

**Case Nos. 2016-2415, 2017-2101, 2017-2191**

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**IN THE UNITED STATES COURT OF APPEALS  
FOR THE FEDERAL CIRCUIT**

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**KAMRAN ASGHARI-KAMRANI,  
NADER ASGHARI-KAMRANI**

Plaintiffs-Appellants,

v.

**UNITED SERVICES AUTOMOBILE ASSOCIATION,**

Defendant-Cross-Appellant.

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*On appeal from the U.S. District Court for the Eastern District of Virginia  
in Asghari-Kamrani et al. v. USAA, Civil Action No. 2:15-cv-478-RGD-RJK,  
Senior District Judge Robert G. Doumar*

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**APPELLANTS' PETITION FOR REHEARING *EN BANC***

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**CERTIFICATE OF INTEREST**

Counsel for Appellants Nader Asghari-Kamrani and Kamran Asghari-Kamrani certifies the following:

1. The full name of every party represented by the undersigned counsel in this matter is:

*Nader Asghari-Kamrani and Kamran Asghari-Kamrani*

2. The names of the real parties in interest represented by us are:

*Nader Asghari-Kamrani and Kamran Asghari-Kamrani*<sup>1</sup>

3. All parent corporations and any public companies that own 10 percent or more of the stock of the parties represented by us are:

None

4. The names of all law firms and the partners or associates that appeared for the parties now represented by us in the trial court or are expected to appear in this Court are:

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<sup>1</sup> Third parties, none of which are corporations or public companies, have a financial interest in the outcome of this case. These third parties do not possess the substantive interest being asserted, nor do they direct or control the litigation. Discovery into the identities of these third parties was denied as irrelevant by the district court. *E.g.*, Dkt. No. 119 at 8-10. These third parties are therefore not believed to be “real parties in interest” under Federal Circuit Rule 47.4, but are simply being disclosed in an abundance of caution.

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5. The title and number of any case known to counsel to be pending in this or any other court or agency that will directly affect or be directly affected by this Court's decision in the pending appeal (*see* Fed. Cir. R. 47.4(a)(5) and 47.5(b)) are:

*Other pending appeals involving the patent-in-suit, which were heard in a consolidated hearing by the same panel:*

(a) *Asghari-Kamrani v. United Services Automobile Association*,  
Case Nos. 17-2504, 17-2505 (Fed. Cir.) (Rule 36 affirmance)

(b) *Asghari-Kamrani v. United Services Automobile Association*,  
Case Nos. 18-1040, 18-1041 (Fed. Cir.) (vacated as moot in light of the Rule 36 affirmance of the district court's invalidity ruling under Section 101)

Dated: October 11, 2018

*/s/ Antigone Gabriella Peyton*

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Antigone Gabriella Peyton

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**STATEMENT OF COUNSEL**

Based on my professional judgment, I believe the panel decision is contrary to the following decisions of the Supreme Court of the United States and precedent of this Court: *Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 134 S. Ct. 2347 (2014); *Mayo Collaborative Servs. v. Prometheus Laboratories, Inc.*, 566 U.S. 66 (2012); *Berkheimer v. HP Inc.*, 881 F.3d 1360 (Fed. Cir. 2018); *Aatrix Software, Inc. v. Green Shades Software, Inc.*, 890 F.3d 1354 (Fed. Cir. 2018); *Amdocs (Israel) Ltd. v. Openet Telecom, Inc.*, 841 F.3d 1288 (Fed. Cir. 2016); *SiRF Tech. Inc. v. Int'l Trade Comm'n*, 601 F.3d 1319 (Fed. Cir. 2010); *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327 (Fed. Cir. 2016).

