10.

Id. at 30:27–32.

We further discuss below the disclosure of Owen in connection with the parties’ arguments.

3. *Independent Claim 1: “perform a secure backup of the record to a storage service”*

Independent claim 1 requires, in relevant part, “perform[ing] a *secure backup* of the record to a storage service.” Ex. 1001, 11:25–26 (emphasis added). The parties dispute, *inter alia*, whether Petitioner’s cited evidence adequately supports Petitioner’s contention that the combination of Shah and Owen teaches a “secure backup” in this context. *See, e.g.*, Prelim. Resp. 43–47; Pet. 55–58. Independent claims 11 and 21 also recite this limitation. Ex. 1001, 12:26–27, 13:25–26.

Petitioner contends “Shah discloses that the second processor (i.e., of TPM/TSS 815 and/or SASO proxy unit 810, residing in the USIM) performs a *secure backup* of the record to a storage service (e.g., RAN 807 with a device trusted mirror DTM 835).” Pet. 55 (emphasis added). Petitioner submits the following as alleged support for this statement:

SASO proxy unit 810 sends the authentication data and list of desired services to DTM 835. Ex-1008, ¶80, FIG. 10 (step 1020).

Moreover, in one embodiment, Shah discloses that the function of SASO proxy 810 and TPM/TSS 815 may reside in a USIM, the structure of which is incorporated by reference to Shah ’256 (Ex-1011). Shah ’256 discloses a USIM 205, which includes a TPM microcontroller. Ex-1011, ¶38, FIG. 2. In the embodiment where SASO proxy 810 resides in the USIM, the USIM (second processor) sends the authentication data and list of desired services to DTM 835.

In particular, Shah discloses that SASO proxy unit 810 “sends the authentication data and the list of desired services to” TPM/TSS 815, which “seals the authentication data and the list of desired services to the integrity of the SASO proxy unit 810 and WAA 820.” Ex-1008, ¶80. SASO proxy unit 910 then sends the “integrity information (or, equivalently, attestation

information) for the WTRU 805, along with the authentication data and the list of applications and the desired services, to the DTM 835.” *Id.*; Ex-1002, ¶¶171-173.

Pet. 56–57 (Fig. 10 image omitted). Petitioner’s declarant makes these same statements verbatim, without more, and with no further explanation or additional citations to evidence. *See* Ex. 1002 ¶¶ 171–173.

Patent Owner argues “[Shah] does not disclose a secure backup,” and “[i]ndeed, [Shah] doesn’t even disclose a backup.” Prelim. Resp. 45. According to Patent Owner, “[w]hat [Shah] does disclose, and what Petitioner mistakenly label[s] as a ‘backup,’ is using a device trusted **mirror** (‘DTM’) to authenticate in the ‘secure automated sign-on’ process.” *Id.* (citing Ex. 1011 ¶ 59). Patent Owner argues “[t]his is not a backup; rather, as the name implies, the device trusted mirror (DTM), ‘provides services that “mirror[s]” the trustworthy service of the WTRU 805 and can attest to it to external requesters of such information.’” *Id.* (alteration in original).

Patent Owner submits:

Further evidencing the fact that this is not a backup, is that [Shah] does not disclose a second device that can download the record from the DTM—and Petitioner does not point to a second device downloading the backup from the DTM. Indeed, there is nothing that indicates that the DTM can do anything beyond attest the user in place of the WTRU.

Id. at 45–46. Patent Owner concludes, and we agree, “Petitioner does not explain how Shah discloses a secure backup.” *Id.* at 46 (“Petitioner does a lot of hand waving without any substantive analysis like adding a complicated figure [i.e., Figure 10] with no explanation as to how the figure is relevant.”). Patent Owner also concludes, and we agree, “[t]here is

nothing on the record that demonstrates that [the skilled artisan] would consider a ‘mirroring’ system to disclose a [secure] backup.” *Id.*

Neither Petitioner nor its expert provide any express construction for what a “secure backup” *is* in the context of the ’512 patent, and as argued by Patent Owner (*id.* at 45–46), neither explains sufficiently, let alone with particularity, how or why Shah’s “mirroring system” (e.g., DTM 835) discloses or teaches the claimed “secure backup.” *See* 35 U.S.C. § 312(a)(3); 37 C.F.R. § 42.104(b)(3). Although Petitioner does not construe “secure backup,” as noted above in Section II.C, for purposes of this decision we construe the term to mean “create a backup of the record that is protected from unauthorized access and transmit it to a storage service.” Under this construction, we still find Petitioner does not explain sufficiently (if at all) how or why Shah’s “mirroring system” discloses or teaches first creating a backup of a record that is protected from unauthorized access and then transmitting that protected backup to a storage service.

The burden of proof here lies with Petitioner, not Patent Owner, and we do not ourselves create and adopt unpatentability arguments on behalf of Petitioner as to whether or how Shah might teach a “secure backup.” *See Wasica Fin. GmbH v. Cont’l Auto. Sys., Inc.*, 853 F.3d 1272, 1286 (Fed. Cir. 2017) (“It is of the utmost importance that petitioners in the IPR proceedings adhere to the requirement that the initial petition identify with particularity the evidence that supports the grounds for the challenge to each claim.” (quoting *Intelligent Bio-Sys., Inc. v. Illumina Cambridge Ltd.*, 821 F.3d 1359, 1369 (Fed. Cir. 2016))); *In re Magnum Oil Tools Int’l, Ltd.*, 829 F.3d 1364, 1381 (Fed. Cir. 2016) (“[W]e find no support for the PTO’s position

that the Board is free to adopt arguments on behalf of petitioners that could have been, but were not, raised by the petitioner during an IPR.”); *DeSilva v. DiLeonardi*, 181 F.3d 865, 866–67 (7th Cir. 1999) (“A brief must make all arguments accessible to the judges, rather than ask them to play archeologist with the record.”).

Petitioner also contends “Owen discloses that a user registers portable device 10 with secure internet portal 70, and creates a backup of the data stored in the portable device.” Pet. 57. Petitioner argues “Owen discloses that secure internet portal 70 can ‘include a registration’ (backup data) and ‘rebuild’ (download to a new device) service for the user should his/her old biometrically-secured device 10 become lost, stolen or damaged.” Pet. 57. Petitioner argues “Owen teaches that ‘[e]ven though the portable, biometrically-secured device 10 is a new one, the biometric sensor can be used to regenerate the user’s unique mathematical key pair so that his identity can be biometrically authenticated by the secure internet portal 70.’” Pet. 57. Petitioner’s declarant makes these same statements verbatim, without more, and with no further explanation or additional citations to evidence. *See* Ex. 1002 ¶¶ 174–175. Petitioner does not explain whether it is relying on Owen to teach a “*secure* backup.”

Patent Owner argues, as with Shah, “Owen similarly does not disclose a secure backup.” Prelim. Resp. 46. “Rather, Owen discloses a system of registering and rebuilding a new device ‘[s]hould the user’s portable device 10 become lost, stolen, and/or damaged, [so that the user] can replace the old device 10 with a new one, and rebuild his private information to the new device.’” *Id.* (alterations in original). Patent Owner argues Owen “does not disclose how the data that [is] used for the registration and rebuilding

service is created and it certainly does not disclose a secure backup is made from a first device and then downloaded by a second device.” *Id.* at 46–47. “Rather, the disclosures that the Petitioner point to almost exclusively deal with the downloading by a second device.” *Id.* at 47. Patent Owner argues, “[n]otably, Petitioner points to the ‘initial registration’ of a device as a backup.” *Id.* Patent Owner concludes, and we agree, “it is unclear how or why [the skilled artisan] would understand device registration to be a backup—and . . . certainly not a *secure backup* as disclosed in the Patent.” *Id.* (emphasis added). We agree with Patent Owner that Petitioner does not explain sufficiently, let alone with particularity, how or why Owen’s secure internet portal 70 and device registration (alone or in combination with Shah) discloses or teaches the claimed “secure backup.”

For the foregoing reasons, and constrained by the Petition, we are not persuaded that the cited evidence adequately supports Petitioner’s contention that Shah, Owen, or the combination thereof teaches a “secure backup,” as recited in independent claims 1, 11, and 21.

4. Summary

For the foregoing reasons, we determine that Petitioner has not demonstrated a reasonable likelihood of success in establishing the unpatentability of claims 1, 11, or 21, or claims 2–4, 6–10, 12–15, and 17–20 which depend therefrom, as obvious over the combination of Shah and Owen.

III. DISCRETIONARY DENIAL UNDER 35 U.S.C. § 314(a)

Because we deny institution upon consideration of the merits of Petitioner's challenges, Patent Owner's arguments that we should exercise our discretion under 35 U.S.C. § 314(a) to deny institution are moot.

IV. CONCLUSION

Petitioner has not demonstrated a reasonable likelihood of prevailing with respect to any of claims 1–4, 6–15, and 17–21 of the '512 patent under either of its proffered Grounds 1 or 2 (Pet. 3–4).

V. ORDER

For the reasons given, it is:

ORDERED that, pursuant to 35 U.S.C. § 314(a), an *inter partes* review is not instituted for claims 1–4, 6–15, and 17–21 of U.S. Patent No. 10,929,512 B1.

IPR2022-00251
Patent 10,929,512 B1

For PETITIONER:

Marc J. Pensabene
Ryan Yagura
Nicholas J. Whilt
Caitlin P. Hogan
O'MELVENY & MYERS LLP
mpensabene@omm.com
ryagura@omm.com
nwhilt@omm.com
chogan@omm.com

For PATENT OWNER:

Richard A. Kamprath
George T. Fishback, Jr.
MCKOOL SMITH, P.C.
rkamprath@mckoolsmith.com
gfishback@mckoolsmith.com

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In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been filed in the U.S. District Court Eastern District of Texas, Marshall Division on the following

☐ Trademarks or ☒ Patents. (☐ the patent action involves 35 U.S.C. § 292.);

DOCKET NO. 2:21-cv-00238	DATE FILED 6/29/2021	U.S. DISTRICT COURT Eastern District of Texas, Marshall Division
PLAINTIFF RIGHTQUESTION, LLC		DEPENDANT SAMSUNG ELECTRONICS CO., LTD. and SAMSUNG ELECTRONICS AMERICA, INC.
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1 10,824,696	11/3/2020	RightQuestion, LLC
2 10,929,512	2/23/2021	RightQuestion, LLC
3		
4		
5		

In the above—entitled case, the following patent(s)/ trademark(s) have been included:

DATE INCLUDED	INCLUDED BY ☐ Amendment ☐ Answer ☐ Cross Bill ☐ Other Pleading	
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1		
2		
3		
4		
5		

In the above—entitled case, the following decision has been rendered or judgement issued:

DECISION/JUDGEMENT

CLERK	(BY) DEPUTY CLERK	DATE
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Copy 1—Upon initiation of action, mail this copy to Director Copy 3—Upon termination of action, mail this copy to Director
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APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/773,767	02/23/2021	10929512	MJAKP008C4	4416
21912	7590	02/03/2021		
VAN PELT, YI & JAMES LLP 10050 N. FOOTHILL BLVD #200 CUPERTINO, CA 95014				

ISSUE NOTIFICATION

The projected patent number and issue date are specified above.

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (application filed on or after May 29, 2000)

The Patent Term Adjustment is 0 day(s). Any patent to issue from the above-identified application will include an indication of the adjustment on the front page.

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Application Assistance Unit (AAU) of the Office of Data Management (ODM) at (571)-272-4200.

APPLICANT(s) (Please see PAIR WEB site <http://pair.uspto.gov> for additional applicants):

RightQuestion, LLC, Portola Valley, CA;
Bjorn Markus Jakobsson, Portola Valley, CA;

The United States represents the largest, most dynamic marketplace in the world and is an unparalleled location for business investment, innovation, and commercialization of new technologies. The USA offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to encourage and facilitate business investment. To learn more about why the USA is the best country in the world to develop technology, manufacture products, and grow your business, visit SelectUSA.gov.



United States Patent and Trademark Office

Office of the Chief Financial Officer

Document Code:WFEE

User :C46167

Sale Adjustment Accounting Date:01/25/2021

Effective Date	Sale Accounting Date	Sale Item Reference Number
01/07/2021	01/25/2021	16773767

Document Number	Fee Code	Fee Code Description	Amount Paid	Payment Method
I20211OD57299307	2801	RCE- 1ST REQUEST	\$680.00	DA



United States Patent and Trademark Office

Office of the Chief Financial Officer

Document Code:WFEE

User :C46167

Refund Accounting Date:01/25/2021

Effective Date	Sale Item Reference Number	Refund Total
01/07/2021	16773767	\$680.00

Document Number	Fee Code	Fee Code Description	Amount Paid	Payment Method	Account Number
I20211OD57299307	2801	RCE- 1ST REQUEST	\$680.00	DA	500685



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/773,767	01/27/2020	Bjorn Markus Jakobsson	MJAKP008C4	4416
21912	7590	01/22/2021	EXAMINER	
VAN PELT, YI & JAMES LLP 10050 N. FOOTHILL BLVD #200 CUPERTINO, CA 95014			STEINLE, ANDREW J	
			ART UNIT	PAPER NUMBER
			2497	
			NOTIFICATION DATE	DELIVERY MODE
			01/22/2021	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

usptocorrespondence@ip-patent.com

Corrected Notice of Allowability	Application No. 16/773,767	Applicant(s) Jakobsson, Bjorn Markus	
	Examiner ANDREW J STEINLE	Art Unit 2497	AIA (FITF) Status No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 01/007/2021.
☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2. ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

3. ☒ The allowed claim(s) is/are 1-21. As a result of the allowed claim(s), you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.

4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

Certified copies:

a) ☐ All b) ☐ Some *c) ☐ None of the:

1. ☐ Certified copies of the priority documents have been received.

2. ☐ Certified copies of the priority documents have been received in Application No. _____.

3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)	5. ☐ Examiner's Amendment/Comment
2. ☒ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____.	6. ☐ Examiner's Statement of Reasons for Allowance
3. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material _____.	7. ☐ Other _____.
4. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____.	

/ANDREW J STEINLE/ Primary Examiner, Art Unit 2497	
---	--

Doc code: IDS

Doc description: Information Disclosure Statement (IDS) Filed

PTO/SB/08a (02-18)

Approved for use through 11/30/2020. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		16773767	
	Filing Date		2020-01-27	
	First Named Inventor	Bjorn Markus Jakobsson		
	Art Unit	2497		
	Examiner Name	Andrew J. Steinle		
	Attorney Docket Number	MJAKP008C4		

U.S. PATENTS								
Examiner Initial*	Cite No	Patent Number	Kind Code ¹	Issue Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear		
	1	5010571		1991-04-23	KATZNELSON RON D			
	2	5499298		1996-03-12	NARASIMHALU ARCOT D			
	3	10872152		2020-12-22	MARTEL PIERRE OLIVIER			
If you wish to add additional U.S. Patent citation information please click the Add button.								
U.S. PATENT APPLICATION PUBLICATIONS								
Examiner Initial*	Cite No	Publication Number	Kind Code ¹	Publication Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear		
	1							
If you wish to add additional U.S. Published Application citation information please click the Add button.								
FOREIGN PATENT DOCUMENTS								
Examiner Initial*	Cite No	Foreign Document Number ³	Country Code ²	Kind Code ⁴	Publication Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear	T ⁵
	1							☐

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**
(Not for submission under 37 CFR 1.99)

Application Number	16773767
Filing Date	2020-01-27
First Named Inventor	Bjorn Markus Jakobsson
Art Unit	2497
Examiner Name	Andrew J. Steinle
Attorney Docket Number	MJAKP008C4

If you wish to add additional Foreign Patent Document citation information please click the Add button

NON-PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T ⁵
	1		☐

If you wish to add additional non-patent literature document citation information please click the Add button

EXAMINER SIGNATURE

Examiner Signature	/ANDREW J STEINLE/	Date Considered	01/13/2021
--------------------	--------------------	-----------------	------------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. ² Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). ³ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁴ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁵ Applicant is to place a check mark here if English language translation is attached.



United States Patent and Trademark Office

Office of the Chief Financial Officer

Document Code:WFEE

User :62534

Sale Accounting Date:01/13/2021

Sale Item Reference Number

16773767

Effective Date

01/07/2021

Document Number

I20211CH06289800

Fee Code

2806

Fee Code Description

SUBMISSION- INFORMATION
DISCLOSURE STMT

Amount Paid

\$130.00

Payment Method

Deposit Account

CERTIFICATION AND REQUEST FOR CONSIDERATION OF AN INFORMATION DISCLOSURE STATEMENT FILED AFTER PAYMENT OF THE ISSUE FEE UNDER THE QPIDS PILOT PROGRAM	
Non-Provisional Application Number: 16773767	Filing Date: 2020-01-27
First Named Inventor: Bjorn Markus Jakobsson	Title of Invention: AUTHENTICATION TRANSLATION
THE UNDERSIGNED HEREBY CERTIFIES AND REQUESTS THE FOLLOWING FOR THE ABOVE-IDENTIFIED APPLICATION. - Consideration is requested of the information disclosure statement (IDS) submitted herewith, which is being filed after payment of the issue fee. - Check the box next to the appropriate selection: ☐ Each item of information contained in the IDS was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the IDS. See 37 CFR 1.97(e)(1). OR ☒ No item of information contained in the IDS was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the IDS was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the IDS. See 37 CFR 1.97(e)(2). - Please charge the IDS fee set forth in 37 CFR 1.17(p) to Deposit Account No. <u>500685</u>. - A Petition to Withdraw from Issue After Payment of the Issue Fee (37 CFR 1.313(c)(2)), including the petition fee set forth in 37 CFR 1.17(h), is submitted herewith as a Web-based ePetition. WARNING: Do <u>not</u> submit the petition as a follow-on paper via EFS-Web. Submit the petition as a Web-based ePetition by signing on to EFS-Web as a registered user, selecting the radio button next to "Existing application/patent," and then selecting the radio button next to "ePetition (for automatic processing and immediate grant, if all petitions requirements are met)." Failure to use the Web-based ePetition interface will result in automatic entry of the RCE. - A request for continued examination (RCE) under 37 CFR 1.114 and the RCE fee under 37 CFR 1.17(e) are submitted herewith. - The RCE will be treated as a "conditional" RCE. In the event the examiner determines that any item of information contained in the IDS necessitates the reopening of prosecution in the application, the undersigned understands that (i) the RCE will be processed and treated as an RCE under 37 CFR 1.114 and therefore (ii) the IDS fee under 37 CFR 1.17(p) will be returned in accordance with 37 CFR 1.97(b)(4). In the event that no item of information in the IDS necessitates reopening prosecution, the undersigned understands that the RCE will not be processed and the RCE fee under 37 CFR 1.17(e) will be returned. - This certification and request is being filed as a Web-based ePetition and is not accompanied by an amendment to the application. Inclusion of an amendment will result in automatic entry of the RCE.	
Signature /Yeu-Ting George Cheng/	Date January 7, 2021
Name (Print/Typed) Yeu-Ting George Cheng	Practitioner Registration Number 69408 (If applicable)
Note: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required in accordance with 37 CFR 1.33 and 11.18. Please see 37 CFR 1.4(d) for the form of the signature. If necessary, submit multiple forms for more than one signature, see below.*	
☒ *Total of <u>1</u> forms are submitted.	

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Privacy Act Statement

The **Privacy Act of 1974 (P.L. 93-579)** requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (*i.e.*, GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Doc code: IDS

Doc description: Information Disclosure Statement (IDS) Filed

PTO/SB/08a (02-18)

Approved for use through 11/30/2020. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		16773767	
	Filing Date		2020-01-27	
	First Named Inventor	Bjorn Markus Jakobsson		
	Art Unit	2497		
	Examiner Name	Andrew J. Steinle		
	Attorney Docket Number	MIAKP008C4		

U.S. PATENTS						
Examiner Initial*	Cite No	Patent Number	Kind Code ¹	Issue Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear
	1	5010571		1991-04-23	KATZNELSON RON D	
	2	5499298		1996-03-12	NARASIMHALU ARCOT D	
	3	10872152		2020-12-22	MARTEL PIERRE OLIVIER	

If you wish to add additional U.S. Patent citation information please click the Add button.

U.S. PATENT APPLICATION PUBLICATIONS						
Examiner Initial*	Cite No	Publication Number	Kind Code ¹	Publication Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear
	1					

If you wish to add additional U.S. Published Application citation information please click the Add button.

FOREIGN PATENT DOCUMENTS								
Examiner Initial*	Cite No	Foreign Document Number ³	Country Code ²	Kind Code ⁴	Publication Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear	T ⁵
	1							☐

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		16773767
	Filing Date		2020-01-27
	First Named Inventor	Bjorn Markus Jakobsson	
	Art Unit	2497	
	Examiner Name	Andrew J. Steinle	
	Attorney Docket Number	MJAKP008C4	

If you wish to add additional Foreign Patent Document citation information please click the Add button			
NON-PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T ⁵
	1		☐
If you wish to add additional non-patent literature document citation information please click the Add button			
EXAMINER SIGNATURE			
Examiner Signature		Date Considered	
*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.			
¹ See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. ² Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). ³ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁴ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁵ Applicant is to place a check mark here if English language translation is attached.			

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**
(Not for submission under 37 CFR 1.99)

Application Number	16773767
Filing Date	2020-01-27
First Named Inventor	Bjorn Markus Jakobsson
Art Unit	2497
Examiner Name	Andrew J. Steinle
Attorney Docket Number	MJAKP008C4

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

☐ That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☒ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

☐ See attached certification statement.