Based on my professional judgment, I believe this appeal requires an answer to one or more precedent-setting questions of exceptional importance:

1. Is the threshold inquiry for patent eligibility under 35 U.S.C. § 101 a pure question of law without underlying factual issues relating to the question of whether the claims transform an abstract idea into a patent-eligible application, including whether they are directed to improvements in computer technology *or* merely describe well-understood, routine, and conventional activities known in the industry (the *Alice* Step Two inquiry)?
2. Can a district court conclude, when considering a Rule 12(b)(6) motion, that a computer-based invention's claims directed towards



authenticating a user during an electronic transaction with an external entity by way of a central entity—using a digital identity and dynamic code—fail to recite an improvement in authentication technologies implemented on a computer network and merely recite well-understood, routine, and conventional activities *without* construing the claims or applying the patentee’s proposed construction, considering the patent’s teachings, or considering relevant fact evidence such as expert testimony on the nature of the invention and state of the art, prior art teachings, or industry practices?

Dated: October 11, 2018

*/s/ Antigone Gabriella Peyton*

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## INTRODUCTION

For a very long time, Section 101 of the Patent Act was essentially a dead section of the patent laws—one rarely invoked to invalidate an issued patent. *See, e.g., Mackay Radio & Telegraph Co. v. Radio Corp. of Am.*, 306 U.S. 86 (1939); *Gottschalk v. Benson*, 409 U.S. 63 (1972); *Parker v. Flook*, 437 U.S. 584 (1978). But times have changed since this Court reaffirmed that a claimed invention is eligible for patent protection if it involves some practical application that “produces a ‘useful, concrete, and tangible result.’” *State St. Bank & Trust Co. v. Signature Fin. Grp., Inc.*, 149 F.3d 1368, 1375 (Fed. Cir. 1998) (citation omitted).

Since this Court’s decisions in a series of cases starting in 2007,<sup>2</sup> and the Supreme Court’s articulation of a revised patent-eligibility inquiry in *Alice* and *Mayo*<sup>3</sup>—Section 101 has become a popular rationale for blocking or invalidating patents at the United States Patent and Trademark Office (“USPTO”) and an effective, but problematic, docket clearing tool for district courts and this Court.

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<sup>2</sup> *In re Comiskey*, 499 F.3d 1365 (Fed. Cir. 2007) (finding several patent claims invalid under Section 101, *sua sponte*, where patentability was not raised as an issue during prosecution or on appeal) (judgement vacated during rehearing *en banc* and reassigned to the original panel for revision on January 13, 2009), *superseded by In re Comiskey*, 554 F.3d 967 (Fed. Cir. 2009) (upholding and defending prior judgement of invalidity under Section 101); *In re Bilski*, 545 F.3d 943 (Fed. Cir. 2008), *aff’d*, 561 U.S. 593 (2010); *In re Nuijten*, 500 F.3d 1346 (Fed. Cir. 2007), *reh’g en banc denied*, 515 F.3d 1361 (Fed. Cir. 2008) (*en banc*) (Linn, J., dissenting) (concluding decision conflicts with Supreme Court precedent regarding application of Section 101).

<sup>3</sup> *Alice Corp. Pty. Ltd. v. CLS Bank Int’l*, 134 S. Ct. 2347 (2014); *Mayo Collaborative Servs. v. Prometheus Labs. Inc.*, 566 U.S. 66 (2012).

Several members of this Court, members of its bar, the public, interested associations and organizations, and USPTO representatives (including current Director Iancu) agree that the patentability law is so unsettled that, in the words of the USPTO Director, it has led to “distorted legal conclusions” about patent eligibility and “it must end.”<sup>4</sup> Additionally, the current patentability standard has been criticized for improperly taking into account unrelated patentability issues like obviousness or lack of written description support.<sup>5</sup>

In this unsettled, post-*Alice* era, district courts regularly wipe out long-standing patents without engaging in an analysis of the claim scope or meaning, before hearing from experts or the inventors regarding the patented technology and the state of the art from a skilled artisan’s perspective, and without an understanding of the prior art and other patentability issues under Sections 102, 103, and 112 of the Patent Act. And as of August 2018, this Court has upheld 90%

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<sup>4</sup> Remarks by Director Iancu at the Intellectual Property Owners Association 46th Annual Meeting (Sept. 24, 2018) (“Iancu Remarks”), <https://www.uspto.gov/about-us/news-updates/remarks-director-iancu-intellectual-property-owners-46th-annual-meeting>; Ryan Davis, Iancu Wants to Clear Up Patent Eligibility of Abstract Ideas, *Law360* (Sept. 24, 2018) (stating USPTO is developing revised guidance for examiners to provide significantly more clarity on when inventions are eligible for patents), <https://www.law360.com/articles/1085699/>; Ryan Davis, Patent System in ‘Crisis Mode,’ Ex-Fed. Circ. Chief Says, *Law360* (Jul. 13, 2017), <https://www.law360.com/articles/944213>; Ryan Davis, Fed. Cir. Judges’ Plea to Reps Shows Patent-Eligibility Angst, *Law360* (Jun. 4, 2018), <https://www.law360.com/articles/1049274>.

<sup>5</sup> *Supra*, fn. 4, Iancu Remarks.

of the Section 101 patent invalidity decisions appealed to it from the district courts since the *Alice* decision issued in 2014.<sup>6</sup>

Two recent decisions of this Court confirm that certain patent eligibility inquiries involve underlying issues that are factual in nature—determinations that cannot be made at the pleading or dispositive motions stage against the patentee without consideration of the relevant facts and claim constructions, as developed in discovery or confirmed to be undisputed by the patentee. *Berkheimer*, 881 F.3d at 1368-69, *reh'g en banc denied*, 890 F.3d 1369 (Fed. Cir. 2018), *petition for cert. filed*, Case No. 18-415 (Oct. 3, 2018); *Aatrix*, 882 F.3d at 1125, 1130, *reh'g en banc denied*, 890 F.3d 1354 (Fed. Cir. 2018). Other decisions of this Court issued before and after *Berkheimer* and *Aatrix* plainly do not apply the same analysis to the question of whether these issues are factual ones.

For example, in this appeal, the Court affirmed the district court's ruling on a Rule 12(b)(6) motion that U.S. Patent No. 8,266,432 (“the '432 patent”) is directed to ineligible subject matter (as a matter of law) based on its unsupported conclusion that the authentication technology involves an old authentication method using a general purpose computer. This affirmance came as a Rule 36

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<sup>6</sup> Meredith Addy, *Alice at Age Four: Time to Grow Up*, IPWatchdog (Sept. 18, 2018), <https://www.ipwatchdog.com/2018/09/18/alice-age-four-grow-up/id=101447/>. (calculating that the Federal Circuit has reversed or vacated only nine cases appealed to it from an invalidity judgment on 101 grounds since the *Alice* decision issued).

judgment, without written opinion, and it is one of many decisions by this Court upholding an early analysis of Step Two of the *Alice* test as a pure legal matter. *See, e.g., TS Patents LLC v. Yahoo! Inc.*, 731 Fed. Appx. 978 (Fed. Cir. 2018) (Rule 36 affirmance of judgment on the pleadings in favor of accused infringer); *Dialware Commc'ns, LLC v. Hasbro, Inc.*, 718 Fed. Appx. 974 (Fed. Cir. 2018) (Rule 36 affirmance of invalidity ruling on motion to dismiss involving five patents and over 250 claims based on a single representative claim, based on district court's conclusion that the patents claim a "practice which has long been used by both people and devices"), *aff'g* No. CV 16-9012-R, 2017 WL 3453298, at \*2 (C.D. Cal. Mar. 22, 2017).

Since *Alice*, the district courts have issued approximately 480 invalidity decisions based on Section 101, and 74% of them occurred at the pleadings stage.<sup>7</sup> The frequency with which this issue is litigated and appealed, along with the intra-circuit split on the patentability test, demonstrate that this Court should reconsider the patentability analysis *en banc*. It should not wait for Congress to become interested in and take up this issue with the hope that the legislature fully understands the concept, its real-world impact, or how it would craft a workable, legislative fix. *Cf. Aatrix*, 890 F.3d at 1360 (*en banc*) (Lourie, J., concurring)

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<sup>7</sup> *Id.* (statistics reflect data collected through August 2018).