☒ The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☐ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Yeu-Ting George Cheng/	Date (YYYY-MM-DD)	2021-01-07
Name/Print	Yeu-Ting George Cheng	Registration Number	69408

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

Privacy Act Statement

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The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Electronic Patent Application Fee Transmittal				
Application Number:		16773767		
Filing Date:		27-Jan-2020		
Title of Invention:		AUTHENTICATION TRANSLATION		
First Named Inventor/Applicant Name:		Bjorn Markus Jakobsson		
Filer:		Yeu-Ting George Cheng/Elaine Nguyen		
Attorney Docket Number:		MJAKP008C4		
Filed as Small Entity				
Filing Fees for Utility under 35 USC 111(a)				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
PETITION FEE-37CFR 1.17(H) (GROUP II)	2464	1	70	70
RCE- 1ST REQUEST	2801	1	680	680
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Miscellaneous:				
Total in USD (\$)				750



UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450
www.uspto.gov

Decision Date : January 7, 2021

In re Application of :

Bjorn Jakobsson

DECISION ON PETITION

UNDER CFR 1.313(c)(2)

Application No : 16773767

Filed : 27-Jan-2020

Attorney Docket No : MJAKP008C4

This is an electronic decision on the petition under 37 CFR 1.313(c)(2), filed January 7, 2021 , to withdraw the above-identified application from issue after payment of the issue fee.

The petition is **GRANTED**.

The above-identified application is withdrawn from issue for consideration of a submission under 37 CFR 1.114 (request for continued examination). See 37 CFR 1.313(c)(2).

Petitioner is advised that the issue fee paid in this application cannot be refunded. If, however, this application is again allowed, petitioner may request that it be applied towards the issue fee required by the new Notice of Allowance.

Telephone inquiries concerning this decision should be directed to the Patent Electronic Business Center (EBC) at 866-217-9197.

This application file is being referred to Technology Center AU 2497 for processing of the request for continuing examination under 37 CFR 1.114 .

Office of Petitions

Electronic Acknowledgement Receipt	
EFS ID:	41588129
Application Number:	16773767
International Application Number:	
Confirmation Number:	4416
Title of Invention:	AUTHENTICATION TRANSLATION
First Named Inventor/Applicant Name:	Bjorn Markus Jakobsson
Customer Number:	21912
Filer:	Yeu-Ting George Cheng/Elaine Nguyen
Filer Authorized By:	Yeu-Ting George Cheng
Attorney Docket Number:	MJAKP008C4
Receipt Date:	07-JAN-2021
Filing Date:	27-JAN-2020
Time Stamp:	19:47:51
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	\$750
RAM confirmation Number	E202117J47470105
Deposit Account	500685
Authorized User	Elaine Nguyen
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows: 37 CFR 1.16 (National application filing, search, and examination fees) 37 CFR 1.17 (Patent application and reexamination processing fees)	

37 CFR 1.19 (Document supply fees)					
37 CFR 1.20 (Post Issuance fees)					
37 CFR 1.21 (Miscellaneous fees and charges)					
File Listing:					
Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Petition automatically granted by EFS	petition-request.pdf	31543	no	2
			2420ca14e9d0411f2260b7f41f576f0dca94d12f		
Warnings:					
Information:					
2	Quick Path Information Disclosure Statement	MJAKP008C4_IDS_03_QPIDS.pdf	166836	no	2
			635ff1baf2847fec6ad082882b9cbe48101b8efb		
Warnings:					
Information:					
3	Request for Continued Examination (RCE)	MJAKP008C4_IDS_03_RCE.pdf	1322856	no	3
			cb2ae246b3e0eba53bce319970757b510a42d379		
Warnings:					
Information:					
4	Quick Path Information Disclosure Statement	MJAKP008C4_IDS_03_SB08_.pdf	71157	no	4
			4f7b5b5c5fd25480459fae40f0fa35be5161b5b6		
Warnings:					
Information:					
5	Fee Worksheet (SB06)	fee-info.pdf	32075	no	2
			7a4a9903cf07e2cc89cdcdad8dc49fd18bc2cb779		
Warnings:					
Information:					
Total Files Size (in bytes):			1624467		

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

Doc Code: PET.AUTO Document Description: Petition automatically granted by EFS-Web		PTO/SB/140 U.S. Patent and Trademark Office Department of Commerce
Electronic Petition Request	PETITION TO WITHDRAW AN APPLICATION FROM ISSUE AFTER PAYMENT OF THE ISSUE FEE UNDER 37 CFR 1.313(c)	
Application Number	16773767	
Filing Date	27-Jan-2020	
First Named Inventor	Bjorn Jakobsson	
Art Unit	2497	
Examiner Name	ANDREW STEINLE	
Attorney Docket Number	MIAKP008C4	
Title	AUTHENTICATION TRANSLATION	
An application may be withdrawn from issue for further action upon petition by the applicant. To request that the Office withdraw an application from issue, applicant must file a petition under this section including the fee set forth in § 1.17(h) and a showing of good and sufficient reasons why withdrawal of the application from issue is necessary. APPLICANT HEREBY PETITIONS TO WITHDRAW THIS APPLICATION FROM ISSUE UNDER 37 CFR 1.313(c). A grantable petition requires the following items: (1) Petition fee; and (2) One of the following reasons: (a) Unpatentability of one or more claims, which must be accompanied by an unequivocal statement that one or more claims are unpatentable, an amendment to such claim or claims, and an explanation as to how the amendment causes such claim or claims to be patentable; (b) Consideration of a request for continued examination in compliance with § 1.114 (for a utility or plant application only); or (c) Express abandonment of the application. Such express abandonment may be in favor of a continuing application, but not a CPA under 37 CFR 1.53(d).		
Petition Fee		
☒ Small Entity		
☐ Micro Entity		
☐ Regular Undiscounted		
Reason for withdrawal from issue		

☐ One or more claims are unpatentable ☒ Consideration of a request for continued examination (RCE) (List of Required Documents and Fees) ☐ Applicant hereby expressly abandons the instant application (any attorney/agent signing for this reason must have power of attorney pursuant to 37 CFR 1.32(b)).	
RCE request, submission, and fee. ☐ I certify, in accordance with 37 CFR 1.4(d)(4) that : ☐ The RCE request ,submission, and fee have already been filed in the above-identified application on ☒ Are attached.	
THIS PORTION MUST BE COMPLETED BY THE SIGNATORY OR SIGNATORIES I certify, in accordance with 37 CFR 1.4(d)(4) that I am: ☒ An attorney or agent registered to practice before the Patent and Trademark Office who has been given power of attorney in this application. ☐ An attorney or agent registered to practice before the Patent and Trademark Office, acting in a representative capacity. ☐ A sole inventor ☐ A joint inventor; I certify that I am authorized to sign this submission on behalf of all of the inventors as evidenced by the power of attorney in the application ☐ A joint inventor; all of whom are signing this e-petition	
Signature	/Yeu-Ting George Cheng/
Name	Yeu-Ting George Cheng
Registration Number	69408



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/773,767	01/26/2021	10902097	MJAKP008C4	4416

21912 7590 01/06/2021
VAN PELT, YI & JAMES LLP
10050 N. FOOTHILL BLVD #200
CUPERTINO, CA 95014

ISSUE NOTIFICATION

The projected patent number and issue date are specified above.

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (application filed on or after May 29, 2000)

The Patent Term Adjustment is 0 day(s). Any patent to issue from the above-identified application will include an indication of the adjustment on the front page.

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Application Assistance Unit (AAU) of the Office of Data Management (ODM) at (571)-272-4200.

APPLICANT(s) (Please see PAIR WEB site <http://pair.uspto.gov> for additional applicants):

RightQuestion, LLC, Portola Valley, CA;
Bjorn Markus Jakobsson, Portola Valley, CA;

The United States represents the largest, most dynamic marketplace in the world and is an unparalleled location for business investment, innovation, and commercialization of new technologies. The USA offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to encourage and facilitate business investment. To learn more about why the USA is the best country in the world to develop technology, manufacture products, and grow your business, visit SelectUSA.gov.



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/773,767	01/27/2020	Bjorn Markus Jakobsson	MJAKP008C4	4416
21912 7590 12/28/2020 VAN PELT, YI & JAMES LLP 10050 N. FOOTHILL BLVD #200 CUPERTINO, CA 95014			EXAMINER STEINLE, ANDREW J	
			ART UNIT 2497	PAPER NUMBER
			NOTIFICATION DATE 12/28/2020	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

usptocorrespondence@ip-patent.com

Response to Rule 312 Communication	Application No. 16/773,767	Applicant(s) Jakobsson, Bjorn Markus	
	Examiner ANDREW J STEINLE	Art Unit 2497	AIA (FITF) Status No
-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address -- 1. ☒ The amendment filed on <u>17 December 2020</u> under 37 CFR 1.312 has been considered, and has been: a) ☐ entered. b) ☒ entered as directed to matters of form not affecting the scope of the invention. c) ☐ disapproved because the amendment was filed after the payment of the issue fee. Any amendment filed after the date the issue fee is paid must be accompanied by a petition under 37 CFR 1.313(c)(1) and the required fee to withdraw the application from issue. d) ☐ disapproved. See explanation below. e) ☐ entered in part. See explanation below. _____			
/ANDREW J STEINLE/ Primary Examiner, Art Unit 2497			

OK TO ENTER: /A.J.S/

12/20/2020

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No.:	16/773,767	Examiner:	Andrew J. Steinle
Filed:	January 27, 2020	Art Unit:	2497
Confirmation No.:	4416	Docket No.:	MJAKP008C4
First Inventor:	Bjorn Markus Jakobsson		
Title:	AUTHENTICATION TRANSLATION		

**AMENDMENT AFTER ALLOWANCE, BEFORE/WITH PAYMENT OF
ISSUE FEE PURSUANT TO 37 C.F.R. §1.312**

Mail Stop Issue Fee
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Please amend the above-identified application as follows:

Electronic Patent Application Fee Transmittal				
Application Number:		16773767		
Filing Date:		27-Jan-2020		
Title of Invention:		AUTHENTICATION TRANSLATION		
First Named Inventor/Applicant Name:		Bjorn Markus Jakobsson		
Filer:		Yeu-Ting George Cheng/Elaine Nguyen		
Attorney Docket Number:		MJAKP008C4		
Filed as Small Entity				
Filing Fees for Utility under 35 USC 111(a)				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
UTILITY APPL ISSUE FEE	2501	1	600	600

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Extension-of-Time:				
Miscellaneous:				
Total in USD (\$)				600

Electronic Acknowledgement Receipt	
EFS ID:	41401728
Application Number:	16773767
International Application Number:	
Confirmation Number:	4416
Title of Invention:	AUTHENTICATION TRANSLATION
First Named Inventor/Applicant Name:	Bjorn Markus Jakobsson
Customer Number:	21912
Filer:	Yeu-Ting George Cheng/Elaine Nguyen
Filer Authorized By:	Yeu-Ting George Cheng
Attorney Docket Number:	MJAKP008C4
Receipt Date:	17-DEC-2020
Filing Date:	27-JAN-2020
Time Stamp:	15:44:06
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	\$ 600
RAM confirmation Number	E2020BGF44503058
Deposit Account	500685
Authorized User	Elaine Nguyen
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows: 37 CFR 1.16 (National application filing, search, and examination fees) 37 CFR 1.17 (Patent application and reexamination processing fees)	

37 CFR 1.19 (Document supply fees)
 37 CFR 1.20 (Post Issuance fees)
 37 CFR 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Issue Fee Payment (PTO-85B)	MJAKP008C4_IF_Transmittal.pdf	111447	no	1
			4ad934240b10cc3414bc3b225fd56f0992c386a3		

Warnings:

Information:

2	Amendment after Notice of Allowance (Rule 312)	MJAKP008C4_AMD_312.pdf	101513	no	7
			a594cec38d4400d3b5b90e60c7dc4fad68baf3		

Warnings:

Information:

3	Fee Worksheet (SB06)	fee-info.pdf	30514	no	2
			ee36ca6033a00e17d79fde940b7302e9757fadf		

Warnings:

Information:

Total Files Size (in bytes): 243474

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), by mail or fax, or via EFS-Web.

By mail, send to: Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

By fax, send to: (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

21912 7590 10/21/2020
VAN PELT, YI & JAMES LLP
10050 N. FOOTHILL BLVD #200
CUPERTINO, CA 95014

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being transmitted to the USPTO via EFS-Web or by facsimile to (571) 273-2885, on the date below.

(Typed or printed name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/773,767	01/27/2020	Bjorn Markus Jakobsson	MJAKP008C4	4416

TITLE OF INVENTION: AUTHENTICATION TRANSLATION

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	\$600	\$0.00	\$0.00	\$600	01/21/2021

EXAMINER	ART UNIT	CLASS-SUBCLASS
STEINLE, ANDREW J	2497	726-001000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.

☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-09 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

(1) The names of up to 3 registered patent attorneys or agents OR, alternatively,

(2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 Van Pelt, Yi & James LLP

2

3

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document must have been previously recorded, or filed for recordation, as set forth in 37 CFR 3.11 and 37 CFR 3.81(a). Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

RightQuestion, LLC

Portola Valley, CA

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☒ Corporation or other private group entity ☐ Government

4a. Fees submitted: ☒ Issue Fee ☐ Publication Fee (if required) ☐ Advance Order - # of Copies

4b. Method of Payment: (Please first reapply any previously paid fee shown above)

☒ Electronic Payment via EFS-Web ☐ Enclosed check ☐ Non-electronic payment by credit card (Attach form PTO-2038)

☒ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment to Deposit Account No. 50-0685

5. Change in Entity Status (from status indicated above)

☐ Applicant certifying micro entity status. See 37 CFR 1.29

☐ Applicant asserting small entity status. See 37 CFR 1.27

☐ Applicant changing to regular undiscounted fee status.

NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.

NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.

NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature /Yeu-Ting George Cheng/

Date December 17, 2020

Typed or printed name Yeu-Ting George Cheng

Registration No. 69408

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No.:	16/773,767	Examiner:	Andrew J. Steinle
Filed:	January 27, 2020	Art Unit:	2497
Confirmation No.:	4416	Docket No.:	MJAKP008C4
First Inventor:	Bjorn Markus Jakobsson		
Title:	AUTHENTICATION TRANSLATION		

**AMENDMENT AFTER ALLOWANCE, BEFORE/WITH PAYMENT OF
ISSUE FEE PURSUANT TO 37 C.F.R. §1.312**

Mail Stop Issue Fee
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Please amend the above-identified application as follows:

IN THE CLAIMS

Please amend the claims as follows:

1. (Currently amended) A system, comprising:
 - a first processor of a first device, wherein the first processor is configured to:
 - based at least in part on a request associated with a user to access an external resource,
 - establish a secure connection with the external resource; and
 - communicate with a second processor using a restricted interface, wherein the second processor is configured to:
 - receive a biometric input from a sensor, wherein the biometric input corresponds to at least one of a fingerprint, a feature usable for facial recognition, a voiceprint, a feature usable for a retina scan, [[and]] or a typing feature; and
 - access a record stored in a secure storage, wherein the record is associated at least with the external resource;
 - retrieve, from the record, at least one of a password, a cookie, [[and]] or a cryptographic key;
 - perform a cryptographic operation;
 - in response to determining that there is a match between the biometric input and a stored biometric template accessed by the second processor, facilitate a login of the user to the external resource at least in part by transmitting, via the established connection, output based at least in part on the at least one of the password, the cryptographic key, [[and]] or the cookie retrieved from the record, and wherein the user is logged in to the external resource based at least in part on the output; and
 - perform a secure backup of the record to a storage service, wherein a second device associated with the user is registered with the storage service, and wherein the record is downloaded from the storage service by the second device; and
 - a memory coupled to the first processor and configured to provide the first processor with instructions.
2. (Original) The system recited in claim 1, wherein the storage service comprises a cloud storage service.

3. (Currently amended) The system recited in claim 1 wherein the second device is registered with the storage service at least in part by:
- connecting to the storage service; and
 - providing at least one of a user identifier [[and]] or a credential to the storage service, wherein the user identifier comprises at least one of a username [[and]] or an account number.
4. (Original) The system recited in claim 1, wherein the record downloaded by the second device is encrypted.
5. (Original) The system recited in claim 4, wherein the second device is configured to decrypt the downloaded record and store the decrypted record to a secure storage associated with the second device.
6. (Original) The system recited in claim 5, wherein the downloaded record is decrypted by the second device using a decryption key that is generated based at least in part on information associated with the user.
7. (Original) The system recited in claim 5, wherein the downloaded record is decrypted by the second device using a decryption key that is generated based at least in part on biometric data.
8. (Original) The system recited in claim 5, wherein the downloaded record is decrypted by the second device using a decryption key generated using one or more features extracted from fingerprinting.
9. (Original) The system recited in claim 4, wherein the encrypted record is stored to an insecure storage associated with the second device.
10. (Original) The system recited in claim 1, wherein performing the cryptographic operation comprises decrypting the record.
11. (Currently amended) A method, comprising:
- based at least in part on a request associated with a user to access an external resource,
 - establishing, by a first processor of a first device, a secure connection with the external resource;
 - and

communicating with a second processor using a restricted interface, wherein the second processor is configured to:

receive a biometric input from a sensor, wherein the biometric input corresponds to at least one of a fingerprint, a feature usable for facial recognition, a voiceprint, a feature usable for a retina scan, [[and]] or a typing feature; and

access a record stored in a secure storage, wherein the record is associated at least with the external resource;

retrieve, from the record, at least one of a password, a cookie, [[and]] or a cryptographic key;

perform a cryptographic operation;

in response to determining that there is a match between the biometric input and a stored biometric template accessed by the second processor, facilitate a login of the user to the external resource at least in part by transmitting, via the established connection, output based at least in part on the at least one of the password, the cryptographic key, [[and]] or the cookie retrieved from the record, and wherein the user is logged in to the external resource based at least in part on the output; and

perform a secure backup of the record to a storage service, wherein a second device associated with the user is registered with the storage service, and wherein the record is downloaded from the storage service by the second device.

12. (Previously presented) The method of claim 11, wherein the storage service comprises a cloud storage service.

13. (Currently amended) The method of claim 11, wherein the second device is registered with the storage service at least in part by:

connecting to the storage service; and

providing at least one of a user identifier [[and]] or a credential to the storage service, wherein the user identifier comprises at least one of a username [[and]] or an account number.

14. (Previously presented) The method of claim 11, wherein the record downloaded by the second device is encrypted.

15. (Previously presented) The method of claim 14, wherein the second device is configured to decrypt the downloaded record and store the decrypted record to a secure storage associated with the second device.
16. (Previously presented) The method of claim 15, wherein the downloaded record is decrypted by the second device using a decryption key that is generated based at least in part on information associated with the user.
17. (Previously presented) The method of claim 15, wherein the downloaded record is decrypted by the second device using a decryption key that is generated based at least in part on biometric data.
18. (Previously presented) The method of claim 15, wherein the downloaded record is decrypted by the second device using a decryption key generated using one or more features extracted from fingerprinting.
19. (Previously presented) The method of claim 14, wherein the encrypted record is stored to an insecure storage associated with the second device.
20. (Previously presented) The method of claim 11, wherein performing the cryptographic operation comprises decrypting the record.
21. (Currently amended) A computer program product embodied in a non-transitory computer readable storage medium and comprising computer instructions for:
- based at least in part on a request associated with a user to access an external resource, establishing, by a first processor of a first device, a secure connection with the external resource; and
 - communicating with a second processor using a restricted interface, wherein the second processor is configured to:
 - receive a biometric input from a sensor, wherein the biometric input corresponds to at least one of a fingerprint, a feature usable for facial recognition, a voiceprint, a feature usable for a retina scan, [[and]] or a typing feature; and
 - access a record stored in a secure storage, wherein the record is associated at least with the external resource;

retrieve, from the record, at least one of a password, a cookie, ~~[[and]]~~ or a cryptographic key;

perform a cryptographic operation;

in response to determining that there is a match between the biometric input and a stored biometric template accessed by the second processor, facilitate a login of the user to the external resource at least in part by transmitting, via the established connection, output based at least in part on the at least one of the password, the cryptographic key, ~~[[and]]~~ or the cookie retrieved from the record, and wherein the user is logged in to the external resource based at least in part on the output; and

perform a secure backup of the record to a storage service, wherein a second device associated with the user is registered with the storage service, and wherein the record is downloaded from the storage service by the second device.

REMARKS

A Notice of Allowance has been received in the above-identified application but the issue fee has not yet been paid. Applicant hereby respectfully requests that on recommendation of the Examiner and approval by the Commissioner that this amendment be entered.

Reconsideration of the application and allowance of all claims are respectfully requested based on the preceding remarks. If at any time the Examiner believes that an interview would be helpful, please contact the undersigned.

Respectfully submitted,

Dated: December 17, 2020

/Yeu-Ting George Cheng/

Yeu-Ting George Cheng
Registration No. 69408
408-207-4765

VAN PELT, YI & JAMES LLP
10050 N. Foothill Blvd., Suite 200
Cupertino, CA 95014
Fax 408-973-2595



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NOTICE OF ALLOWANCE AND FEE(S) DUE

21912 7590 10/21/2020
VAN PELT, YI & JAMES LLP
10050 N. FOOTHILL BLVD #200
CUPERTINO, CA 95014

EXAMINER

STEINLE, ANDREW J

ART UNIT

PAPER NUMBER

2497

DATE MAILED: 10/21/2020

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/773,767	01/27/2020	Bjorn Markus Jakobsson	MJAKP008C4	4416

TITLE OF INVENTION: AUTHENTICATION TRANSLATION

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	\$600	\$0.00	\$0.00	\$600	01/21/2021

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the ENTITY STATUS shown above. If the ENTITY STATUS is shown as SMALL or MICRO, verify whether entitlement to that entity status still applies.

If the ENTITY STATUS is the same as shown above, pay the TOTAL FEE(S) DUE shown above.

If the ENTITY STATUS is changed from that shown above, on PART B - FEE(S) TRANSMITTAL, complete section number 5 titled "Change in Entity Status (from status indicated above)".

For purposes of this notice, small entity fees are 1/2 the amount of undiscounted fees, and micro entity fees are 1/2 the amount of small entity fees.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Maintenance fees are due in utility patents issuing on applications filed on or after Dec. 12, 1980. It is patentee's responsibility to ensure timely payment of maintenance fees when due. More information is available at www.uspto.gov/PatentMaintenanceFees.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), by mail or fax, or via EFS-Web.

By mail, send to: Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

By fax, send to: (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

21912 7590 10/21/2020
VAN PELT, YI & JAMES LLP
10050 N. FOOTHILL BLVD #200
CUPERTINO, CA 95014

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being transmitted to the USPTO via EFS-Web or by facsimile to (571) 273-2885, on the date below.

(Typed or printed name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/773,767	01/27/2020	Bjorn Markus Jakobsson	MJAKP008C4	4416

TITLE OF INVENTION: AUTHENTICATION TRANSLATION

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	\$600	\$0.00	\$0.00	\$600	01/21/2021

EXAMINER	ART UNIT	CLASS-SUBCLASS
STEINLE, ANDREW J	2497	726-001000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
- ☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-09 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

- (1) The names of up to 3 registered patent attorneys or agents OR, alternatively, 1 _____
- (2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed. 2 _____
- 3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document must have been previously recorded, or filed for recordation, as set forth in 37 CFR 3.11 and 37 CFR 3.81(a). Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. Fees submitted: ☐ Issue Fee ☐ Publication Fee (if required) ☐ Advance Order - # of Copies _____

4b. Method of Payment: (Please first reapply any previously paid fee shown above)

- ☐ Electronic Payment via EFS-Web ☐ Enclosed check ☐ Non-electronic payment by credit card (Attach form PTO-2038)
- ☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment to Deposit Account No. _____

5. Change in Entity Status (from status indicated above)

- ☐ Applicant certifying micro entity status. See 37 CFR 1.29
- ☐ Applicant asserting small entity status. See 37 CFR 1.27
- ☐ Applicant changing to regular undiscounted fee status.

NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.

NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.

NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature _____ Date _____

Typed or printed name _____ Registration No. _____



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/773,767	01/27/2020	Bjorn Markus Jakobsson	MJAKP008C4	4416
21912 7590 10/21/2020 VAN PELT, YI & JAMES LLP 10050 N. FOOTHILL BLVD #200 CUPERTINO, CA 95014			EXAMINER STEINLE, ANDREW J	
			ART UNIT 2497	PAPER NUMBER
DATE MAILED: 10/21/2020				

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (Applications filed on or after May 29, 2000)

The Office has discontinued providing a Patent Term Adjustment (PTA) calculation with the Notice of Allowance.

Section 1(h)(2) of the AIA Technical Corrections Act amended 35 U.S.C. 154(b)(3)(B)(i) to eliminate the requirement that the Office provide a patent term adjustment determination with the notice of allowance. See Revisions to Patent Term Adjustment, 78 Fed. Reg. 19416, 19417 (Apr. 1, 2013). Therefore, the Office is no longer providing an initial patent term adjustment determination with the notice of allowance. The Office will continue to provide a patent term adjustment determination with the Issue Notification Letter that is mailed to applicant approximately three weeks prior to the issue date of the patent, and will include the patent term adjustment on the patent. Any request for reconsideration of the patent term adjustment determination (or reinstatement of patent term adjustment) should follow the process outlined in 37 CFR 1.705.

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

OMB Clearance and PRA Burden Statement for PTOL-85 Part B

The Paperwork Reduction Act (PRA) of 1995 requires Federal agencies to obtain Office of Management and Budget approval before requesting most types of information from the public. When OMB approves an agency request to collect information from the public, OMB (i) provides a valid OMB Control Number and expiration date for the agency to display on the instrument that will be used to collect the information and (ii) requires the agency to inform the public about the OMB Control Number's legal significance in accordance with 5 CFR 1320.5(b).

The information collected by PTOL-85 Part B is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.** Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Notice of Allowability	Application No. 16/773,767	Applicant(s) Jakobsson, Bjorn Markus	
	Examiner ANDREW J STEINLE	Art Unit 2497	AIA (FITF) Status No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 1/20/2020.
☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2. ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

3. ☒ The allowed claim(s) is/are 1-21 . As a result of the allowed claim(s), you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.

4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

Certified copies:

a) ☐ All b) ☐ Some *c) ☐ None of the:

1. ☐ Certified copies of the priority documents have been received.

2. ☐ Certified copies of the priority documents have been received in Application No. _____.

3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)	5. ☒ Examiner's Amendment/Comment
2. ☒ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____.	6. ☒ Examiner's Statement of Reasons for Allowance
3. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material _____.	7. ☐ Other _____.
4. ☒ Interview Summary (PTO-413), Paper No./Mail Date. <u>9/23/2020</u> .	

/ANDREW J STEINLE/ Primary Examiner, Art Unit 2497	
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DETAILED ACTION

Notice of Pre-AIA or AIA Status

The present application is being examined under the pre-AIA first to invent provisions.

Terminal Disclaimer

The terminal disclaimers filed on 9/23/2020 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of **Application No. 16/563,715, US Patent 10,521,568, US Patent 10,360,351, and US Patent 9,294,452** have been reviewed and are accepted. The terminal disclaimers have been recorded.

Information Disclosure Statement

The information disclosure statements (IDS) submitted on 1/27/2020 and 8/26/2020 are in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statements are being considered by the examiner.

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in an emailed examiner's amendment from Yeu-Ting George Cheng (Reg. No. 69,408) received on 9/23/2020.

The application has been amended as follows:

Please replace Claim 12 with the following:

12. (Currently amended) The method of claim 11 system recited in claim 1, wherein the storage service comprises a cloud storage service.

Please replace Claim 13 with the following:

13. (Currently amended) The method of claim 11, ~~system recited in claim 1~~ wherein the second device is registered with the storage service at least in part by:
connecting to the storage service; and
providing at least one of a user identifier and a credential to the storage service, wherein the user identifier comprises at least one of a username and an account number.

Please replace Claim 14 with the following:

14. (Currently amended) The method of claim 11, ~~system recited in claim 1~~, wherein the record downloaded by the second device is encrypted.

Please replace Claim 15 with the following:

15. (Currently amended) The method of claim 14, ~~system recited in claim 4~~, wherein the second device is configured to decrypt the downloaded record and store the decrypted record to a secure storage associated with the second device.

Please replace Claim 16 with the following:

16. (Currently amended) The method of claim 15, ~~system recited in claim 5~~, wherein the downloaded record is decrypted by the second device using a decryption key that is generated based at least in part on information associated with the user.

Please replace Claim 17 with the following:

17. (Currently amended) The method of claim 15 ~~system recited in claim 5~~, wherein the downloaded record is decrypted by the second device using a decryption key that is generated based at least in part on biometric data.

Please replace Claim 18 with the following:

18. (Currently amended) The method of claim 15 ~~system recited in claim 5~~, wherein the downloaded record is decrypted by the second device using a decryption key generated using one or more features extracted from fingerprinting.

Please replace Claim 19 with the following:

19. (Currently amended) The method of claim 14 ~~system recited in claim 4~~, wherein the encrypted record is stored to an insecure storage associated with the second device.

Please replace Claim 20 with the following:

20. (Currently amended) The method of claim 11 ~~system recited in claim 1~~, wherein performing the cryptographic operation comprises decrypting the record.

Allowable Subject Matter

Claims 1-21 are allowed.

The following is an examiner's statement of reasons for allowance:

Regarding Claims 1, 11, and 21, although the closest prior art of record (such as Kumar et al. (US 8549300 B1), Beigi et al., (US 20120110341 A1) and Woods et al (US 6691232 B1)) teaches ***A system, comprising: a first processor of a first device, wherein the first processor is configured to: based at least in part on a request***

associated with a user to access an external resource, establish a secure connection with the external resource; and communicate with a second processor using a restricted interface, wherein the second processor is configured to: receive a biometric input from a sensor, wherein the biometric input corresponds to at least one of a fingerprint, a feature usable for facial recognition, a voiceprint, a feature usable for a retina scan, and a typing feature; and access a record stored in a secure storage, wherein the record is associated at least with the external resource; retrieve, from the record, at least one of a password, a cookie, and a cryptographic key; perform a cryptographic operation; and a memory coupled to the first processor and configured to provide the first processor with instructions.

However, none of the prior art, alone or in combination teaches ***in response to determining that there is a match between the biometric input and a stored biometric template accessed by the second processor, facilitate a login of the user to the external resource at least in part by transmitting, via the established connection, output based at least in part on the at least one of the password, the cryptographic key, and the cookie retrieved from the record, and wherein the user is logged in to the external resource based at least in part on the output; and perform a secure backup of the record to a storage service, wherein a second device associated with the user is registered with the storage service, and wherein the record is downloaded from the storage service by the second device*** in view of other limitations of the independent claims.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANDREW J STEINLE whose telephone number is (571)272-9923. The examiner can normally be reached on M-F 10am-6pm CT.

Examiner interviews are available via telephone, in-person, and video conferencing using a USPTO supplied web-based collaboration tool. To schedule an interview, applicant is encouraged to use the USPTO Automated Interview Request (AIR) at <http://www.uspto.gov/interviewpractice>.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eleni Shiferaw can be reached on (571) 272-3867. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <https://ppair-my.uspto.gov/pair/PrivatePair>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ANDREW J STEINLE/
Primary Examiner, Art Unit 2497

<i>Examiner-Initiated Interview Summary</i>	Application No. 16/773,767	Applicant(s) Jakobsson, Bjorn Markus		
	Examiner ANDREW J STEINLE	Art Unit 2497	AIA (First Inventor to File) Status No	Page 1 of 2

All participants (applicant, applicants representative, PTO personnel):

1. ANDREW J STEINLE (Primary Examiner);
Telephonic

2. Yeu-Ting George Cheng (Attorney of Record: Reg. No. 69,408); Telephonic

Date of Interview: 23 September 2020

Claims Discussed: 1-20

Amendment proposed: Examiner proposed amendments as some of the dependent claims are duplicates and seem to be the wrong statutory class.

Issues Discussed:

Proposed Amendments:
Examiner called the attorney to discuss dependent Claims 12-20 follow independent Claim 11 however, Claim 11 is a method and Claims 12-20 are system claims depending on Claim 1. This also means Claims 12-20 are exact duplicates of Claims 2-10. The attorney stated that an examiner's amendment would be emailed as dependent Claims 12-20 should be method claims depending on Claim 11. Examiner also requested a terminal disclaimer be filed for the parent cases as this case would be in condition for allowance subsequent to the receipt of the examiner's amendment.

/ANDREW J STEINLE/ Primary Examiner, Art Unit 2497	
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Applicant is reminded that a complete written statement as to the substance of the interview must be made of record in the application file. It is the applicants responsibility to provide the written statement, unless the interview was initiated by the Examiner and the Examiner has indicated that a written summary will be provided. See MPEP 713.04

Please further see:

MPEP 713.04

Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews, paragraph (b)

37 CFR § 1.2 Business to be transacted in writing

U.S. Patent and Trademark Office
PTOL-413/413b (Rev. 01/01/2015)

Interview Summary

Paper No. 20200923

Applicant recordation instructions: It is not necessary for applicant to provide a separate record of the substance of interview

Examiner recordation instructions: Examiners must summarize the substance of any interview of record. A complete and proper recordation of the substance of an interview should include the items listed in MPEP 713.04 for complete and proper recordation including the identification of the general thrust of each argument or issue discussed, a general indication of any other pertinent matters discussed regarding patentability and the general results or outcome of the interview, to include an indication as to whether or not agreement was reached on the issues raised.

<i>Notice of References Cited</i>	Application/Control No. 16/773,767		Applicant(s)/Patent Under Reexamination Jakobsson, Bjorn Markus	
	Examiner ANDREW J STEINLE		Art Unit 2497	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	CPC Classification	US Classification
*	A	US-8549300-B1	10-2013	Kumar; Kartik	H04L9/3263	713/175
*	B	US-20120110341-A1	05-2012	Beigi; Homayoon	H04L9/3268	713/186
*	C	US-6691232-B1	02-2004	Wood; David L.	H04L63/0815	726/6
	D					
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FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	CPC Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

U.S. Patent and Trademark Office
PTO-892 (Rev. 01-2001)

Notice of References Cited

Part of Paper No. 20200923

<i>Index of Claims</i> 	Application/Control No. 16/773,767	Applicant(s)/Patent Under Reexamination Jakobsson, Bjorn Markus
	Examiner ANDREW J STEINLE	Art Unit 2497

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

CLAIMS									
☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☒ T.D. ☐ R.1.47									
CLAIM			DATE						
Final	Original	09/23/2020							
1	1	=							
2	2	=							
3	3	=							
4	4	=							
6	5	=							
7	6	=							
8	7	=							
9	8	=							
5	9	=							
10	10	=							
11	11	=							
12	12	=							
13	13	=							
14	14	=							
15	15	=							
17	16	=							
18	17	=							
19	18	=							
16	19	=							
20	20	=							
21	21	=							

Issue Classification 	Application/Control No. 16/773,767	Applicant(s)/Patent Under Reexamination Jakobsson, Bjorn Markus
	Examiner ANDREW J STEINLE	Art Unit 2497

CPC						
Symbol					Type	Version
G06F	/	21	/	10	F	2013-01-01
H04L	/	63	/	20	I	2013-01-01
G06F	/	21	/	32	I	2013-01-01
G06F	/	21	/	121	I	2013-01-01
H04L	/	63	/	10	I	2013-01-01
G06F	/	21	/	128	I	2013-01-01
G06F	/	21	/	31	I	2013-01-01
H04L	/	63	/	0861	I	2013-01-01
H04L	/	63	/	083	I	2013-01-01
G06F	/	21	/	44	I	2013-01-01

CPC Combination Sets					
Symbol				Type	Version
	/		/		

NONE (Assistant Examiner) _____ (Date) _____		Total Claims Allowed: 21	
/ANDREW J STEINLE/ Primary Examiner, Art Unit 2497 (Primary Examiner) _____ (Date) 23 September 2020		O.G. Print Claim(s) 1	O.G. Print Figure 1

U.S. Patent and Trademark Office

Part of Paper No.: 20200923

Issue Classification 	Application/Control No. 16/773,767	Applicant(s)/Patent Under Reexamination Jakobsson, Bjorn Markus
	Examiner ANDREW J STEINLE	Art Unit 2497

INTERNATIONAL CLASSIFICATION			
CLAIMED			
G06F		21	00

NON-CLAIMED			

US ORIGINAL CLASSIFICATION	
CLASS	SUBCLASS

CROSS REFERENCES(S)						
CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)					

NONE		Total Claims Allowed:	
(Assistant Examiner)	(Date)	21	
/ANDREW J STEINLE/ Primary Examiner, Art Unit 2497	23 September 2020	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	1

U.S. Patent and Trademark Office

Part of Paper No.: 20200923

Issue Classification 	Application/Control No. 16/773,767	Applicant(s)/Patent Under Reexamination Jakobsson, Bjorn Markus
	Examiner ANDREW J STEINLE	Art Unit 2497

☐ Claims renumbered in the same order as presented by applicant
 ☐ CPA
 ☒ T.D.
 ☐ R.1.47

CLAIMS															
Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original
1	1	10	10	16	19										
2	2	11	11	20	20										
3	3	12	12	21	21										
4	4	13	13												
6	5	14	14												
7	6	15	15												
8	7	17	16												
9	8	18	17												
5	9	19	18												

NONE		Total Claims Allowed:	
(Assistant Examiner)	(Date)	21	
/ANDREW J STEINLE/ Primary Examiner, Art Unit 2497 (Primary Examiner)	23 September 2020 (Date)	O.G. Print Claim(s) 1	O.G. Print Figure 1

U.S. Patent and Trademark Office

Part of Paper No.: 20200923

<i>Search Notes</i> 	Application/Control No. 16/773,767	Applicant(s)/Patent Under Reexamination Jakobsson, Bjorn Markus
	Examiner ANDREW J STEINLE	Art Unit 2497

CPC - Searched*		
Symbol	Date	Examiner
CPC Classification Search G06F21/10, 121, 128, 31, 32, 44, H04L63/0861, 083, 10, 20 limited by text	09/23/2020	AS

CPC Combination Sets - Searched*		
Symbol	Date	Examiner

US Classification - Searched*			
Class	Subclass	Date	Examiner

* See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.

Search Notes		
Search Notes	Date	Examiner
EAST class limited w/text search (see search history)	09/23/2020	AS
EAST inventor and assignee search (see search history)	09/23/2020	AS
EAST text search (see search history)	09/23/2020	AS
NPL Search including Google patents	09/23/2020	AS

Interference Search			
US Class/CPC Symbol	US Subclass/CPC Group	Date	Examiner
	General Interference and search of claims (USPGPB, USPAT)	09/23/2020	AS

/ANDREW J STEINLE/ Primary Examiner, Art Unit 2497	
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EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S1	244	((("Jakobsson") near3 ("Bjorn") near3 ("Markus"))).INV.	US-PGPUB; USPAT; USOCR	OR	ON	2020/09/22 00:59
S2	331	((("Jakobsson") near3 ("Bjorn") near3 ("Markus"))).INV.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/09/22 00:59
S3	21	(rightquestion (right adj question)).as.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/09/22 00:59
S4	9,053,750	@ad<="20111209"	US-PGPUB; USPAT; USOCR	OR	ON	2020/09/22 00:59
S5	97	(S2 S3) and S4	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/09/22 00:59
S6	9	S5 and biometric	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/09/22 00:59
S7	7	S6 and secure	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/09/22 00:59
S8	0	S7 and wip\$3	US-PGPUB; USPAT;	OR	ON	2020/09/22 00:59

			USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			
S9	9,053,750	@ad<="20111209"	US-PGPUB; USPAT; USOCR	OR	ON	2020/09/22 00:59
S10	60,266	S9 and biometric	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/09/22 00:59
S11	2,280	S10 and (((secure protected encrypted) adj storage) enclave)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/09/22 00:59
S12	2,279	S11 and (external (resource computer client device user))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/09/22 00:59
S13	560	S11 and (external adj (resource computer client device user))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/09/22 00:59
S14	444	S13 and match\$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/09/22 00:59
S15	139	S14 and (login log-in log\$in (log adj in))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/09/22 00:59

S16	12	S15 and wip\$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/09/22 00:59
S17	11	("20120110341" "20110231651" "20120167193" "8549300" "20110205016" "20090100269" "7950051" "20060247982" "20100242102" "20050198348" "7512965").pn.	US-PGPUB; USPAT; USOCR	OR	ON	2020/09/22 00:59
S18	20	("20040107170" "20040236632" "20050198348" "20090100269" "20100242102" "20110078771" "20110205016" "20110231651" "20120110341" "20120167193" "6016476" "7512965" "7697729" "7950051" "8145916" "8549300" "8577813" "8856539" "8984596" "9100826").PN.	US-PGPUB; USPAT	OR	ON	2020/09/22 01:35
S19	83,626	(G06F21/10,121,128,31,32,44, H04L63/0861,10,20).cpc.	US-PGPUB; USPAT; USOCR	OR	ON	2020/09/22 01:35
S20	22,487	S19 and biometric	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/09/22 01:35
S21	2,381	S20 and (((secure protected encrypted) adj storage) enclave)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/09/22 01:35
S22	2,381	S21 and (external (resource computer client device user))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/09/22 01:35
S23	753	S21 and (external adj (resource computer client device user))	US-PGPUB; USPAT; USOCR; FPRS; EPO;	OR	ON	2020/09/22 01:35

			JPO; DERWENT; IBM_TDB			
S24	679	S23 and match\$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/09/22 01:35
S25	289	S24 and (login log-in log\$in (log adj in))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/09/22 01:35
S26	72	S25 and wip\$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/09/22 01:35
S27	9,053,750	@ad<="20111209"	US-PGPUB; USPAT; USOCR	OR	ON	2020/09/22 01:35
S28	2	S26 and S27	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/09/22 01:35
S29	60,266	S27 and biometric	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/09/22 01:35
S30	2,280	S29 and (((secure protected encrypted) adj storage) enclave)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/09/22 01:35

S31	560	S30 and (external adj (resource computer client device user))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/09/22 01:35
S32	444	S31 and match\$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/09/22 01:35
S33	139	S32 and (login log-in log\$in (log adj in))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/09/22 01:35
S34	3	S33 and (biometric adj template)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/09/22 02:05
S35	1,359	S29 and (biometric adj template)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/09/22 02:05
S36	1,277	S35 and match\$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/09/22 02:05
S37	213	S36 and (external adj (resource computer client device user))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/09/22 02:05

S38	19	S37 and (((secure protected encrypted) adj storage) enclave)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/09/22 02:05
S39	48	S37 and (login log-in log\$in (log adj in))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/09/22 02:05
S40	0	S39 and wip\$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/09/22 02:05
S41	0	S37 and wip\$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/09/22 02:05
S42	175	S37 and (wip\$3 delet\$3 eras\$3 purg\$3 format\$4)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/09/22 02:05
S43	41	S39 and (wip\$3 delet\$3 eras\$3 purg\$3 format\$4)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/09/22 02:05
S44	1	S43 and (((secure protected encrypted) adj storage) enclave)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/09/22 02:05

S45	17	S18 and biometric	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/09/22 02:05
S46	10	S45 and (login log-in log\$in (log adj in))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/09/22 02:05
S47	9	S46 and (wip\$3 delet\$3 eras\$3 purg\$3 format\$4)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/09/22 02:05
S48	8	S47 and match\$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/09/22 02:05
S49	1	S48 and (external adj (resource computer client device user))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/09/22 02:05
S50	0	S49 and (((secure protected encrypted) adj storage) enclave)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/09/22 02:05
S52	21	("6691232" "20040107170" "20040236632" "20050198348" "20090100269" "20100242102" "20110078771" "20110205016" "20110231651" "20120110341" "20120167193" "6016476" "7512965" "7697729" "7950051" "8145916" "8549300" "8577813"	US-PGPUB; USPAT	OR	ON	2020/09/23 14:14

		"8856539" "8984596" "9100826").PN.				
S53	13	S52 and (login (log adj in) log-in log\$in)	US-PGPUB; USPAT; USOCR	OR	ON	2020/09/23 14:15
S54	11	S53 and biometric	US-PGPUB; USPAT; USOCR	OR	ON	2020/09/23 14:16
S55	11	S54 and (password cookie key)	US-PGPUB; USPAT; USOCR	OR	ON	2020/09/23 14:17
S56	9	S55 and (cryptographic encrypt\$3)	US-PGPUB; USPAT; USOCR	OR	ON	2020/09/23 14:17
S57	8	S56 and match\$3	US-PGPUB; USPAT; USOCR	OR	ON	2020/09/23 14:17
S58	1	S57 and (backup back-up back\$up)	US-PGPUB; USPAT; USOCR	OR	ON	2020/09/23 14:17