(concluding that the patentability law “needs clarification by higher authority, perhaps by Congress”).

This Court and the Supreme Court have repeatedly explored the purpose and scope of Section 101 and developed various frameworks for analyzing patent claims under it. As the sole circuit court that hears patent appeals, this Court has subject matter expertise in this area. Many parties—including litigants, industry organizations, and members of the Court’s bar—have asked this Court to bring greater clarity and certainty to the patentability test and articulate guidance for applying it consistently in individual cases. The USPTO is currently attempting to provide clarity to parties, but its hands are tied by this Court’s intra-circuit split and the inconsistent articulation and application of the patent validity inquiries in different cases.

This appeal is the right vehicle for the full Court to resolve this tension. Proper analysis and application of the *Alice* test is outcome determinative in this case. The ’432 patent is one of eight issued patents in the family, and five patent family members overcame the patentability hurdle after the Examiner considered the district court’s non-statutory subject matter ruling against the ’432 patent. While each set of patent claims should be evaluated individually, the USPTO’s determination that other family members’ claims are patentable highlights the

uncertainty and inconsistency resulting from application of the current legal standard.

Additionally, this case presents an unusual circumstance involving parallel appealed PTAB rulings exercising jurisdiction over the '432 patent as a covered business method patent (“CBM”). In those decisions, the PTAB concluded that the patent does not meet the “technological invention” exception to CBM jurisdiction. Those decisions were considered by the panel along with the district court’s determination (as a matter of law) that the '432 patent did not present a specific technical solution to a technical problem under the *Alice* test.<sup>8</sup>

### **BACKGROUND**

The '432 patent issued from an application filed September 15, 2008, and is titled “Centralized Identification and Authentication System and Method.” This patent has a claimed priority date of August 29, 2001.<sup>9</sup> Appx37-48; Appx34. The

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<sup>8</sup> Plaintiffs-Appellants have not filed a petition for rehearing *en banc* relating to the two CBM decisions invalidating the '432 patent. (Nos. 2018-1040 and 2018-1041). The panel vacated those decisions as moot in light of its affirmance of the district court’s invalidity ruling on 101 grounds. If the Court determines *sua sponte* that it is also interested in considering the jurisdictional issues raised in the PTAB appeals—in particular the proper construction and scope of the statutory “technological invention” exception to the PTAB’s jurisdiction in CBM proceedings and the agency’s inconsistent implementing regulations, which import a mini-patentability test, Plaintiffs-Appellants would welcome that decision. The issue is one of exceptional importance that qualifies for *en banc* review.

<sup>9</sup> On August 29, 2001, the Inventors applied *pro se* for the first of several patents on their technological solution, without any outside financial support.

'432 patent is directed towards solving the specific technological problem of authenticating users who are engaged in an electronic transaction over an electronic communication network (e.g., the Internet). This ecosystem gave rise to the problem that the '432 patent solves because, unlike face-to-face activities, it was not built or designed to provide verified identities for people who access information across the network of computers that communicate with each other. Thus, by default, anyone can use a computer to access information across the Internet without sharing their identity.

A number of “solutions” have been proposed and commercialized by security and technology companies dealing with this authentication issue—including use of public key infrastructure (PKI), smart cards, digital certificates, hardware tokens, and use of biometric information—however, all have significant drawbacks that have impeded widespread consumer adoption.<sup>10</sup> Many of these tools were expensive and required expertise beyond the technical capabilities of the average Internet user to implement. Others required preregistration with long lag times, hardware that had to be carried by the person at all times, or limitation to a

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<sup>10</sup> See Appx2702-2706 (public document found in Joint Appendix for companion Case Nos. 2018-1040 and 2018-1041). The district court did not entertain any evidence regarding the state of the art or the specific technological problem solved by the patented invention before issuing its invalidity ruling. If it had considered such evidence, the patentees would have submitted the industry statement cited above to highlight the technical problem and improvement provided by the claimed solution.



single site—necessitating potentially hundreds of site-specific verification methods.