EAST Search History (Interference)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S51	0	((facilitate near3 login) same (external adj resource) same (perform near3 (secure adj backup) near4 record near4 (storage adj service))).clm.	US-PGPUB; USPAT	OR	ON	2020/09/23 01:56

9/23/2020 2:31:19 PM

C:\Users\asteinle\Documents\EAST\Workspaces\16773767.wsp

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[www.google.com/patents/US8495914](#)
Biometric authentication utilizing unique biometric ...
 This technique is known as another technique for identity users in voice recognition systems, a fingerprint is obtained from a user and stored as ...
 Grant - Filed Jan 27, 2011 - Revised Jul 20, 2017 - Lee S. Orlin - Readers Biometrics
[Overview](#) [Related](#) [Discuss](#)

[www.google.com/patents/US20180210149](#)
Techniques for facilitating secure, credential-free user ...
 An disclosed herein, the method management (zero password login) system 200 facilitates secure access to various resources by providing the authentication ...
 App - Filed Dec 16, 2015 - Published Jul 21, 2016 - Aruban Banerjee - Genio ID Inc.
[Overview](#) [Related](#) [Discuss](#)

[www.google.com/patents/US20130115154](#)
System and method for facilitating operator authentication
 The at least one resource is configured to, in response to the prospective operator attempting to utilize the resource, initiate an operator authentication ...
 App - Filed Oct 15, 2011 - Published Jun 18, 2013 - Anne Anderson - Anderson Apple II
[Overview](#) [Related](#) [Discuss](#)

[www.google.com/patents/EP2693493.1/en](#)
Method and system for access to secure resources
 (2014) Yet another embodiment of the present invention is directed to a device (the device) for gaining access to a secure area of a resource ...
 App - Filed Nov 26, 2011 - Published Jul 26, 2016 - Steven Chanin - Sony Computer Entertainment Inc.
[Overview](#) [Related](#) [Discuss](#)

[www.google.com/patents/US9219459](#)
Biometric authentication system
 The invention also prevents communication with external devices prior to user ...
 biometric input can consist of a reference, voice identification, wave or other biometric data ...
 Grant - Filed Jul 10, 2008 - Issued Apr 17, 2016 - Peter M. Dugan - Paul M. Burger
[Overview](#) [Related](#) [Discuss](#)

[www.google.com/patents/US20080154767](#)
Secure off-chip processing such as for biometric data
 Accordingly, data provided by sensors other than secure biometric data ...
 biometric identification include a secure device, for example, for acquiring an image ...
 App - Filed Oct 24, 2007 - Published Jun 27, 2009 - Alan Kistner - Upek, Inc.
[Overview](#) [Related](#) [Discuss](#)

[www.google.com/patents/US9126030](#)
Methods and systems for authenticating users
 Additionally, the method includes receiving biometric authentication data in a workstation ...
 In yet another aspect, a method of authenticating users ...
 requires access to protected resources, applying information in a workstation ...
 order to facilitate properly validating identities of workstation users desiring to ...
 Grant - Filed Mar 22, 2010 - Issued Sep 2, 2016 - Daniel Robert White - Dean Holdings Limited
[Overview](#) [Related](#) [Discuss](#)

[www.google.com/patents/US9898182](#)
Proximity based biometric identification systems and methods
 Protocols implemented according to embodiments facilitate a decentralized approach ...
 Auditing and tracing of user identification and authentication and/or resources ...
 card and RFID reader and thus obtain information from a user's RFID card ...
 or wireless communication with an external system (e.g., identification body).
 Grant - Filed Jan 16, 2011 - Issued Mar 24, 2016 - Shek Duncan Wong - Hong Kong Applied Science And Technology Research Institute Co., Ltd.
[Overview](#) [Related](#) [Discuss](#)

[www.google.com/patents/US20170101418](#)
Log-on service providing credential level change without ...
 First, single sign-on configurations are facilitated using an authentication credential obtaining, authentication and session tracking infrastructure ...
 Second ...
 App - Filed Sep 13, 2016 - Published May 5, 2017 - David Wood - Sun Microsystems Inc.
[Overview](#) [Related](#) [Discuss](#)

[www.google.com/patents/US201479967A/en](#)
Biometric credential verification framework
 Use of a biometric identification device in a first computer system to subsequently access an authentication system includes receiving biometric sample data ...
 App - Filed Jun 16, 2012 - Published Jul 31, 2014 - G.D. 988888 988888
[Overview](#) [Related](#) [Discuss](#)

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Doc code: IDS

PTO/SB/08a (02-18)

Doc description: Information Disclosure Statement (IDS) Filed

Approved for use through 11/30/2020. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number	16773767
	Filing Date	2020-01-27
	First Named Inventor	Bjorn Markus Jakobsson
	Art Unit	~~MA~~ xx 2497
	Examiner Name	~~MA~~ xx Andrew Steinle
	Attorney Docket Number	MJAKP008C4

U.S. PATENTS						Remove
Examiner Initial*	Cite No	Patent Number	Kind Code ¹	Issue Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear
	1	6016476		2000-01-18	MAES STEPHANE HERMAN	
	2	7512965		2009-03-31	AMDUR EUGENE	
	3	7697729		2010-04-13	HOWELL MARK J	
	4	7950051		2011-05-24	SPITZ SEAN T	
	5	8145916		2012-03-27	BOSHRA MICHAEL	
	6	8549300		2013-10-01	KUMAR KARTIK	
	7	8577813		2013-11-05	WEISS KENNETH P	
	8	8856539		2014-10-07	WEISS KENNETH	

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**
(Not for submission under 37 CFR 1.99)

Application Number	16773767
Filing Date	2020-01-27
First Named Inventor	Bjorn Markus Jakobsson
Art Unit	~~WA~~ 2497
Examiner Name	~~WA~~ Andrew Steinle
Attorney Docket Number	MJAKP008C4

9	8984596	2015-03-17	GRIFFIN STEPHANIE
10	9100826	2015-08-04	WEISS KENNETH P

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U.S. PATENT APPLICATION PUBLICATIONS

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Examiner Initial*	Cite No	Publication Number	Kind Code ¹	Publication Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear
	1	20040107170		2004-06-03	LABROU YANNIS	
	2	20040236632		2004-11-25	MARITZEN MICHAEL L	
	3	20050198348		2005-09-08	YEATES ANTHONY J	
	4	20090100269		2009-04-16	NACCACHE DAVID	
	5	20100242102		2010-09-23	CROSS DAVID B	
	6	20110078771		2011-03-31	GRIFFIN STEPHANIE	
	7	20110205016		2011-08-25	AL-AZEM SAMER	

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**
(Not for submission under 37 CFR 1.99)

Application Number	16773767
Filing Date	2020-01-27
First Named Inventor	Bjorn Markus Jakobsson
Art Unit	~~2497~~ 2497
Examiner Name	~~WAXX~~ Andrew Steinle
Attorney Docket Number	MJAKP008C4

8	20110231651	2011-09-22	BOLLAY BENN SAPIN
9	20120110341	2012-05-03	BEIGI HOMAYOON
10	20120167193	2012-06-28	GARGARO GIANLUCA

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Examiner Initial*	Cite No	Foreign Document Number ³	Country Code ²ⁱ	Kind Code ⁴	Publication Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear	T ⁵
	1	2004051585	WO		2004-06-17	JAKOBSSON MARKUS		
	2	2005001751	WO		2005-01-06	REGENTS OF THE UNIVERSITY OF CALIFORNIA		

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NON-PATENT LITERATURE DOCUMENTS

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Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T ⁵
	1	"Managing Authorization and Access Control", Author: unknown, Published November 3, 2005, pp. 1-12, URL: http://technet.microsoft.com/en-us/library/bb457115.aspx	
	2	Hammer-Lahav, Ed. "The OAuth 1.0 Protocol", from https://tools.ietf.org/html/rfc5849 , April 2010.	

If you wish to add additional non-patent literature document citation information please click the Add button

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number	16773767
	Filing Date	2020-01-27
	First Named Inventor	Bjorn Markus Jakobsson
	Art Unit	~~2497~~ 2497
	Examiner Name	~~2497~~ Andrew Steinle
	Attorney Docket Number	MJAKP008C4

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Examiner Signature	/ANDREW J STEINLE/	Date Considered	09/23/2020
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CONFIRMATION NO. 4416

SERIAL NUMBER	FILING or 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.		
16/773,767	01/27/2020 RULE	726	2497	MJAKP008C4		
APPLICANTS RightQuestion, LLC, Portola Valley, CA; INVENTORS Bjorn Markus Jakobsson, Portola Valley, CA; ** CONTINUING DATA ***** This application is a CON of 16/563,715 09/06/2019 which is a CON of 16/273,797 02/12/2019 PAT 10521568 which is a CON of 15/042,636 02/12/2016 PAT 10360351 which is a CON of 13/706,254 12/05/2012 PAT 9294452 which claims benefit of 61/587,387 01/17/2012 and claims benefit of 61/569,112 12/09/2011 ** FOREIGN APPLICATIONS ***** ** IF REQUIRED, FOREIGN FILING LICENSE GRANTED *** SMALL ENTITY ** 02/12/2020						
Foreign Priority claimed ☐ Yes ☒ No 35 USC 119(a-d) conditions met ☐ Yes ☒ No Verified and /ANDREW J Acknowledged STEINLE/ Examiner's Signature		☐ Met after Allowance Initials	STATE OR COUNTRY CA	SHEETS DRAWINGS 8	TOTAL CLAIMS 21	INDEPENDENT CLAIMS 3
ADDRESS VAN PELT, YI & JAMES LLP 10050 N. FOOTHILL BLVD #200 CUPERTINO, CA 95014 UNITED STATES						
TITLE AUTHENTICATION TRANSLATION						
FILING FEE RECEIVED 835	FEES: Authority has been given in Paper No. _____ to charge/credit DEPOSIT ACCOUNT No. _____ for following:			☐ All Fees ☐ 1.16 Fees (Filing) ☐ 1.17 Fees (Processing Ext. of time) ☐ 1.18 Fees (Issue) ☐ Other _____ ☐ Credit		

From: [George Cheng](#)
To: [Steinle, Andrew](#)
Subject: MJAKP008C4 (App. No.: 16/773,767) Proposed Examiner's Amendment
Date: Wednesday, September 23, 2020 4:46:53 PM
Attachments: [MJAKP008C4 Proposed Examiner's Amendment - 2020.09.23.docx](#)

Examiner Steinle,

Please find attached a proposed Examiner's Amendment for Application No. 16/773,767. Applicant authorizes communication of this proposed Examiner's Amendment by this email. Please continue to send official correspondence via the email address associated with customer number 21912.

Regards,
George

George Cheng

Van Pelt, Yi & James LLP
Intellectual Property Law
10050 N. Foothill Blvd., Suite 200
Cupertino, CA 95014
V: 408-207-4765
F: 408-973-2595
gcheng@ip-patent.com

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MJAKP008C4 Proposed Examiner's Amendment – 2020.09.23

1. (Original) A system, comprising:
 - a first processor of a first device, wherein the first processor is configured to:
 - based at least in part on a request associated with a user to access an external resource, establish a secure connection with the external resource; and
 - communicate with a second processor using a restricted interface, wherein the second processor is configured to:
 - receive a biometric input from a sensor, wherein the biometric input corresponds to at least one of a fingerprint, a feature usable for facial recognition, a voiceprint, a feature usable for a retina scan, and a typing feature; and
 - access a record stored in a secure storage, wherein the record is associated at least with the external resource;
 - retrieve, from the record, at least one of a password, a cookie, and a cryptographic key;
 - perform a cryptographic operation;
 - in response to determining that there is a match between the biometric input and a stored biometric template accessed by the second processor, facilitate a login of the user to the external resource at least in part by transmitting, via the established connection, output based at least in part on the at least one of the password, the cryptographic key, and the cookie retrieved from the record, and wherein the user is logged in to the external resource based at least in part on the output; and
 - perform a secure backup of the record to a storage service, wherein a second device associated with the user is registered with the storage service, and wherein the record is downloaded from the storage service by the second device;
 - and
 - a memory coupled to the first processor and configured to provide the first processor with instructions.
2. (Original) The system recited in claim 1, wherein the storage service comprises a cloud storage service.

3. (Original) The system recited in claim 1 wherein the second device is registered with the storage service at least in part by:
 - connecting to the storage service; and
 - providing at least one of a user identifier and a credential to the storage service, wherein the user identifier comprises at least one of a username and an account number.
4. (Original) The system recited in claim 1, wherein the record downloaded by the second device is encrypted.
5. (Original) The system recited in claim 4, wherein the second device is configured to decrypt the downloaded record and store the decrypted record to a secure storage associated with the second device.
6. (Original) The system recited in claim 5, wherein the downloaded record is decrypted by the second device using a decryption key that is generated based at least in part on information associated with the user.
7. (Original) The system recited in claim 5, wherein the downloaded record is decrypted by the second device using a decryption key that is generated based at least in part on biometric data.
8. (Original) The system recited in claim 5, wherein the downloaded record is decrypted by the second device using a decryption key generated using one or more features extracted from fingerprinting.
9. (Original) The system recited in claim 4, wherein the encrypted record is stored to an insecure storage associated with the second device.
10. (Original) The system recited in claim 1, wherein performing the cryptographic operation comprises decrypting the record.
11. (Original) A method, comprising:
 - based at least in part on a request associated with a user to access an external resource,
 - establishing, by a first processor of a first device, a secure connection with the external resource;
 - and

communicating with a second processor using a restricted interface, wherein the second processor is configured to:

- receive a biometric input from a sensor, wherein the biometric input corresponds to at least one of a fingerprint, a feature usable for facial recognition, a voiceprint, a feature usable for a retina scan, and a typing feature; and

- access a record stored in a secure storage, wherein the record is associated at least with the external resource;

- retrieve, from the record, at least one of a password, a cookie, and a cryptographic key;

- perform a cryptographic operation;

- in response to determining that there is a match between the biometric input and a stored biometric template accessed by the second processor, facilitate a login of the user to the external resource at least in part by transmitting, via the established connection, output based at least in part on the at least one of the password, the cryptographic key, and the cookie retrieved from the record, and wherein the user is logged in to the external resource based at least in part on the output; and

- perform a secure backup of the record to a storage service, wherein a second device associated with the user is registered with the storage service, and wherein the record is downloaded from the storage service by the second device.

12. (Currently amended) The method of claim 11 ~~system recited in claim 1~~, wherein the storage service comprises a cloud storage service.

13. (Currently amended) The method of claim 11, ~~system recited in claim 1~~ wherein the second device is registered with the storage service at least in part by:

- connecting to the storage service; and

- providing at least one of a user identifier and a credential to the storage service, wherein the user identifier comprises at least one of a username and an account number.

14. (Currently amended) The method of claim 11 ~~system recited in claim 1~~, wherein the record downloaded by the second device is encrypted.

15. (Currently amended) The method of claim 14 ~~system recited in claim 4~~, wherein the second device is configured to decrypt the downloaded record and store the decrypted record to a secure storage associated with the second device.

16. (Currently amended) The method of claim 15 ~~system recited in claim 5~~, wherein the downloaded record is decrypted by the second device using a decryption key that is generated based at least in part on information associated with the user.

17. (Currently amended) The method of claim 15 ~~system recited in claim 5~~, wherein the downloaded record is decrypted by the second device using a decryption key that is generated based at least in part on biometric data.

18. (Currently amended) The method of claim 15 ~~system recited in claim 5~~, wherein the downloaded record is decrypted by the second device using a decryption key generated using one or more features extracted from fingerprinting.

19. (Currently amended) The method of claim 14 ~~system recited in claim 4~~, wherein the encrypted record is stored to an insecure storage associated with the second device.

20. (Currently amended) The method of claim 11 ~~system recited in claim 1~~, wherein performing the cryptographic operation comprises decrypting the record.

21. (Original) A computer program product embodied in a non-transitory computer readable storage medium and comprising computer instructions for:

based at least in part on a request associated with a user to access an external resource, establishing, by a first processor of a first device, a secure connection with the external resource; and

communicating with a second processor using a restricted interface, wherein the second processor is configured to:

receive a biometric input from a sensor, wherein the biometric input corresponds to at least one of a fingerprint, a feature usable for facial recognition, a voiceprint, a feature usable for a retina scan, and a typing feature; and

access a record stored in a secure storage, wherein the record is associated at least with the external resource;

retrieve, from the record, at least one of a password, a cookie, and a cryptographic key;

perform a cryptographic operation;

in response to determining that there is a match between the biometric input and a stored biometric template accessed by the second processor, facilitate a login of the user to the external resource at least in part by transmitting, via the established connection, output based at least in part on the at least one of the password, the cryptographic key, and the cookie retrieved from the record, and wherein the user is logged in to the external resource based at least in part on the output; and

perform a secure backup of the record to a storage service, wherein a second device associated with the user is registered with the storage service, and wherein the record is downloaded from the storage service by the second device.

Doc code: IDS

Doc description: Information Disclosure Statement (IDS) Filed

PTO/SB/08a (02-18)

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	Art Unit	2497
	Examiner Name	~~Elmer A. Chieraw~~ Andrew Steinle
	Attorney Docket Number	MJAKP008C4

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	Filing Date		2020-01-27
	First Named Inventor	Bjorn Markus Jakobsson	
	Art Unit	2497	
	Examiner Name	~~Elenix Shiferaw~~ Andrew Steinle	
	Attorney Docket Number	MJKP008C4	

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Application Number * 16/773,767 *	Application/Control No. 16/773,767	Applicant(s)/Patent under Reexamination Jakobsson, Bjorn Markus	
	Examiner STEINLE, ANDREW J	Art Unit 2497	
Document Code - DISQ		Internal Document - DO NOT MAIL	

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Date Filed: <u>23 September 2020</u>	This patent is subject to a Terminal Disclaimer	

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/FELICIA D ROBERTS/ Technology Center: <u>OPLC</u> Telephone: <u>(571)272-0550</u> <u>2 TDs approved with this filing date</u>



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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No.:	16/773,767	Examiner:	Andrew J. Steinle
Filed:	January 27, 2020	Art Unit:	2497
Confirmation No.:	4416	Docket No.:	MJAKP008C4
First Inventor:	Bjorn Markus Jakobsson		
Title:	AUTHENTICATION TRANSLATION		

TERMINAL DISCLAIMER UNDER 37 C.F.R. § 1.321
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Respectfully submitted,

Dated: September 23, 2020

/Yeu-Ting George Cheng/

Yeu-Ting George Cheng

Registration No. 69408

408-207-4765

VAN PELT, YI & JAMES LLP
10050 N. Foothill Blvd., Suite 200
Cupertino, CA 95014
Fax 408-973-2595

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No.:	16/773,767	Examiner:	Andrew J. Steinle
Filed:	January 27, 2020	Art Unit:	2497
Confirmation No.:	4416	Docket No.:	MJAKP008C4
First Inventor:	Bjorn Markus Jakobsson		
Title:	AUTHENTICATION TRANSLATION		

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Respectfully submitted,

Dated: September 23, 2020

/Yeu-Ting George Cheng/

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VAN PELT, YI & JAMES LLP
10050 N. Foothill Blvd., Suite 200
Cupertino, CA 95014
Fax 408-973-2595

Electronic Patent Application Fee Transmittal				
Application Number:		16773767		
Filing Date:		27-Jan-2020		
Title of Invention:		AUTHENTICATION TRANSLATION		
First Named Inventor/Applicant Name:		Bjorn Markus Jakobsson		
Filer:		Yeu-Ting George Cheng/Elaine Nguyen		
Attorney Docket Number:		MJAKP008C4		
Filed as Small Entity				
Filing Fees for Utility under 35 USC 111(a)				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
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Application Number:	16773767
International Application Number:	
Confirmation Number:	4416
Title of Invention:	AUTHENTICATION TRANSLATION
First Named Inventor/Applicant Name:	Bjorn Markus Jakobsson
Customer Number:	21912
Filer:	Yeu-Ting George Cheng/Elaine Nguyen
Filer Authorized By:	Yeu-Ting George Cheng
Attorney Docket Number:	MJAKP008C4
Receipt Date:	23-SEP-2020
Filing Date:	27-JAN-2020
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Application Type:	Utility under 35 USC 111(a)

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	Examiner Name	Eleni A. Shiferaw
	Attorney Docket Number	MJAKP008C4

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	Attorney Docket Number	MJAKP008C4

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That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Yeu-Ting George Cheng/	Date (YYYY-MM-DD)	2020-08-26
Name/Print	Yeu-Ting George Cheng	Registration Number	69408

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Electronic Acknowledgement Receipt	
EFS ID:	40392872
Application Number:	16773767
International Application Number:	
Confirmation Number:	4416
Title of Invention:	AUTHENTICATION TRANSLATION
First Named Inventor/Applicant Name:	Bjorn Markus Jakobsson
Customer Number:	21912
Filer:	Yeu-Ting George Cheng/Elaine Nguyen
Filer Authorized By:	Yeu-Ting George Cheng
Attorney Docket Number:	MJAKP008C4
Receipt Date:	26-AUG-2020
Filing Date:	27-JAN-2020
Time Stamp:	18:14:18
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
------------------------	----

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Information Disclosure Statement (IDS) Form (SB08)	MJAKP008C4_IDS_02_SB08.pdf	1052951	no	4
			d656164b2cea011601bfae69ef4be4cf377db95e		

Warnings:

Information:	
Total Files Size (in bytes):	1052951
This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503. <u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application. <u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course. <u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.	

PATENT APPLICATION FEE DETERMINATION RECORD						Application or Docket Number 16/773,767				
Substitute for Form PTO-875										
APPLICATION AS FILED - PART I										
(Column 1)		(Column 2)		SMALL ENTITY		OTHER THAN SMALL ENTITY				
FOR	NUMBER FILED	NUMBER EXTRA	RATE(\$)	FEE(\$)		RATE(\$)	FEE(\$)			
BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A	75		N/A				
SEARCH FEE (37 CFR 1.16(k), (l), or (m))	N/A	N/A	N/A	330		N/A				
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A	380		N/A				
TOTAL CLAIMS (37 CFR 1.16(j))	21	minus 20 = *	1	x 50 = 50	OR					
INDEPENDENT CLAIMS (37 CFR 1.16(h))	3	minus 3 = *		x 230 = 0.00						
APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$310 (\$155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).			0.00						
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))				0.00						
				TOTAL		TOTAL				
				835						
* If the difference in column 1 is less than zero, enter "0" in column 2.										
APPLICATION AS AMENDED - PART II										
(Column 1)		(Column 2)		(Column 3)		SMALL ENTITY		OTHER THAN SMALL ENTITY		
AMENDMENT A		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE(\$)	ADDITIONAL FEE(\$)		RATE(\$)	ADDITIONAL FEE(\$)
	Total (37 CFR 1.16(i))	*	Minus	**	=	x	=	OR	x	=
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x	=	OR	x	=
	Application Size Fee (37 CFR 1.16(s))							OR		
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	
AMENDMENT B		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE(\$)	ADDITIONAL FEE(\$)		RATE(\$)	ADDITIONAL FEE(\$)
	Total (37 CFR 1.16(i))	*	Minus	**	=	x	=	OR	x	=
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x	=	OR	x	=
	Application Size Fee (37 CFR 1.16(s))							OR		
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	
* If the entry in column 1 is less than the entry in column 2, write "0" in column 3. ** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20". *** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3". The "Highest Number Previously Paid For" (Total or Independent) is the highest found in the appropriate box in column 1.										



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United States Patent and Trademark Office
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P.O. Box 1459
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO	TOT CLAIMS	IND CLAIMS
16/773,767	01/27/2020		835	MJAKP008C4	21	3

CONFIRMATION NO. 4416

FILING RECEIPT



0000000114680634

21912
VAN PELT, YI & JAMES LLP
10050 N. FOOTHILL BLVD #200
CUPERTINO, CA 95014

Date Mailed: 02/14/2020

Receipt is acknowledged of this non-provisional utility patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF FIRST INVENTOR, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection.

Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please submit a written request for a corrected Filing Receipt, including a properly marked-up ADS showing the changes with strike-through for deletions and underlining for additions. If you received a "Notice to File Missing Parts" or other Notice requiring a response for this application, please submit any request for correction to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections provided that the request is grantable.

Inventor(s)

Bjorn Markus Jakobsson, Portola Valley, CA;

Applicant(s)

RightQuestion, LLC, Portola Valley, CA;

Power of Attorney: The patent practitioners associated with Customer Number 21912

Domestic Priority data as claimed by applicant

This application is a CON of 16/563,715 09/06/2019
which is a CON of 16/273,797 02/12/2019 PAT 10521568
which is a CON of 15/042,636 02/12/2016 PAT 10360351
which is a CON of 13/706,254 12/05/2012 PAT 9294452
which claims benefit of 61/587,387 01/17/2012
and claims benefit of 61/569,112 12/09/2011

Foreign Applications for which priority is claimed (You may be eligible to benefit from the **Patent Prosecution Highway** program at the USPTO. Please see <http://www.uspto.gov> for more information.) - None.

Foreign application information must be provided in an Application Data Sheet in order to constitute a claim to foreign priority. See 37 CFR 1.55 and 1.76.

Permission to Access Application via Priority Document Exchange: Yes

Permission to Access Search Results: Yes

Applicant may provide or rescind an authorization for access using Form PTO/SB/39 or Form PTO/SB/69 as appropriate.

If Required, Foreign Filing License Granted: 02/12/2020

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 16/773,767**

Projected Publication Date: Request for Non-Publication Acknowledged

Non-Publication Request: Yes

Early Publication Request: No

**** SMALL ENTITY ****

Title

AUTHENTICATION TRANSLATION

Preliminary Class

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications: No

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at <http://www.uspto.gov/web/offices/pac/doc/general/index.html>.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, <http://www.stopfakes.gov>. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific

page 2 of 4

countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4258).

LICENSE FOR FOREIGN FILING UNDER
Title 35, United States Code, Section 184
Title 37, Code of Federal Regulations, 5.11 & 5.15

GRANTED

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This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 37 CFR 1.53(d). This license is not retroactive.

The grant of a license does not in any way lessen the responsibility of a licensee for the security of the subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise themselves of current regulations especially with respect to certain countries, of other agencies, particularly the Office of Defense Trade Controls, Department of State (with respect to Arms, Munitions and Implements of War (22 CFR 121-128)); the Bureau of Industry and Security, Department of Commerce (15 CFR parts 730-774); the Office of Foreign Assets Control, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

NOT GRANTED

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).

SelectUSA

The United States represents the largest, most dynamic marketplace in the world and is an unparalleled location for business investment, innovation, and commercialization of new technologies. The U.S. offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to promote and facilitate business investment. SelectUSA provides information assistance to the international investor community; serves as an ombudsman for existing and potential investors; advocates on behalf of U.S. cities, states, and regions competing for global investment; and counsels U.S. economic development organizations on investment attraction best practices. To learn more about why the United States is the best country in the world to develop

technology, manufacture products, deliver services, and grow your business, visit <http://www.SelectUSA.gov> or call +1-202-482-6800.

TRANSMITTAL FOR POWER OF ATTORNEY TO ONE OR MORE REGISTERED PRACTITIONERS

NOTE: This form is to be submitted with the Power of Attorney by Applicant form (PTO/AIA/82B) to identify the application to which the Power of Attorney is directed, in accordance with 37 CFR 1.5, unless the application number and filing date are identified in the Power of Attorney by Applicant form. If neither form PTO/AIA/82A nor form PTO/AIA/82B identifies the application to which the Power of Attorney is directed, the Power of Attorney will not be recognized in the application.

Application Number	Not Assigned
Filing Date	Herewith
First Named Inventor	Bjorn Markus Jakobsson
Title	AUTHENTICATION TRANSLATION
Art Unit	Not Assigned
Examiner Name	Not Assigned
Attorney Docket Number	MJAKP008C4

SIGNATURE of Applicant or Patent Practitioner

Signature	/Yeu-Ting George Cheng/	Date (Optional)	
Name	Yeu-Ting George Cheng	Registration Number	69408
Title (if Applicant is a juristic entity)			
Applicant Name (if Applicant is a juristic entity)			

NOTE: This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4(d) for signature requirements and certifications. If more than one applicant, use multiple forms.



*Total of 1 forms are submitted.

This collection of information is required by 37 CFR 1.131, 1.32, and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Doc Code: PA..

Document Description: Power of Attorney

PTO/AIA/82B (07-13)

Approved for use through 11/30/2014, OMB 0651-0051

U.S. Patent and Trademark Office, U.S. DEPARTMENT OF COMMERCE

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POWER OF ATTORNEY BY APPLICANT

I hereby revoke all previous powers of attorney given in the application identified in either the attached transmittal letter or the boxes below.

Application Number	Filing Date

(Note: The boxes above may be left blank if information is provided on form PTO/AIA/82A.)

☒ I hereby appoint the Patent Practitioner(s) associated with the following Customer Number as my/our attorney(s) or agent(s), and to transact all business in the United States Patent and Trademark Office connected therewith for the application referenced in the attached transmittal letter (form PTO/AIA/82A) or identified above:

21912

OR

☐ I hereby appoint Practitioner(s) named in the attached list (form PTO/AIA/82C) as my/our attorney(s) or agent(s), and to transact all business in the United States Patent and Trademark Office connected therewith for the patent application referenced in the attached transmittal letter (form PTO/AIA/82A) or identified above. (Note: Complete form PTO/AIA/82C.)

Please recognize or change the correspondence address for the application identified in the attached transmittal letter or the boxes above to:

☒ The address associated with the above-mentioned Customer Number

OR

☐ The address associated with Customer Number:

OR

Firm or Individual Name				
Address				
City	State	Zip		
Country				
Telephone	Email			

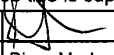
I am the Applicant (if the Applicant is a juristic entity, list the Applicant name in the box):

RightQuestion, LLC

- ☐ Inventor or Joint Inventor (title not required below)
- ☐ Legal Representative of a Deceased or Legally Incapacitated Inventor (title not required below)
- ☒ Assignee or Person to Whom the Inventor is Under an Obligation to Assign (provide signer's title if applicant is a juristic entity)
- ☐ Person Who Otherwise Shows Sufficient Proprietary Interest (e.g., a petition under 37 CFR 1.46(b)(2) was granted in the application or is concurrently being filed with this document) (provide signer's title if applicant is a juristic entity)

SIGNATURE of Applicant for Patent

The undersigned (whose title is supplied below) is authorized to act on behalf of the applicant (e.g., where the applicant is a juristic entity).

Signature		Date (Optional)	
Name	Bjorn Markus Jakobsson		
Title	Manager		

NOTE: Signature - This form must be signed by the applicant in accordance with 37 CFR 1.33. See 37 CFR 1.4 for signature requirements and certifications. If more than one applicant, use multiple forms.

☐ Total of forms are submitted.

This collection of information is required by 37 CFR 1.131, 1.32, and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No.:	Not Assigned	Examiner:	Not Assigned
Filed:	Herewith	Art Unit:	Not Assigned
Confirmation No.:	Not Assigned	Docket No.:	MJAKP008C4
First Inventor:	Bjorn Markus Jakobsson		
Title:	AUTHENTICATION TRANSLATION		

INFORMATION DISCLOSURE STATEMENT
UNDER 37 CFR §§1.56 AND 1.97(B)
BEFORE MAILING OF A FIRST OFFICE ACTION

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

The references listed in the attached PTO SB/08 may be material to examination of the above-identified patent application. Applicants disclose the list of these references in compliance with their duty of disclosure pursuant to 37 CFR §§1.56 and 1.97. The Examiner is requested to make these references of official record in this application. The above-identified application is a continuation of prior application U.S. Patent Application No. 16/563,715, which is a continuation of prior application U.S. Patent Application No. 16/273,797, which is a continuation of prior application U.S. Patent Application No. 15/042,636, which is a continuation of prior application U.S. Patent Application No. 13/706,254. These prior applications are being relied upon for an earlier filing date under 35 U.S.C. § 120. Because the listed references were either cited by the PTO, or submitted to the PTO in the prior applications, under 37 CFR §1.98(d), Applicants submit that copies need not be provided.

This Information Disclosure Statement is not to be construed as a representation that a search has been made, that additional information material to the examination of this application does not exist, or that these references indeed constitute prior art.

Application Serial No.
Attorney Docket No. MJAKP008C4

This Information Disclosure Statement is being filed (1) with the above-referenced application or (2) within three months of the filing date of the above-referenced application or (3) before the mailing date of a first Office Action on the merits or (4) before the mailing date of a first Office Action after filing of a Request for Continued Examination. Accordingly, it is believed that no fees are due in connection with the filing of this Information Disclosure Statement. However, if it is determined that any fees are due, the Commissioner is hereby authorized to charge such fees to Deposit Account 50-0685 (Order No. MJAKP008C4).

Respectfully submitted,

Dated: January 27, 2020

/Yeu-Ting George Cheng/
Yeu-Ting George Cheng
Registration No. 69408
408-207-4765

VAN PELT, YI & JAMES LLP
10050 N. Foothill Blvd., Suite 200
Cupertino, CA 95014
Fax 408-973-2595

Doc code: IDS

Doc description: Information Disclosure Statement (IDS) Filed

PTO/SB/08a (02-18)

Approved for use through 11/30/2020. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number	
	Filing Date	2020-01-27
	First Named Inventor	Bjorn Markus Jakobsson
	Art Unit	N/A
	Examiner Name	N/A
	Attorney Docket Number	MJAKP008C4

U.S. PATENTS						Remove
Examiner Initial*	Cite No	Patent Number	Kind Code ¹	Issue Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear
	1	6016476		2000-01-18	MAES STEPHANE HERMAN	
	2	7512965		2009-03-31	AMDUR EUGENE	
	3	7697729		2010-04-13	HOWELL MARK J	
	4	7950051		2011-05-24	SPITZ SEAN T	
	5	8145916		2012-03-27	BOSHRA MICHAEL	
	6	8549300		2013-10-01	KUMAR KARTIK	
	7	8577813		2013-11-05	WEISS KENNETH P	
	8	8856539		2014-10-07	WEISS KENNETH	

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		
	Filing Date		2020-01-27
	First Named Inventor	Bjorn Markus Jakobsson	
	Art Unit	N/A	
	Examiner Name	N/A	
	Attorney Docket Number	MJKP008C4	

	9	8984596		2015-03-17	GRIFFIN STEPHANIE	
	10	9100826		2015-08-04	WEISS KENNETH P	

If you wish to add additional U.S. Patent citation information please click the Add button.

U.S.PATENT APPLICATION PUBLICATIONS						Remove
Examiner Initial*	Cite No	Publication Number	Kind Code ¹	Publication Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear
	1	20040107170		2004-06-03	LABROU YANNIS	
	2	20040236632		2004-11-25	MARITZEN MICHAEL L	
	3	20050198348		2005-09-08	YEATES ANTHONY J	
	4	20090100269		2009-04-16	NACCACHE DAVID	
	5	20100242102		2010-09-23	CROSS DAVID B	
	6	20110078771		2011-03-31	GRIFFIN STEPHANIE	
	7	20110205016		2011-08-25	AL-AZEM SAMER	

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		
	Filing Date		2020-01-27
	First Named Inventor	Bjorn Markus Jakobsson	
	Art Unit	N/A	
	Examiner Name	N/A	
	Attorney Docket Number	MIAKP008C4	

	8	20110231651		2011-09-22	BOLLAY BENN SAPIN	
	9	20120110341		2012-05-03	BEIGI HOMAYOON	
	10	20120167193		2012-06-28	GARGARO GIANLUCA	

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FOREIGN PATENT DOCUMENTS

Examiner Initial*	Cite No	Foreign Document Number ³	Country Code ²ⁱ	Kind Code ⁴	Publication Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear	T ⁵
	1	2004051585	WO		2004-06-17	JAKOBSSON MARKUS		
	2	2005001751	WO		2005-01-06	REGENTS OF THE UNIVERSITY OF CALIFORNIA		

If you wish to add additional Foreign Patent Document citation information please click the Add button.

NON-PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T ⁵
	1	"Managing Authorization and Access Control", Author: unknown, Published November 3, 2005, pp. 1-12, URL: http://technet.microsoft.com/en-us/library/bb457115.aspx	
	2	Hammer-Lahav, Ed. "The OAuth 1.0 Protocol", from https://tools.ietf.org/html/rfc5849 , April 2010.	

If you wish to add additional non-patent literature document citation information please click the Add button.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		
	Filing Date		2020-01-27
	First Named Inventor	Bjorn Markus Jakobsson	
	Art Unit	N/A	
	Examiner Name	N/A	
	Attorney Docket Number	MJAKP008C4	

EXAMINER SIGNATURE			
Examiner Signature		Date Considered	
*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.			
¹ See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. ² Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). ³ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁴ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁵ Applicant is to place a check mark here if English language translation is attached.			

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		
	Filing Date		2020-01-27
	First Named Inventor	Bjorn Markus Jakobsson	
	Art Unit	N/A	
	Examiner Name	N/A	
	Attorney Docket Number	MJAKP008C4	

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Yeu-Ting George Cheng/	Date (YYYY-MM-DD)	2020-01-27
Name/Print	Yeu-Ting George Cheng	Registration Number	69408

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

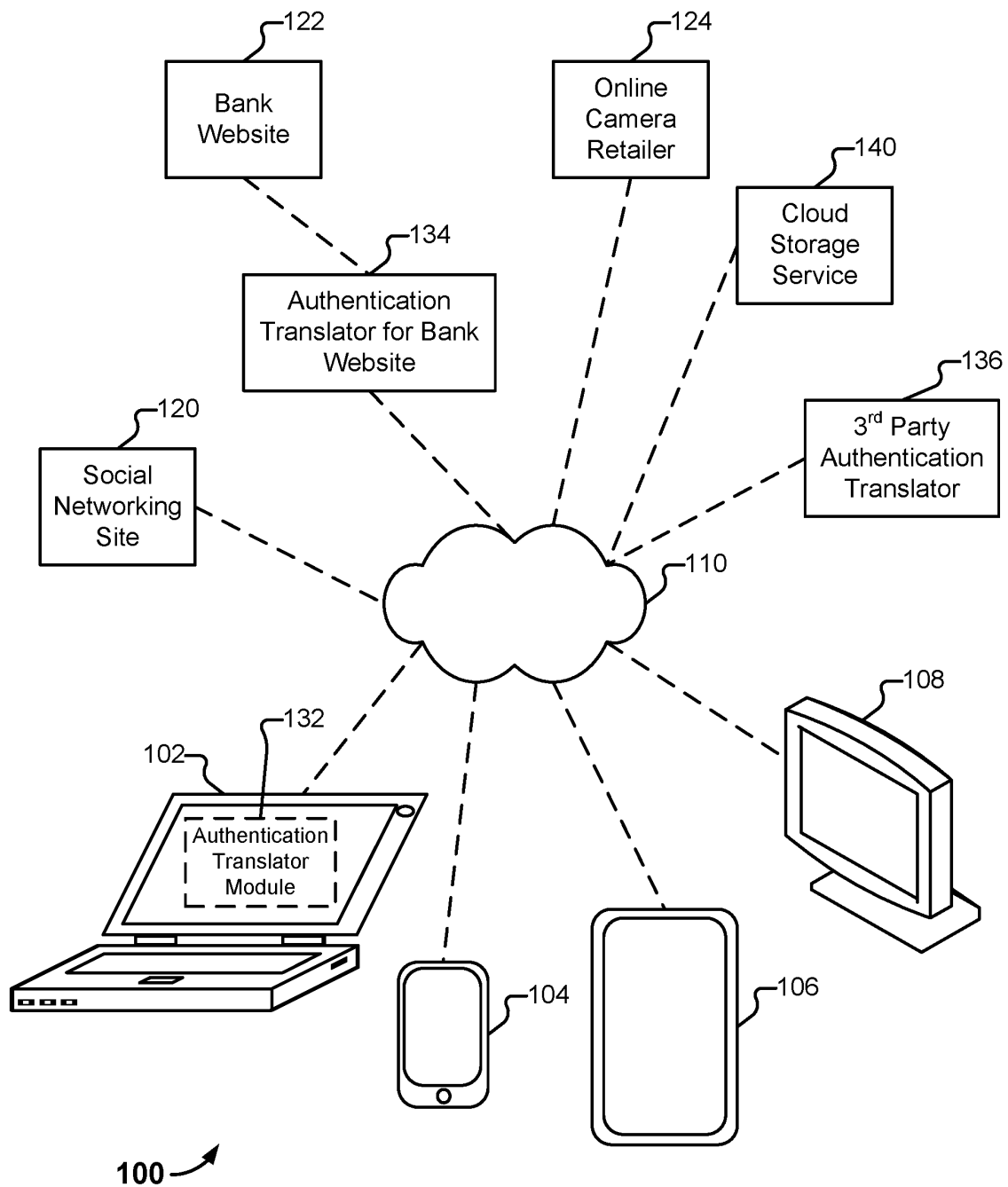
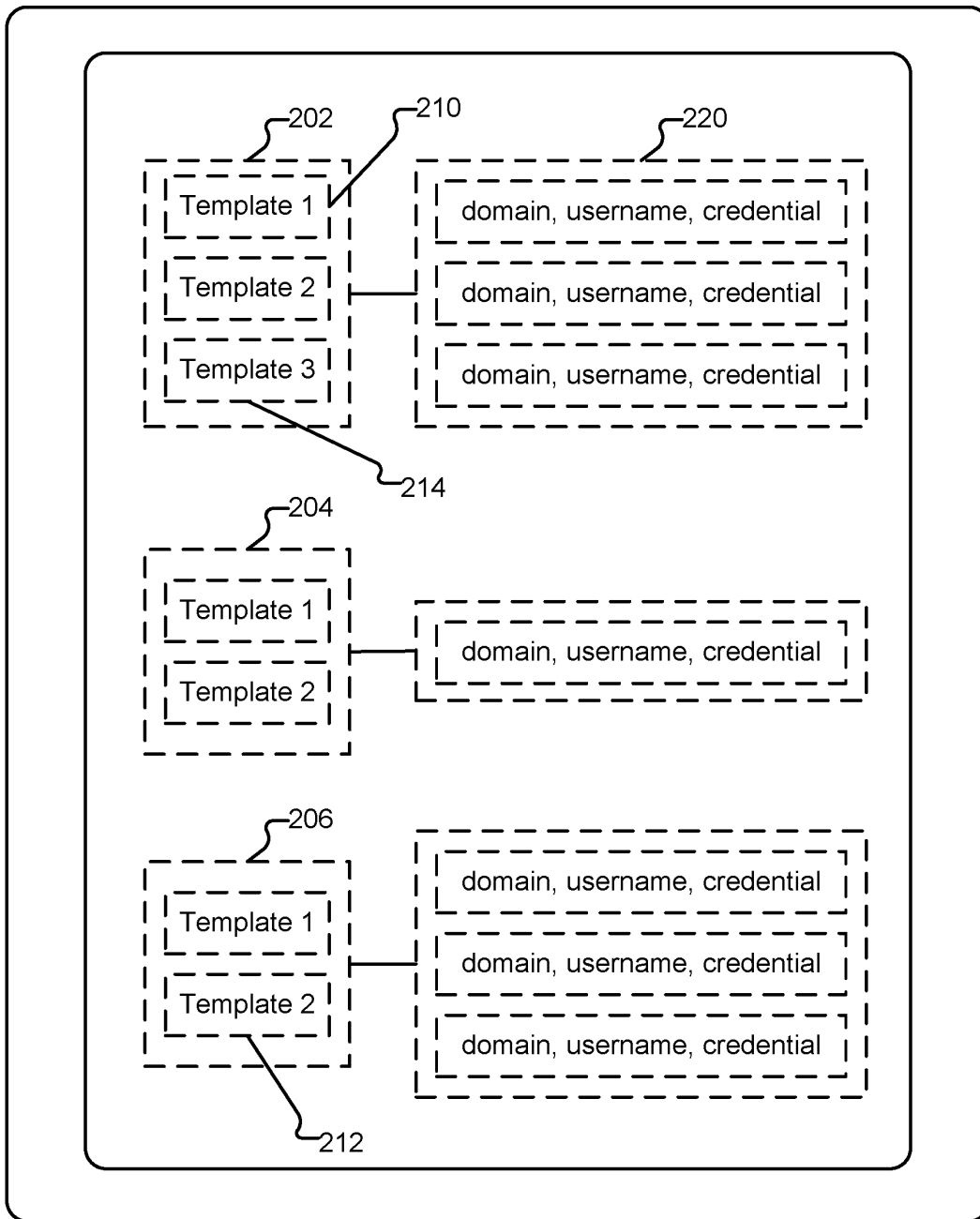
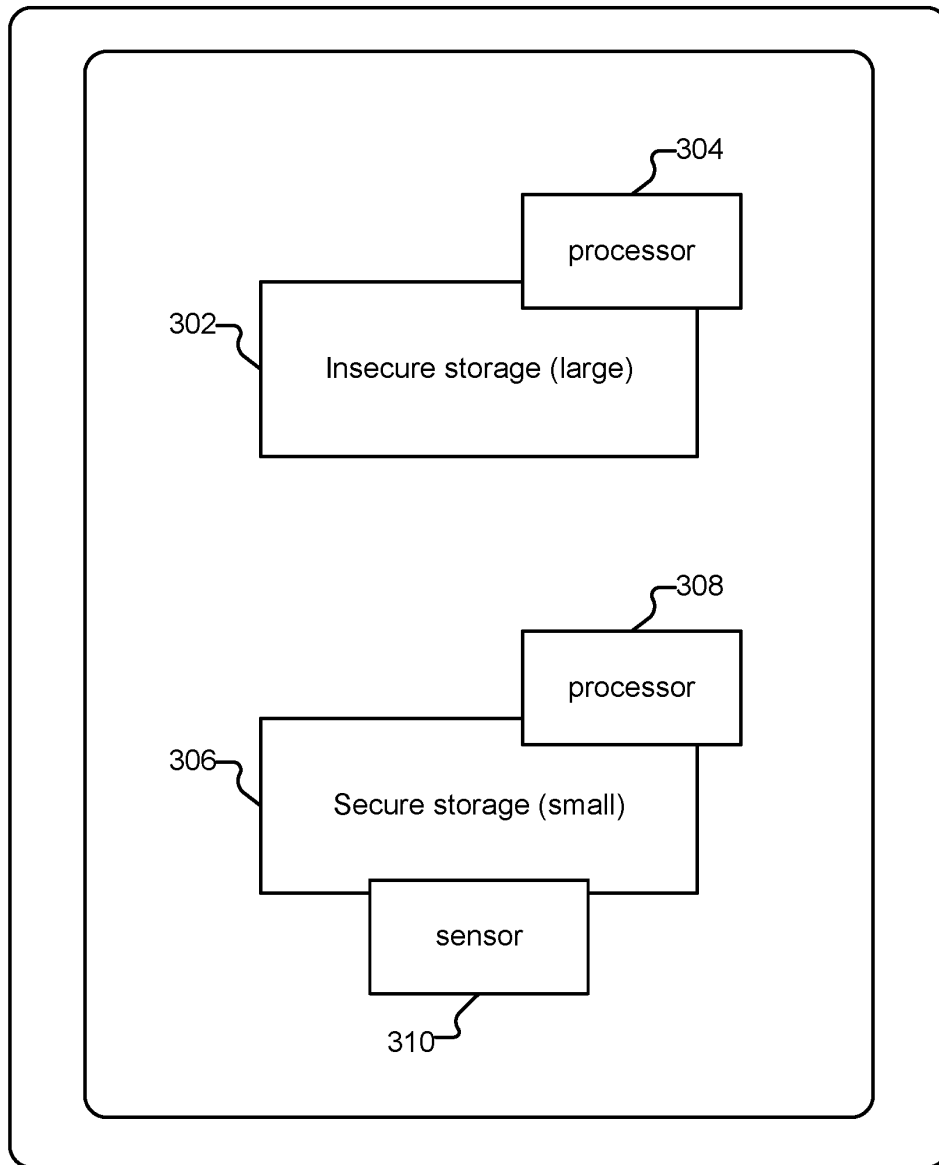