Having worked on data access, data management, and network architecture issues faced by medical centers, the U.S. Government, and corporations, the Inventors saw the need for a simple, technical solution that would be faster, more secure, and more user-friendly than the existing authentication technologies. *See* '432 patent, Col. 1:22-28 and Col. 2:9 (reproduced in addendum). This led them to develop an authentication solution that overcame the problems associated with prior computer network authentication tools. *Id.* at Col. 1:22-28 and Col. 3:47-64.

The '432 patent claims a computer-based authentication process involving development and use of a digital identity to verify the identity of a “user.” A “central-entity” computer system uses that digital identity to provide authentication services to an “external-entity” computer system across an electronic network such that the “user” can verify he is who he says he is for the purpose of engaging in an electronic transaction with the “external entity.” *See id.* at Abstract and Claim 1.

This is an appeal from the district court’s grant of the Defendant’s Rule 12(b)(6) motion to dismiss, holding that the '432 patent is invalid as directed towards patent-ineligible subject matter. The district court decision issued two years ago, before this Court’s decisions in *Berkheimer* and *Aatrix*. Appellants appealed the invalidity ruling to this Court, which reviewed the judgment without

deference and affirmed under Rule 36.

### **REASONS FOR GRANTING THE PETITION**

#### **I. *En Banc* Review Is Necessary to Resolve an Intra-Circuit Split on the Patentability Inquiry, Including the Question of Whether the *Alice* Step Two Considerations Involve Questions of Fact or Are Purely Legal Inquiries**

This Court has held that “[t]he question of whether a claim element or combination of elements is well-understood, routine and conventional to a skilled artisan in the relevant field is a question of fact” when analyzing invalidity issues under Section 101. *Berkheimer*, 881 F.3d at 1368; *Aatrix*, 882 F.3d at 1125; *Mortg. Grader, Inc. v. First Choice Loan Servs. Inc.*, 811 F.3d 1314, 1325 (Fed. Cir. 2016); *Accenture Global Servs. v. Guidewire Software, Inc.*, 728 F.3d 1336, 1340–41 (Fed. Cir. 2013) (noting that patent eligibility presents an issue of law that “may contain underlying factual issues”). This analysis has been alternatively characterized by some members of the Court as an “unremarkable proposition” that is consistent with the Court’s precedent, *Aatrix*, 890 F.3d at 1355 (Moore, J., concurring), and by others as “contrary to that well-established precedent” with “staggering” consequences, *id.* at 1362, 1365 (Reyna, J., dissenting).

Other members of this Court have explicitly suggested that it should wait for help or guidance from Congress or the Supreme Court. *Berkheimer*, 890 F.3d at 1376 (Lourie, J., concurring); *Aatrix*, 890 F.3d at 1360 (Lourie, J., concurring). But the stakeholders cannot wait. This Court should grant *en banc* review to correct an

“incoherent body of doctrine” that “give[s] little confidence that the outcome is necessarily correct” in any individual patentability inquiry. *Interval Licensing LLC v. AOL, Inc.*, 896 F.3d 1335, 1348 (Fed. Cir. 2018) (Plager, J., concurring-in-part and dissenting-in-part). This Court is effectively the court of last resort for this issue. This Court should join the USPTO’s current effort to roll up its sleeves and bring more certainty, predictability, and clarity to the Section 101 analysis.

## **II. The Patentability Analysis Applied to the ’432 Patent Is Inconsistent with the USPTO’s Patentability Evaluation and Its Recent Guidance to Examiners on Section 101 Rejections**

Not only was the patent-in-suit issued after the Supreme Court’s opinions in *Bilski* and *Mayo* were published, but the USPTO allowed four additional applications in the same family (which subsequently issued as patents) and removed a Section 101 rejection in a fifth application after considering the district court’s opinion and order invalidating the ’432 patent under Section 101.<sup>11</sup> The USPTO’s treatment of other applications in the same family highlights the inconsistent treatment of this issue by the courts and the agency with subject matter expertise in this area.