FIG. 1



200 ↗

FIG. 2



300 ↗

FIG. 3

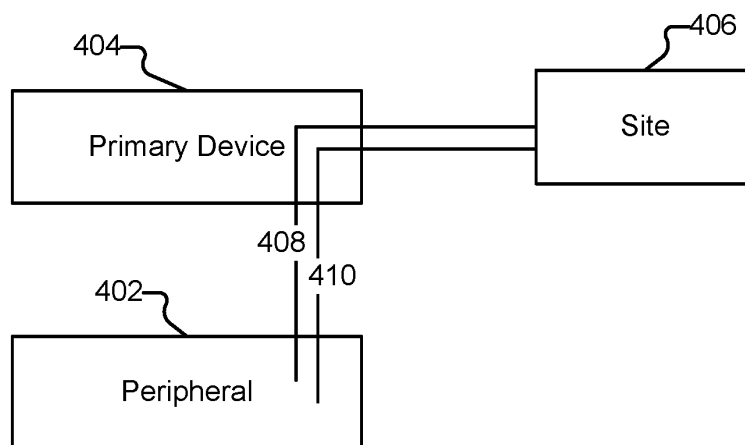


FIG. 4

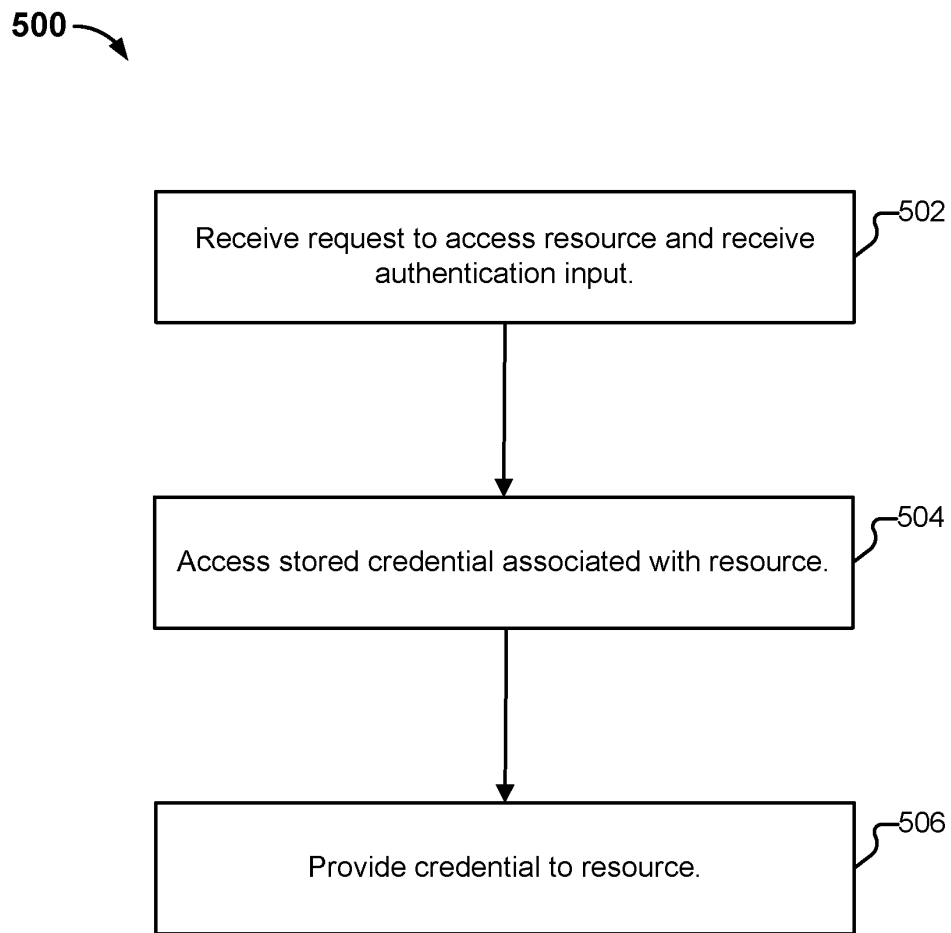


FIG. 5

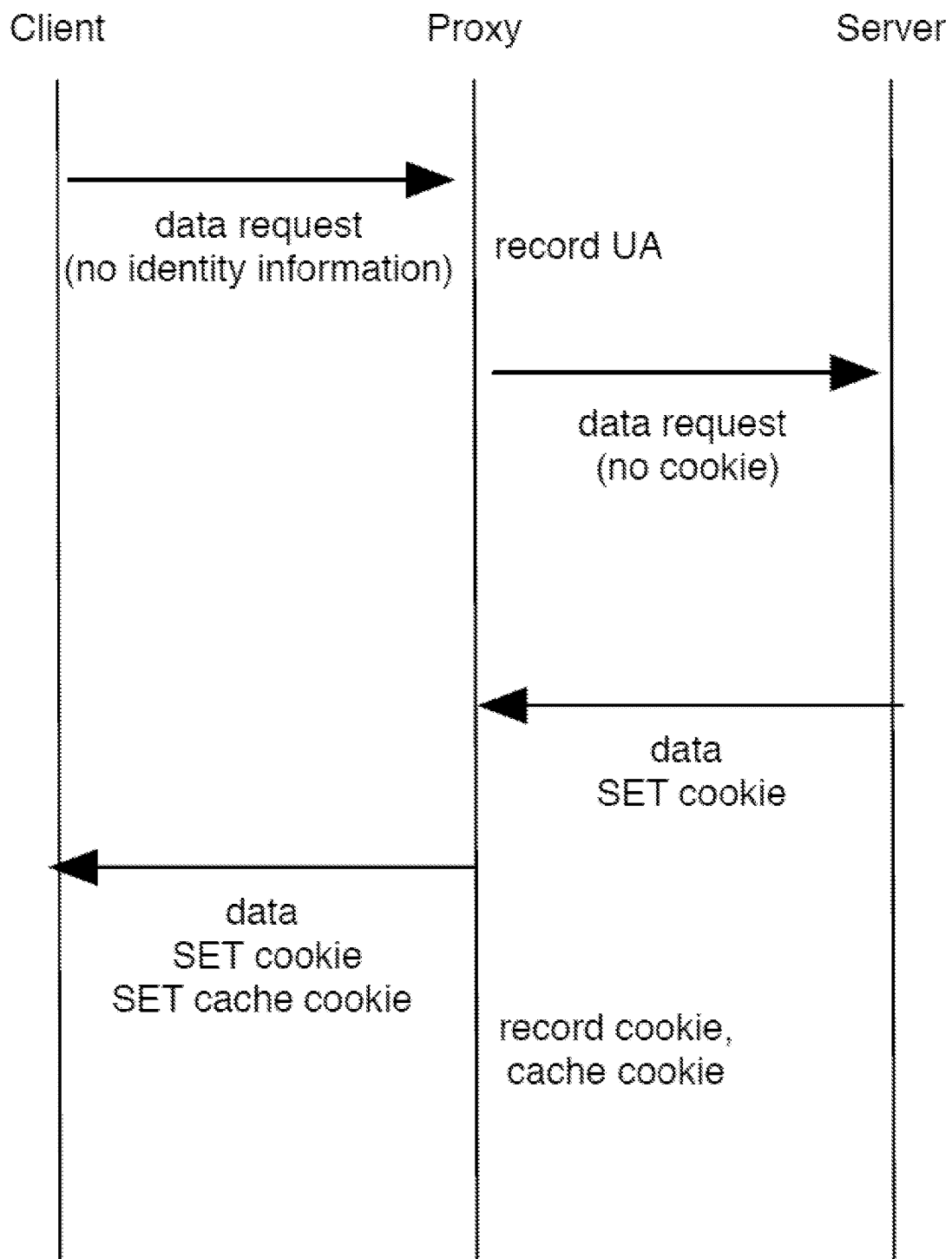


FIG. 6

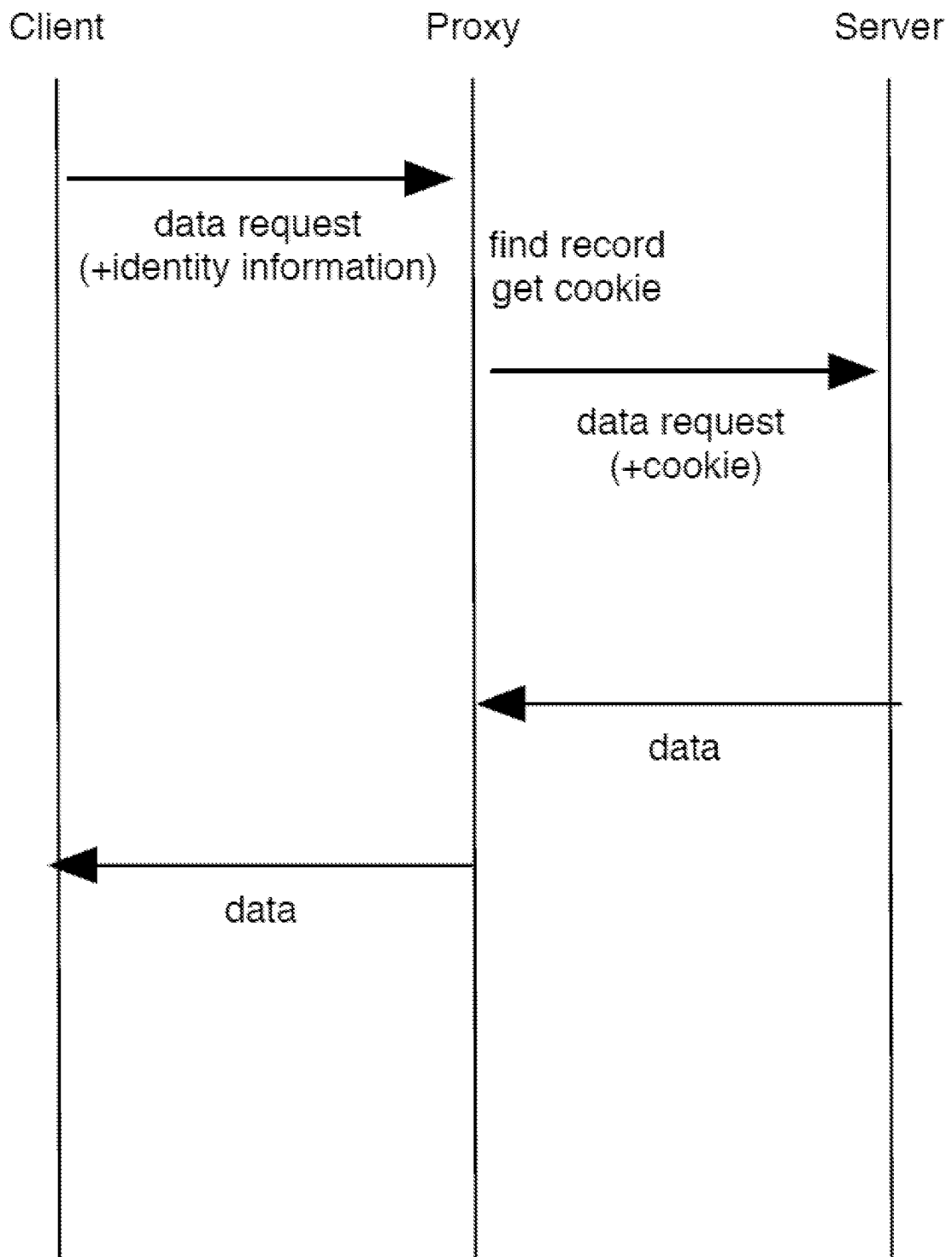


FIG. 7

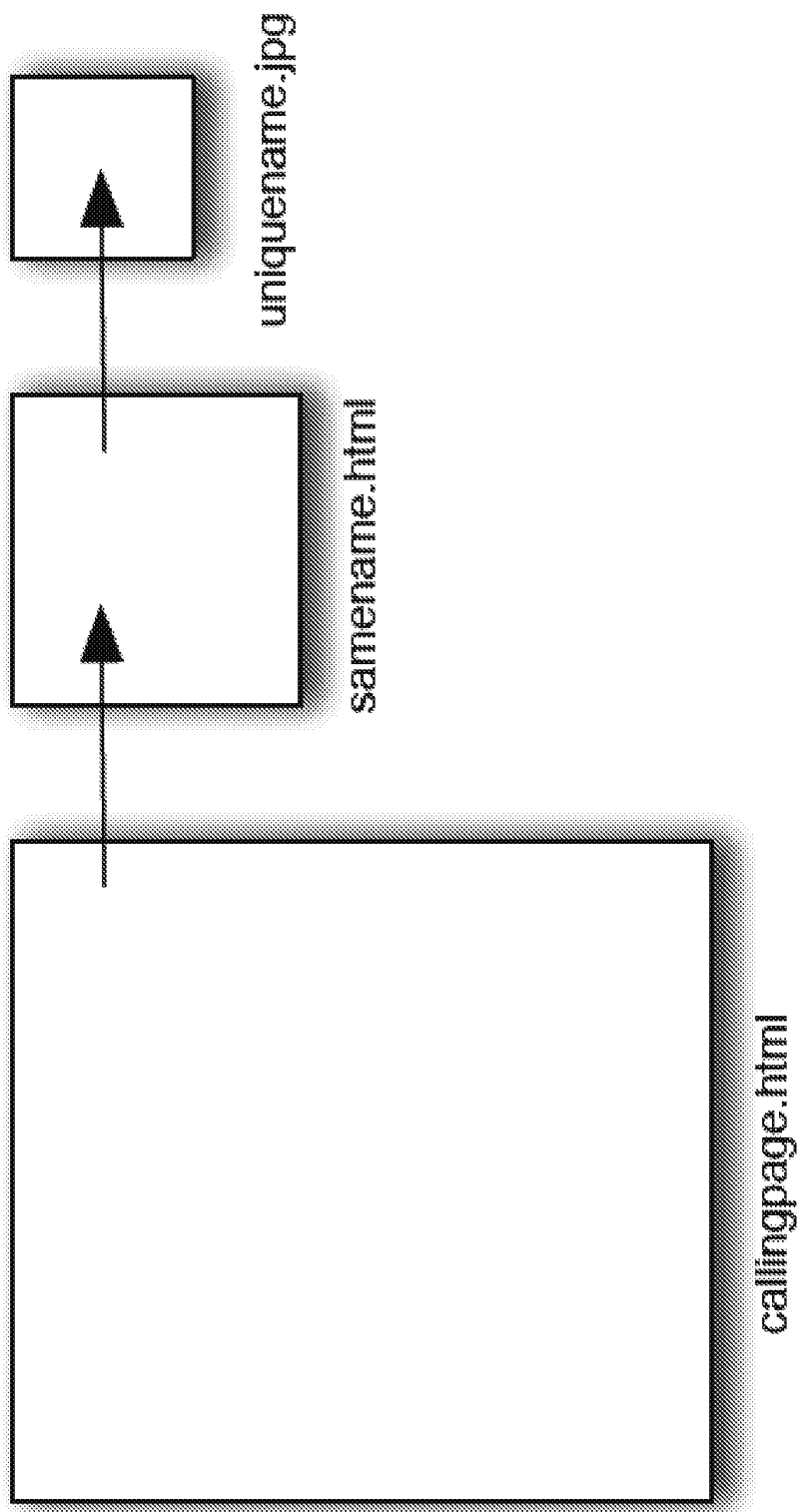


FIG. 8

Electronic Patent Application Fee Transmittal				
Application Number:				
Filing Date:				
Title of Invention:		AUTHENTICATION TRANSLATION		
First Named Inventor/Applicant Name:		Bjorn Markus Jakobsson		
Filer:		Yeu-Ting George Cheng/Elaine Nguyen		
Attorney Docket Number:		MJAKP008C4		
Filed as Small Entity				
Filing Fees for Utility under 35 USC 111(a)				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
UTILITY FILING FEE (ELECTRONIC FILING)	4011	1	75	75
UTILITY SEARCH FEE	2111	1	330	330
UTILITY EXAMINATION FEE	2311	1	380	380
Pages:				
Claims:				
CLAIMS IN EXCESS OF 20	2202	1	50	50
Miscellaneous-Filing:				
Petition:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Miscellaneous:				
Total in USD (\$)				835

Electronic Acknowledgement Receipt	
EFS ID:	38412004
Application Number:	16773767
International Application Number:	
Confirmation Number:	4416
Title of Invention:	AUTHENTICATION TRANSLATION
First Named Inventor/Applicant Name:	Bjorn Markus Jakobsson
Customer Number:	21912
Filer:	Yeu-Ting George Cheng/Elaine Nguyen
Filer Authorized By:	Yeu-Ting George Cheng
Attorney Docket Number:	MJAKP008C4
Receipt Date:	27-JAN-2020
Filing Date:	
Time Stamp:	19:01:56
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	\$835
RAM confirmation Number	E20201QJ02184805
Deposit Account	500685
Authorized User	Elaine Nguyen
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows: 37 CFR 1.16 (National application filing, search, and examination fees) 37 CFR 1.17 (Patent application and reexamination processing fees)	

37 CFR 1.19 (Document supply fees)
 37 CFR 1.20 (Post Issuance fees)
 37 CFR 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Application Data Sheet	MJAKP008C4_ADS.pdf	1793883	no	9
			3bb36ff2e19b955f4183ccb18bb662c9502247a2		
Warnings:					
Information:					
2	Oath or Declaration filed	MJAKP008C4_Executed_Dec.pdf	93450	no	1
			8bbb681eb91b3a5261d972ce592786304497ed0e		
Warnings:					
Information:					
3	Power of Attorney	MJAKP008C4_POA_AIA82A.pdf	217717	no	1
			d55c78ac140e3c523e742fff4568936fe79b798f		
Warnings:					
Information:					
4	Power of Attorney	MJAK_Executed_POA_AIA82B_RightQuestionLLC.pdf	387899	no	1
			a756b6df61aa99188dddec71473eeefbe19a844b6f		
Warnings:					
Information:					
5	Transmittal Letter	MJAKP008C4_IDS_01_Transmittal.pdf	79378	no	2
			5a54559654f9a6344f4189be74c49d427002f5c1		
Warnings:					
Information:					
6	Information Disclosure Statement (IDS) Form (SB08)	MJAKP008C4_IDS_01_SB08.pdf	1054170	no	6
			3b03c4fe93d3e3840a69cca0caaa3274a89ad624		
Warnings:					
Information:					

7	Specification	MJAKP008C4_APP.pdf	173682	no	23
			5890c166c7d367b14320cce40b0336e997b26de0		
Warnings:					
Information:					
8	Drawings-only black and white line drawings	MJAKP008C4_APP_Figures.pdf	112090	no	8
			83487947bd1fc2e79014265a447a54f43bdce227		
Warnings:					
Information:					
9	Fee Worksheet (SB06)	fee-info.pdf	36758	no	2
			f25c2d9b1f6f13e3befccfa128ae4aa7306dd48d		
Warnings:					
Information:					
Total Files Size (in bytes):			3949027		
This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503. <u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application. <u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course. <u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.					

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	MJAKP008C4
		Application Number	
Title of Invention	AUTHENTICATION TRANSLATION		
The application data sheet is part of the provisional or nonprovisional application for which it is being submitted. The following form contains the bibliographic data arranged in a format specified by the United States Patent and Trademark Office as outlined in 37 CFR 1.76. This document may be completed electronically and submitted to the Office in electronic format using the Electronic Filing System (EFS) or the document may be printed and included in a paper filed application.			

Secrecy Order 37 CFR 5.2:

☐ Portions or all of the application associated with this Application Data Sheet may fall under a Secrecy Order pursuant to 37 CFR 5.2 (Paper filers only. Applications that fall under Secrecy Order may not be filed electronically.)

Inventor Information:

Inventor	1				Remove	
Legal Name						
Prefix	Given Name	Middle Name	Family Name	Suffix		
	Bjorn	Markus	Jakobsson			
Residence Information (Select One) • US Residency Non US Residency Active US Military Service						
City	Portola Valley	State/Province	CA	Country of Residence	US	
Mailing Address of Inventor:						
Address 1	118 Ramona Rd.					
Address 2						
City	Portola Valley	State/Province	CA			
Postal Code	94028	Country	US			
All Inventors Must Be Listed - Additional Inventor Information blocks may be generated within this form by selecting the Add button.						
Add						

Correspondence Information:

Enter either Customer Number or complete the Correspondence Information section below.			
For further information see 37 CFR 1.33(a).			
☐ An Address is being provided for the correspondence information of this application.			
Customer Number	21912		
Email Address		Add Email	Remove Email

Application Information:

Title of the Invention	AUTHENTICATION TRANSLATION		
Attorney Docket Number	MJAKP008C4	Small Entity Status Claimed	☒
Application Type	Nonprovisional		
Subject Matter	Utility		
Total Number of Drawing Sheets (if any)	8	Suggested Figure for Publication (if any)	

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	MJAKP008C4
		Application Number	
Title of Invention	AUTHENTICATION TRANSLATION		

Filing By Reference:

Only complete this section when filing an application by reference under 35 U.S.C. 111(c) and 37 CFR 1.57(a). Do not complete this section if application papers including a specification and any drawings are being filed. Any domestic benefit or foreign priority information must be provided in the appropriate section(s) below (i.e., "Domestic Benefit/National Stage Information" and "Foreign Priority Information").

For the purposes of a filing date under 37 CFR 1.53(b), the description and any drawings of the present application are replaced by this reference to the previously filed application, subject to conditions and requirements of 37 CFR 1.57(a).

Application number of the previously filed application	Filing date (YYYY-MM-DD)	Intellectual Property Authority or Country

Publication Information:

☐ Request Early Publication (Fee required at time of Request 37 CFR 1.219)

☒ **Request Not to Publish.** I hereby request that the attached application not be published under 35 U.S.C. 122(b) and certify that the invention disclosed in the attached application **has not and will not** be the subject of an application filed in another country, or under a multilateral international agreement, that requires publication at eighteen months after filing.

Representative Information:

Representative information should be provided for all practitioners having a power of attorney in the application. Providing this information in the Application Data Sheet does not constitute a power of attorney in the application (see 37 CFR 1.32). Either enter Customer Number or complete the Representative Name section below. If both sections are completed the customer Number will be used for the Representative Information during processing.

Please Select One:	☒ Customer Number	☐ US Patent Practitioner	☐ Limited Recognition (37 CFR 11.9)
Customer Number	21912		

Domestic Benefit/National Stage Information:

This section allows for the applicant to either claim benefit under 35 U.S.C. 119(e), 120, 121, 365(c), or 386(c) or indicate National Stage entry from a PCT application. Providing benefit claim information in the Application Data Sheet constitutes the specific reference required by 35 U.S.C. 119(e) or 120, and 37 CFR 1.78.

When referring to the current application, please leave the "Application Number" field blank.

Prior Application Status	Pending	Remove	
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)
	Continuation of	16563715	2019-09-06

Application Data Sheet 37 CFR 1.76		Attorney Docket Number		MJAKP008C4	
		Application Number			
Title of Invention		AUTHENTICATION TRANSLATION			

Prior Application Status		Patented		Remove	
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
16563715	Continuation of	16273797	2019-02-12	10521568	2019-12-31
Prior Application Status		Patented		Remove	
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
16273797	Continuation of	15042636	2016-02-12	10360351	2019-07-23
Prior Application Status		Patented		Remove	
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
15042636	Continuation of	13706254	2012-12-05	9294452	2016-03-22
Prior Application Status		Expired		Remove	
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)		
13706254	Claims benefit of provisional	61587387	2012-01-17		
Prior Application Status		Expired		Remove	
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)		
13706254	Claims benefit of provisional	61569112	2011-12-09		
Additional Domestic Benefit/National Stage Data may be generated within this form by selecting the Add button.					

Foreign Priority Information:

This section allows for the applicant to claim priority to a foreign application. Providing this information in the application data sheet constitutes the claim for priority as required by 35 U.S.C. 119(b) and 37 CFR 1.55. When priority is claimed to a foreign application that is eligible for retrieval under the priority document exchange program (PDX)ⁱ the information will be used by the Office to automatically attempt retrieval pursuant to 37 CFR 1.55(i)(1) and (2). Under the PDX program, applicant bears the ultimate responsibility for ensuring that a copy of the foreign application is received by the Office from the participating foreign intellectual property office, or a certified copy of the foreign priority application is filed, within the time period specified in 37 CFR 1.55(g)(1).

			Remove
Application Number	Country ⁱ	Filing Date (YYYY-MM-DD)	Access Code ⁱ (if applicable)
Additional Foreign Priority Data may be generated within this form by selecting the Add button.			

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	MJAKP008C4
		Application Number	
Title of Invention	AUTHENTICATION TRANSLATION		

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications

This application (1) claims priority to or the benefit of an application filed before March 16, 2013 and (2) also contains, or contained at any time, a claim to a claimed invention that has an effective filing date on or after March 16, 2013. ☐ NOTE: By providing this statement under 37 CFR 1.55 or 1.78, this application, with a filing date on or after March 16, 2013, will be examined under the first inventor to file provisions of the AIA.
--

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	MJAKP008C4
		Application Number	
Title of Invention	AUTHENTICATION TRANSLATION		

Authorization or Opt-Out of Authorization to Permit Access:

When this Application Data Sheet is properly signed and filed with the application, applicant has provided written authority to permit a participating foreign intellectual property (IP) office access to the instant application-as-filed (see paragraph A in subsection 1 below) and the European Patent Office (EPO) access to any search results from the instant application (see paragraph B in subsection 1 below).

Should applicant choose not to provide an authorization identified in subsection 1 below, applicant **must opt-out** of the authorization by checking the corresponding box A or B or both in subsection 2 below.

NOTE: This section of the Application Data Sheet is **ONLY** reviewed and processed with the **INITIAL** filing of an application. After the initial filing of an application, an Application Data Sheet cannot be used to provide or rescind authorization for access by a foreign IP office(s). Instead, Form PTO/SB/39 or PTO/SB/69 must be used as appropriate.

1. Authorization to Permit Access by a Foreign Intellectual Property Office(s)

A. Priority Document Exchange (PDX) - Unless box A in subsection 2 (opt-out of authorization) is checked, the undersigned hereby **grants the USPTO authority** to provide the European Patent Office (EPO), the Japan Patent Office (JPO), the Korean Intellectual Property Office (KIPO), the State Intellectual Property Office of the People's Republic of China (SIPO), the World Intellectual Property Organization (WIPO), and any other foreign intellectual property office participating with the USPTO in a bilateral or multilateral priority document exchange agreement in which a foreign application claiming priority to the instant patent application is filed, access to: (1) the instant patent application-as-filed and its related bibliographic data, (2) any foreign or domestic application to which priority or benefit is claimed by the instant application and its related bibliographic data, and (3) the date of filing of this Authorization. See 37 CFR 1.14(h)(1).

B. Search Results from U.S. Application to EPO - Unless box B in subsection 2 (opt-out of authorization) is checked, the undersigned hereby **grants the USPTO authority** to provide the EPO access to the bibliographic data and search results from the instant patent application when a European patent application claiming priority to the instant patent application is filed. See 37 CFR 1.14(h)(2).

The applicant is reminded that the EPO's Rule 141(1) EPC (European Patent Convention) requires applicants to submit a copy of search results from the instant application without delay in a European patent application that claims priority to the instant application.

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☐ A. Applicant **DOES NOT** authorize the USPTO to permit a participating foreign IP office access to the instant application-as-filed. If this box is checked, the USPTO will not be providing a participating foreign IP office with any documents and information identified in subsection 1A above.

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Application Data Sheet 37 CFR 1.76		Attorney Docket Number	MJAKP008C4
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Mailing Address Information For Applicant:			
Address 1	118 Ramona Rd.		
Address 2			
City	Portola Valley	State/Province	CA
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DECLARATION FOR ORIGINAL U.S. PATENT APPLICATION

Attorney's Docket No. MJAKP008

As a below-named inventor, I hereby declare that:

I believe that I am the original inventor (if only one name is listed below) or an original joint inventor (if plural names are listed below) of a claimed invention in the application entitled: **AUTHENTICATION TRANSLATION**, the specification of which,

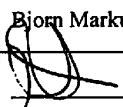
- (check one)
1. ☐ is attached hereto.
2. ☒ was filed on December 5, 2012 as
U.S. Application No. 13/706,254
and was amended on _____.
3. ☐ was filed on _____ as
International PCT Application No. _____
and was amended on _____.

I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

The above-identified application was made or authorized to be made by me.

I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR § 1.56.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and I acknowledge that any willful false statement made in this declaration is punishable under 18 USC 1001 by fine or imprisonment of not more than five (5) years, or both.

Full name of sole or first inventor	Bjorn Markus Jakobsson		
Signature of sole or first inventor		Date:	<u>March 21</u> , 2013

Attorney Docket No. MJAKP008C4

APPLICATION FOR UNITED STATES PATENT

AUTHENTICATION TRANSLATION

By Inventor:

Bjorn Markus Jakobsson
Portola Valley, CA
A Citizen of Sweden

Assignee: RightQuestion, LLC

VAN PELT, YI & JAMES LLP
10050 N. Foothill Blvd., Suite 200
Cupertino, CA 95014
Telephone (408) 973-2585

AUTHENTICATION TRANSLATION

CROSS REFERENCE TO OTHER APPLICATIONS

[0001] This application is a continuation of co-pending U.S. Patent Application No. 16/563,715, entitled AUTHENTICATION TRANSLATION filed September 06, 2019 which is incorporated herein by reference for all purposes, which is a continuation of U.S. Patent Application No. 16/273,797, entitled AUTHENTICATION TRANSLATION filed February 12, 2019, now U.S. Patent No. 10,521,568, which is incorporated herein by reference for all purposes, which is a continuation of U.S. Patent Application No. 15/042,636, entitled AUTHENTICATION TRANSLATION filed February 12, 2016, now U.S. Patent No. 10,360,351, which is incorporated herein by reference for all purposes, which is a continuation of U.S. Patent Application No. 13/706,254, entitled AUTHENTICATION TRANSLATION filed December 5, 2012, now U.S. Patent No. 9,294,452, which is incorporated herein by reference for all purposes, which claims priority to U.S. Provisional Application No. 61/587,387, entitled BIOMETRICS-SUPPORTED SECURE AUTHENTICATION SYSTEM filed January 17, 2012 which is incorporated herein by reference for all purposes. U.S. Patent Application No. 13/706,254 also claims priority to U.S. Provisional Patent Application No. 61/569,112 entitled BACKWARDS COMPATIBLE ROBUST COOKIES filed December 9, 2011, which is incorporated herein by reference for all purposes.

BACKGROUND OF THE INVENTION

[0002] Providing credentials to a service, whether via a mobile or other device, is often a tedious experience for a user. Unfortunately, to make authentication easier for themselves, users will often engage in practices such as password re-use, and/or the selection of poor quality passwords, which render their credentials less secure against attacks. Accordingly, improvements in authentication techniques would be desirable. Further, it would be desirable for such improvements to be widely deployable, including on existing/legacy systems.

BRIEF DESCRIPTION OF THE DRAWINGS

[0003] Various embodiments of the invention are disclosed in the following detailed description and the accompanying drawings.

[0004] Figure 1 illustrates an embodiment of an environment in which authentication translation is provided.

[0005] Figure 2 illustrates an embodiment of credential information stored on a device.

[0006] Figure 3 illustrates an embodiment of a device with secure storage.

[0007] Figure 4 illustrates an example of a renegotiation.

[0008] Figure 5 illustrates an embodiment of a process for performing authentication translation.

[0009] Figure 6 illustrates an example of what occurs when a client device first visits the site of a legacy server via an authentication translator.

[0010] Figure 7 illustrates an example of what occurs when a device subsequently visits the site of a legacy server via an authentication translator.

[0011] Figure 8 shows the structure of an example of a cache cookie used in some embodiments.

DETAILED DESCRIPTION

[0012] The invention can be implemented in numerous ways, including as a process; an apparatus; a system; a composition of matter; a computer program product embodied on a computer readable storage medium; and/or a processor, such as a processor configured to execute instructions stored on and/or provided by a memory coupled to the processor. In this specification, these implementations, or any other form that the invention may take, may be referred to as techniques. In general, the order of the steps of disclosed processes may be altered within the scope of the invention. Unless stated otherwise, a component such as a processor or a memory described as being configured to perform a task may be implemented as a general component that is temporarily configured to perform the task at a given time or a specific component that is manufactured to perform the task. As used herein, the term ‘processor’ refers to one or more devices, circuits, and/or processing cores configured to process data, such as computer program instructions.

[0013] A detailed description of one or more embodiments of the invention is provided below along with accompanying figures that illustrate the principles of the invention. The invention is described in connection with such embodiments, but the invention is not limited to any embodiment. The scope of the invention is limited only by the claims and the invention encompasses numerous alternatives, modifications and equivalents. Numerous specific details are set forth in the following description in order to provide a thorough understanding of the invention. These details are provided for the purpose of example and the invention may be practiced according to the claims without some or all of these specific details. For the purpose of clarity, technical material that is known in the technical fields related to the invention has not been described in detail so that the invention is not unnecessarily obscured.

[0014] Figure 1 illustrates an embodiment of an environment in which authentication translation is provided. In the example shown, a variety of client devices 102-108 connect, via one or more networks (represented as a single network cloud 110) to a variety of services 120-124 (also referred to herein as sites 120-124). In particular, client device 102 is a notebook computer owned by a user hereinafter referred to as Alice. Notebook 102 includes a camera, a microphone, and a fingerprint sensor. Client device 104 is a smartphone, also owned by Alice.

Client device 104 includes a camera. Client device 106 is a tablet owned by Bob, and sometimes used by Bob's son Charlie. Client device 106 includes a camera and a fingerprint sensor. Client device 108 is a kiosk located in the lobby of a hotel. Kiosk 108 includes a camera and a microphone. The techniques described herein can be used with or adapted to be used with other devices, as applicable. For example, the techniques can be used in conjunction with gaming systems, with peripheral devices such as mice, and with embedded devices, such as door locks.

[0015] Service 120 is a social networking site. Service 122 is a website of a bank. Service 124 is the online store of a boutique camera retailer. Each of services 120-124 requires a username and password (and/or a cookie) from a user prior to giving that user access to protected content and/or other features. As will be described in more detail below, using the techniques described herein, users need not type such usernames and passwords into their devices whenever required by a service. Instead, users can authenticate themselves to an "authentication translator" via an appropriate technique, and the authentication translator will provide the appropriate credentials to the implicated service on the user's behalf. Also as will be described in more detail below, authentication translators can be located in a variety of places within an environment. For example, notebook computer 102 includes an authentication translator module 132 that provides authentication translation services. The other devices 104-108 can also include (but need not include) their own respective authentication translator modules. The owner of bank website 122 also operates an authentication translator 134 associated with the bank. Finally, authentication translator 136 provides authentication translation services to a variety of businesses, including online camera retailer 124.

[0016] Figure 2 illustrates an embodiment of credential information stored on a device. In particular, device 200 stores three user profiles 202-206, each of which contains a username and one or more templates (e.g., template 210) associated with the user. In various embodiments, a template is a collection of biometric features. Using fingerprints as an example type of biometric, a corresponding template includes a collection of patterns, minutia, and/or other features that can be matched against to determine if a person's fingerprint matches the fingerprint of the registered user (i.e., the owner of a given user profile). A representation of a single fingerprint may be included in multiple templates (e.g., in different resolutions, in accordance with different protocols, as captured during warm vs. cold conditions, and/or by itself

or in combination with multiple fingerprints). When other biometrics are employed (e.g., facial recognition, voiceprint, or retina scan technology), features appropriate to those types of biometrics are included in the template. Other types of features can also be included in templates. As one example, a user's typing speed and/or accuracy can be measured by a device, such as device 102, and used to distinguish between multiple users of a device. For example, suppose Alice types at 100 words per minute and rarely makes mistakes. A representation of this information can be stored in template 212. Also suppose Alice's niece, who sometimes uses Alice's laptop computer when visiting Alice types at 20 words per minute and makes many mistakes. In some embodiments, the fact that a user was recently (e.g., within the last 5 minutes) typing on laptop 102 at 90 words per minute is evidence of a match against template 212. In this case, the typing speed of 90 words per minute is similar enough to Alice's typical behavior, it is considered a match. Various policies can be included in a profile that govern how matches are to be performed. For example, policies can specify thresholds/tolerances for what constitutes a match, and can specify that different levels of matches can result in different levels of access to different resources.

[0017] A profile is associated with a vault (e.g., vault 220). The vault, in turn, contains triples specifying a service provider/domain, a username, and a credential. The vault can also contain other sensitive user information, such as account numbers, address/phone number information, and health care data. The credential for a service provider/domain can be a password (e.g., for legacy servers), and can also take alternate forms (e.g., a cryptographic key for service providers supporting stronger authentication methods).

[0018] In some embodiments, profiles, templates, and vaults (collectively "authentication information") are stored entirely in an unprotected storage area, and are stored in the clear. In other embodiments, secure storage techniques are used to secure at least a portion of the authentication information.

[0019] One example of a device with secure storage is illustrated in Figure 3. In the example shown, a mobile phone 300 includes a large and insecure storage 302 attached to a fast processor 304, and a smaller but secure storage 306 attached to a dedicated processor 308 and a sensor 310 (e.g., a camera or a fingerprint reader). Users (and applications) can read from and

write to the insecure storage area. However, users cannot access the secure storage area, and the fast processor can only communicate with the dedicated processor/sensor via a restricted API. As another example, a unique decryption key associated with a given vault can be stored in a profile. The vault is an encrypted and authenticated container that can be stored on insecure storage, e.g., on the device, and also backed up (e.g., to a cloud storage service 140 or to an alternate form of external storage). As needed, authentication information or portions thereof can be loaded into secure storage and decrypted. For example, one can use AES to encrypt the files one by one, using a key stored on the secured storage. A message authentication technique, such as HMAC, can be used for authenticating the encrypted files to provide tamper prevention. Profiles and vaults can be updated while in secure storage; if this occurs, they are encrypted and MACed before being written back to the insecure storage, which may in turn propagate them to external backup storage. In yet other embodiments, profiles and vaults are stored entirely in secure storage, in plaintext, which allows them to be both read and written -- and in particular, searched.

[0020] Example Transaction Types

[0021] A variety of transaction types can take place in the environment shown in Figure 1, examples of which are discussed in this section.

[0022] Initial Registration

[0023] In order to begin using the techniques described herein, users perform some form of initial registration. As one example, suppose Alice launches an enrollment program installed on laptop 102. She uses the program to capture various biometric information (e.g., fingerprints, photographs of her face, etc.). A user profile is created for Alice, and the biometric information captured about her is encoded into a plurality of templates, such as templates 210 and 214. In some embodiments, Alice is also explicitly asked to supply credential information for services she would like to use, such as by providing the domain name of social networking site 120, along with her username and password for site 120. In other embodiments, domain/username/credential information is at least passively captured on Alice's behalf and included in one or more vaults such as vault 220. Credential information can also be important from a browser password manager already in use by Alice or other appropriate source. In some

embodiments, Alice also registers with cloud storage service 140, which will allow her to back up her authentication information and to synchronize it across her devices (e.g., 102 and 104), as described in more detail below.

[0024] Other registration approaches can also be used. For example, registration can be integrated into the experience the first time a device is used. Thus, when Bob first turns on tablet 106, he may be prompted to take a picture of his face (with a profile/templates being created in response). Similarly, the first time Charlie uses tablet 106, the techniques described herein can be used to determine that Charlie does not yet have a profile (e.g., because none of the templates already present on tablet 106 match his biometrics) and Charlie can be prompted to enroll as a second user of the device.

[0025] Authentication

[0026] Suppose Alice wishes to authenticate to banking website 122. Using a fingerprint reader incorporated into her laptop, she performs a fingerprint scan, which causes her biometric features to be extracted and compared to any stored templates residing on her computer. If a match is found, an associated decryption key is selected, and the associated vault is loaded and decrypted. The vault is scanned for an entry that matches the selected service provider (i.e., website 122). If a matching entry is found, the associated domain, username, and site credential are extracted from the vault. In some embodiments, the validity of the domain name mapping is verified at this point to harden the system against domain name poisoning. Next, a secure connection is established between Alice's computer and the service provider, and Alice is authenticated. For service providers supporting strong user authentication, mutual SSL can be used, for example. A variety of policies can be involved when performing matching. For example, to access certain domains, Alice's print may need only match template 210. To access other domains, Alice may need to match multiple templates (e.g., both 210 and 214). As another example, in order to access social networking site 120, Alice may merely need to be sitting in front of her computer, which has an integrated webcam. Even in relatively low light conditions, a match can be performed against Alice's face and features stored in a template. However, in order to access bank website 122, Alice may need a high quality photograph (i.e., requiring her to turn on a bright light) and may need to demonstrate liveness (e.g., by blinking or turning her

head). As yet another example, other contextual information can be included in policies. For example, if Alice's IP address indicates she is in a country that she is not usually in, she may be required to match multiple templates (or match a template with more/better quality features) in order to access retailer 124, as distinguished from when her IP address indicates she is at home.

[0027] In some embodiments, the biometric sensor used by a user may be a peripheral device (e.g., a mouse with an integrated fingerprint scanner that is connected to the user's primary device via USB). In such scenarios, the peripheral device may be responsible for storing at least a portion of authentication information and may perform at least some of the authentication tasks previously described as having been performed by Alice's computer. For example, instead of processors 304 and 308, and storages 302 and 306 being collocated on a single device (e.g., laptop 102), processor 304 and storage 302 may be present on a primary device, and processor 308 and storage 306 may be present on a peripheral device (e.g., that also includes a sensor, such as a fingerprint reader).

[0028] In such scenarios, once Alice's login to banking website 122 is successfully completed, the secure session can be handed over from the peripheral device to the primary device, in a way that does not allow the primary device retroactive access to the plaintext data of the transcripts exchanged between the peripheral device and the service provider. One way this can be accomplished is by renegotiating SSL keys between the peripheral device and the website, after which the newly negotiated key can be handed off from the peripheral device to the primary device. This avoids retroactive credential capture in a setting where the device is infected by malware.

[0029] An example of renegotiation is depicted in Figure 4. Specifically, after a user has successfully authenticated to a fingerprint reader, a login is performed to a service provider. Using the primary device (404) as a proxy, the peripheral fingerprint reader 402 negotiates a first SSL connection (408) with a service provider 406, over which credentials are exchanged. The proxy then renegotiates SSL (410), which replaces the old key with a new one. The new key is disclosed to the device, which then seamlessly takes over the connection with the service provider and performs the transaction protected by the authentication. The credentials exchanged during the first SSL connection cannot be accessed by device 404, since the key of the

renegotiated session is independent of the key of the original session; this provides protection against malware residing on the device. Renegotiation can be used when the primary device 404 is believed to be in a safe state when performing the negotiation of the SSL connection, but it is not known whether it is in a safe state during the transaction protected by the authentication. Renegotiation can also be used when a secure component of the primary device 404 performs the negotiation of the SSL connection and another and potentially insecure component of the primary device 404 is involved in the transaction protected by the authentication.

[0030] Figure 5 illustrates an embodiment of a process for performing authentication translation. The process begins at 502 when a request to access a resource is received, as is an authentication input. One example of the processing performed at 502 is as follows. Suppose Alice wishes to sign into social networking website 120. She directs a web browser application installed on client 102 to the social networking website. Authentication translator module 132 recognizes, from the context of Alice's actions (e.g., that she is attempting to access site 120 with her browser) that she would like to access a particular resource. Authentication translator module 132 prompts Alice (e.g., by a popup message or via a sound) to provide biometric information (e.g., to use the integrated fingerprint reader on her laptop). In some embodiments, the translator module does not prompt Alice, for example, because Alice has been trained to provide biometric information automatically when attempting to access certain resources. In yet other embodiments, the translator module only prompts Alice if she fails to provide acceptable biometric information within a timeout period (e.g., 30 seconds).

[0031] Module 132 compares Alice's supplied biometric data to the templates stored on her computer. If a suitable match is found, and if an entry for site 120 is present in the applicable vault, at 504, a previously stored credential associated with the resource is accessed. In particular, the username and password for the website, as stored in a vault, such as vault 220, are retrieved from the vault.

[0032] Finally, at 506, the credential is provided to the resource. For example, Alice's username and password for site 120 are transmitted to site 120 at 506. The credential can be transmitted directly (e.g., by the module or by Alice's computer) and can also be supplied

indirectly (e.g., through the use of one or more proxies, routers, or other intermediaries, as applicable).

[0033] Other devices can also make use of process 500 or portions thereof. For example, when Alice launches a banking application on phone 104, implicit in her opening that application is her desire to access the resources of website 134. The application can take Alice's picture and compare it to stored templates/vault information. If an appropriate match is found, a credential can be retrieved from the vault on her phone (or, e.g., retrieved from cloud storage service 140) and provided to website 134.

[0034] As another example, suppose Charlie is using tablet 106 and attempts to visit site 120, whether via a dedicated application or via a web browser application installed on the tablet. Charlie's photograph is taken, and then compared against the profiles stored on tablet 106 (e.g., both Bob and Charlie's profiles). When a determination is made that Charlie's photograph matches a template stored in his stored profile (and not, e.g., Bob's), Charlie's credentials for site 120 are retrieved from a vault and transmitted by an authentication translator module residing on client 106.

[0035] As yet another example, kiosk 108 can be configured to provide certain local resources (e.g., by displaying a company directory or floor plan on demand) when users speak certain requests into a microphone. Enrolled users (e.g., with stored voiceprint or facial recognition features) can be granted access to additional/otherwise restricted services in accordance with the techniques described herein and process 500.

[0036] New device

[0037] In some embodiments, to register a new device, a user provides an identifier, such as a username or an account number to the device. The new device connects to an external storage (such as cloud storage 140), provides the user identifier and credential, and downloads the user's templates/vaults from the service. In some embodiments, the templates/vaults are encrypted. Once downloaded, the template is decrypted and stored in a secure storage area, while the still encrypted vault can be stored in insecure storage. The decryption key can be generated from information the user has/knows, or from biometric data -- such as features

extracted from fingerprinting of all ten fingers. In some embodiments, more arduous fingerprinting is required for the setup of a new device than for regular authentication to avoid that a new device gets registered by a user thinking she is merely authenticating -- or worse still, simply touching the device. Moreover, it translates into higher entropy of the decryption keys.

[0038] Backup Authentication

[0039] Backup authentication allows a user, such as Alice, to access resources in the event she is unable to or unwilling to interact with a particular biometric sensor. As one example, instead of having a single template associated with her profile, Alice can have multiple templates associated with it, e.g., where the first template includes fingerprint features and the second template includes voice biometric, facial recognition, or iris detection features. As a second example, where the service Alice is connecting to is a legacy website (i.e., one that users authenticate to using usernames and passwords), such a service would allow the use of passwords and password reset mechanisms by Alice without requiring Alice to use a fingerprint reader.

[0040] In various embodiments, environment 100 supports the ability of users (e.g., under duress) to release the contents of their vaults. For example, if Alice was physically threatened with the loss of a finger by a criminal, Alice could instead release the contents of her vault(s) – the ultimate goal of the criminal. As one example, in the event Alice supplies all 10 fingerprints to the sensor, provides a special password, or supplies a fingerprint and a second identifier, a cleartext version of her vault(s) could be made available.

[0041] Access Policies

[0042] In various embodiments, cloud storage service 140 is configured to accept backups from multiple devices associated with a single account, and synchronize the updates so that all devices get automatically refreshed. For example, Alice's laptop 102 and phone 104 could both communicate with cloud storage service 140 which would keep their authentication information synchronized. Refreshes can also be made in accordance with user-configured restrictions. For example, Alice's employer could prevent privileged employer data from being stored on shared personal devices, or on any device that was not issued by the employer. As

another example, arbitrary policies can be defined regarding the access to and synchronization of software and data, and to tie a license or access rights to a person (and her fingerprint) rather than to a device. As yet another example, in some embodiments (e.g., where a device is made publicly available or otherwise shared by many users), no or a reduced amount of authentication information resides on a device, and at least a portion of authentication information is always retrieved from cloud storage service 140.

[0043] Remote wiping

[0044] Remote wiping of a user's authentication information (e.g., templates) can be used both to "unshare" previously shared devices (e.g., where Bob and Charlie both have user profiles on their shared tablet 106), and to avoid that criminals with physical component access to lost devices gain access to templates and vault contents. In some embodiments, policies such as ones where a template self-wipes if it is not matched within a particular duration of time are supported. Since user data can be frequently backed up to the cloud storage, and recovered from this using the new device registration process, inconvenience to the user will be minimized.

[0045] Legacy Server Support

[0046] New authentication schemes typically require changes to a significant codebase residing with service providers. If the code is well written and documented, such changes may be relatively simple. Commonly, though, this may not be so. The engineers who originally wrote the code of relevance may have long since left the company; the code they left behind may be poorly documented -- if documented at all. In severe cases, the legacy code may have been written in an outdated programming language or written in a way that does not follow guidelines for good code. This makes updates to the codebase impractical or virtually impossible in many common cases. Even if none of these challenges complicate the desired modifications, it is commonly a great bureaucratic burden to obtain permission to make modifications (e.g., to store an extra field in a backend database), because every affected part of the organization may need to review the request.

[0047] As will be described in the following section, the technologies described herein can be used in conjunction with legacy servers (e.g., existing servers that rely on usernames and

passwords to authenticate users), and in particular, can be used without requiring modification to such legacy servers.

[0048] Cookies

[0049] Cookies are commonly used by legacy servers for user authentication. Unfortunately, cookies have several problems. For one thing, they are sometimes deleted -- whether explicitly/intentionally by the end user or by the user's software. In addition, cookies are commonly stolen. Approaches such as cache cookies and identification using user agents can be more resistant to these problems, however, they have their own problems. For example, their use requires new code and new fields in the credential database stored by the server.

[0050] In some embodiments, authentication translators, such as translators 134 and 136 (also referred to herein as proxies) provide authentication translation services on behalf of associated services. Translators 134 and 136 are illustrated as single logical devices in Figure 1. In some embodiments, the translators comprise standard commercially available server hardware (e.g., a multi-core processor, 4+ Gigabytes of RAM, and one or more Gigabit network interface adapters) and run typical server-class operating systems (e.g., Linux). Translators 134 and 136 can also be implemented using a scalable, elastic architecture and may comprise several distributed components, including components provided by one or more third parties. For example, translators 134 and 136 may store user credential information or may task cloud storage service 140 with storing at least a portion of that information.

[0051] In the case of authentication translator 134, service is provided with respect to bank website 122 only. Authentication translator 134 is positioned between a legacy web server (122) and the Internet (110) -- and therefore between the legacy server and any client devices. Authentication translator 134 is configured to translate traffic between the legacy server and client devices so that the client devices (and respective users) perceive the new authentication mechanism, while the legacy server remains unchanged. Authentication translator 136 works similarly, but it provides authentication translation as a third party service to multiple providers, an example of which is online camera retailer 124.

[0052] Authentication translators 134 and 136 can also perform process 500. For example, when a device transmits a request to access website 122, the request is intercepted by translator 134, as is cookie/user agent information. The received information can be used to determine a username/password associated with the device, and that information can be passed by translator 134 to website 122 on behalf of the device.

[0053] Figure 6 illustrates an example of what occurs when a client device first visits the site of a legacy server via an authentication translator. The translator (referred to in the figure as a “proxy”) fails to identify the client, and passes on the request to the legacy server. The legacy server responds to the request and sets a cookie. The proxy passes on the response, including the cookie and also a cache cookie. The proxy stores the information about both these types of identifiers, along with the user agent of the client device. This triplet of information is also referred to herein as an identifier.

[0054] Figure 7 illustrates an example of what occurs when a device subsequently visits the site of a legacy server via an authentication translator. In this scenario, the device’s request is accompanied by some form of identifying information. The proxy uses this information to identify the associated cookie and passes this along to the legacy server, along with the request. In some embodiments, additional processing is also involved. For example, reading a cache cookie may require user interaction. Moreover, if not all of the identifying information is present in the request, the proxy can be configured to set the missing information again by sending a corresponding request to the client device.

[0055] The translation of cache cookies and user agent information to cookies involves a two-way translation. First, when the legacy server sets a cookie, the proxy will set the two types of cookies -- both an HTML cookie and a cache cookie -- and then create a new record in which the two cookies are stored, along with the user agent information of the client device. The user agent information can include quite a bit of data associated with a browser -- such as the browser type and version, the clock skew, and the fonts that are installed. While each of these pieces of information only contributes a small amount of entropy, the collection of items can be sufficient to identify the device in most cases. Moreover, while some of these types of data may change over time -- in fact, all of them may -- they do not typically change, and when one or two of

them do, the others typically do not. When the client device is used to visit a site controlled by the legacy server, the cookie, cache cookie and user agent information are read (if available), the record identified, and the request translated and sent to the legacy server. When a legacy server requests that the user password is updated (e.g., as part of an annual or other periodic requirement), the transmission of this request to the user can be suppressed -- in which case the database of the proxy is updated to create the illusion of an update. The user can be involved in authentication as needed, e.g., if, in addition to supplying a credential, a user must also solve a CAPTCHA, the CAPTCHA can be displayed to the user (with the user's credentials being handled in accordance with the techniques described herein).

[0056] Figure 8 shows the structure of an example of a cache cookie used in some embodiments. Cache cookies can be associated with a particular webpage, just like an HTML cookie can. In the example shown in Figure 8, the proxy wishes to associate a page "callingpage.html" with a cache cookie. It embeds a request for a second object, "samename.html" in callingpage.html for every visitor. However, as the cache cookie is set for one visitor, a customized samename.html is served to this visitor. The page samename.html refers to an object with a different name for each user; that object is referred to as "uniquename.jpg." The cache cookie is set by embedding the request for samename.html in callingpage.html. The client browser attempts to render this, causing a request for samename.html from the server. The server configures samename.html to refer to a uniquely named file uniquename.jpg, and serves samename.html to the client. For the client browser to render samename.html, it requests the file uniquename.jpg, which is intentionally not served. That concludes the setting of a cache cookie. As a user returns to the page callingname.html, the browser again attempts to render the entire page, which causes it to load the object samename.html from its cache. As that is rendered, the client browser requests uniquename.jpg, which is not in its cache (since it was not served previously). The server still does not serve it, but takes note of the name of the file being requested, as it identifies the client device. Note that samename.html can be displayed in a zero-sized iframe, which makes the end user unaware of it being rendered.

[0057] A cache cookie is an implementation of the typical cookie functionality that uses the client device's browser cache. Unlike user agents, it does not change over time, and like standard HTML cookies, it cannot be read by a party other than that which set it. However, like

HTML cookies, it could be deleted -- by the user clearing his or her browser cache. Cache cookies are not automatically transmitted with GET requests, unless the cache elements are embedded in the referring pages. This adds a potential round of communication in some settings. By relying on user agent information, cache cookies, and HTML cookies to identify the client device, it is much more likely that a machine will be recognized than if only HTML cookies are used.

[0058] Although the foregoing embodiments have been described in some detail for purposes of clarity of understanding, the invention is not limited to the details provided. There are many alternative ways of implementing the invention. The disclosed embodiments are illustrative and not restrictive.

[0059] WHAT IS CLAIMED IS:

CLAIMS

1. A system, comprising:
a first processor of a first device, wherein the first processor is configured to:
based at least in part on a request associated with a user to access an external
resource, establish a secure connection with the external resource; and
communicate with a second processor using a restricted interface, wherein the
second processor is configured to:
receive a biometric input from a sensor, wherein the biometric input
corresponds to at least one of a fingerprint, a feature usable for facial recognition,
a voiceprint, a feature usable for a retina scan, and a typing feature; and
access a record stored in a secure storage, wherein the record is associated
at least with the external resource;
retrieve, from the record, at least one of a password, a cookie, and a
cryptographic key;
perform a cryptographic operation;
in response to determining that there is a match between the biometric
input and a stored biometric template accessed by the second processor, facilitate
a login of the user to the external resource at least in part by transmitting, via the
established connection, output based at least in part on the at least one of the
password, the cryptographic key, and the cookie retrieved from the record, and
wherein the user is logged in to the external resource based at least in part on the
output; and
perform a secure backup of the record to a storage service, wherein a
second device associated with the user is registered with the storage service, and
wherein the record is downloaded from the storage service by the second device;
and
a memory coupled to the first processor and configured to provide the first processor with
instructions.
2. The system recited in claim 1, wherein the storage service comprises a cloud storage
service.

3. The system recited in claim 1 wherein the second device is registered with the storage service at least in part by:

connecting to the storage service; and

providing at least one of a user identifier and a credential to the storage service,

5 wherein the user identifier comprises at least one of a username and an account number.

4. The system recited in claim 1, wherein the record downloaded by the second device is encrypted.

5. The system recited in claim 4, wherein the second device is configured to decrypt the downloaded record and store the decrypted record to a secure storage associated with the second
10 device.

6. The system recited in claim 5, wherein the downloaded record is decrypted by the second device using a decryption key that is generated based at least in part on information associated with the user.

7. The system recited in claim 5, wherein the downloaded record is decrypted by the second
15 device using a decryption key that is generated based at least in part on biometric data.

8. The system recited in claim 5, wherein the downloaded record is decrypted by the second device using a decryption key generated using one or more features extracted from fingerprinting.

9. The system recited in claim 4, wherein the encrypted record is stored to an insecure
20 storage associated with the second device.

10. The system recited in claim 1, wherein performing the cryptographic operation comprises decrypting the record.

11. A method, comprising:

based at least in part on a request associated with a user to access an external resource,
25 establishing, by a first processor of a first device, a secure connection with the external resource;
and

communicating with a second processor using a restricted interface, wherein the second processor is configured to:

- receive a biometric input from a sensor, wherein the biometric input corresponds to at least one of a fingerprint, a feature usable for facial recognition, a voiceprint, a feature usable for a retina scan, and a typing feature; and
- access a record stored in a secure storage, wherein the record is associated at least with the external resource;
- retrieve, from the record, at least one of a password, a cookie, and a cryptographic key;
- perform a cryptographic operation;
- in response to determining that there is a match between the biometric input and a stored biometric template accessed by the second processor, facilitate a login of the user to the external resource at least in part by transmitting, via the established connection, output based at least in part on the at least one of the password, the cryptographic key, and the cookie retrieved from the record, and wherein the user is logged in to the external resource based at least in part on the output; and
- perform a secure backup of the record to a storage service, wherein a second device associated with the user is registered with the storage service, and wherein the record is downloaded from the storage service by the second device.

12. The system recited in claim 1, wherein the storage service comprises a cloud storage service.

13. The system recited in claim 1 wherein the second device is registered with the storage service at least in part by:

- connecting to the storage service; and
- providing at least one of a user identifier and a credential to the storage service, wherein the user identifier comprises at least one of a username and an account number.

14. The system recited in claim 1, wherein the record downloaded by the second device is encrypted.

15. The system recited in claim 4, wherein the second device is configured to decrypt the downloaded record and store the decrypted record to a secure storage associated with the second device.

16. The system recited in claim 5, wherein the downloaded record is decrypted by the second device using a decryption key that is generated based at least in part on information associated with the user.

17. The system recited in claim 5, wherein the downloaded record is decrypted by the second device using a decryption key that is generated based at least in part on biometric data.

18. The system recited in claim 5, wherein the downloaded record is decrypted by the second device using a decryption key generated using one or more features extracted from fingerprinting.

19. The system recited in claim 4, wherein the encrypted record is stored to an insecure storage associated with the second device.

20. The system recited in claim 1, wherein performing the cryptographic operation comprises decrypting the record.

21. A computer program product embodied in a non-transitory computer readable storage medium and comprising computer instructions for:

based at least in part on a request associated with a user to access an external resource, establishing, by a first processor of a first device, a secure connection with the external resource; and

communicating with a second processor using a restricted interface, wherein the second processor is configured to:

receive a biometric input from a sensor, wherein the biometric input corresponds to at least one of a fingerprint, a feature usable for facial recognition, a voiceprint, a feature usable for a retina scan, and a typing feature; and

access a record stored in a secure storage, wherein the record is associated at least with the external resource;

retrieve, from the record, at least one of a password, a cookie, and a cryptographic key;

perform a cryptographic operation;

5 in response to determining that there is a match between the biometric input and a stored biometric template accessed by the second processor, facilitate a login of the user to the external resource at least in part by transmitting, via the established connection, output based at least in part on the at least one of the password, the cryptographic key, and the cookie retrieved from the record, and wherein the user is logged in to the external resource based at least in part on the output; and

10 perform a secure backup of the record to a storage service, wherein a second device associated with the user is registered with the storage service, and wherein the record is downloaded from the storage service by the second device.

ABSTRACT OF THE DISCLOSURE

Authentication translation is disclosed. A request to access a resource is received at an authentication translator, as is an authentication input. The authentication input corresponds to at least one stored record. The stored record is associated at least with the resource. In response to the receiving, a previously stored credential associated with the resource is accessed. The credential is provided to the resource.

SCORE Placeholder Sheet for IFW Content

Application Number: 16773767

Document Date: 01/27/2020

The presence of this form in the IFW record indicates that the following document type was received in electronic format on the date identified above. This content is stored in the SCORE database.

Since this was an electronic submission, there is no physical artifact folder, no artifact folder is recorded in PALM, and no paper documents or physical media exist. The TIFF images in the IFW record were created from the original documents that are stored in SCORE.

- Drawing

At the time of document entry (noted above):

- USPTO employees may access SCORE content via DAV or via the SCORE web page.
- External customers may access SCORE content via PAIR using the Supplemental Content tab.