Plaintiffs-Appellants submit, as the current USPTO Director suggests, that patentability rejections should be kept “in their own distinct lanes”; courts and the

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<sup>11</sup> U.S. Patent Appl. Nos. 13/606,538, 13/633,680, 15/833,909, and 15/614,164; *see also* U.S. Patent Appl. No. 15/639,020 (currently on appeal from Final Rejection under Section 103, on obviousness grounds).

USPTO should, indeed, “stop commingling the categories of inventions on one hand with the conditions for patentability on the other.”<sup>12</sup> And abstract ideas *should* be limited to a few specific categories that include the “basic tools of scientific and technological work,” like mathematical formulas and economic practices.<sup>13</sup> But the USPTO cannot clean up this mess alone. It needs this Court’s thoughtful analysis regarding the gatekeeping role that Section 101 should play in a patentability construct, including proper separation of the issues of obviousness, anticipation, and Section 112 support. If a court has concerns about the inventive nature of a patent it will, in due course, consider the accused infringer’s arguments and evidence relating to the novelty and obviousness issues.

As the USPTO Director noted recently, legislative efforts to provide clarity on patent eligibility will take a lot of time, and the result is uncertain.<sup>14</sup> The USPTO examiners, the PTAB, patent applicants, owners, and the public struggle with the uncertainty around patent-eligibility on a daily basis. This issue cannot wait on the hope and dream of a fast and useful legislative or Supreme Court intervention.

### **III. The District Court and This Court Erred in Concluding, as a Matter of Law, that the ’432 Patent Claims Are Directed Towards Patent-Ineligible Subject Matter**

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<sup>12</sup> *Supra*, fn. 4, Iancu Remarks.

<sup>13</sup> *Id.*

<sup>14</sup> *Id.*

The district court failed to engage with the elements of the patent claims to determine whether there is an “inventive concept” or some elements or combination of elements that demonstrate the claims are patent eligible. USAA argued that “the ’432 Patent encompasses neither all technology for authenticating an individual (whether or not for an electronic transaction) nor all 2-factor authentication technology,” and Plaintiffs-Appellants argued that the claims do not “preempt the field of user authentication on a computer network.” Appx465, fn.11; Appx465. These factual positions—which both suggest the claims cover a narrow scope of technology that avoids preemption issues—require an analysis of the claimed technology and the other solutions available in the context of authentication on a computer network, particularly for engagement in an electronic transaction (which is recited in the patent claims, including the preamble of claim 1).

Expert testimony, inventor testimony, and construction of the claim terms would have also impacted the scope of preemption analysis and the search for the inventive concept in the claims. Here, the district court bypassed any evaluation of the scope of preemption, despite the parties’ apparent agreement that preemption is not a problem for this patent. *Cf. Mayo*, 566 U.S. at 85; *Amdocs*, 841 F.3d at 1301 (noting the importance of the preemption inquiry).

Importantly, during the Section 101 hearing, the district court asked about

claim construction and technical issues without actually construing the claims or seeking expert testimony on the state of the art.<sup>15</sup> Appx1608-1610 at 12:7-14:22; Appx1613 at 17:1-9. In responding to Plaintiffs-Appellants' point that "there's absolutely no evidence here on the record about this having been used before the computer context" the district court acknowledged "You're absolutely correct that there isn't any evidence that it was done before. It's just the fact that we all use computers, we all have been in transactions where authentication—well, we all have them." Appx1674-1675 at 78:16-79:4. Yet in its patentability opinion, the district court simply concluded that the patent was directed towards an *old method of authentication* involving a generic computer implementation of an abstract idea, and never disclosed what that "idea" was or how the claimed invention was well-understood, routine, and conventional. Appx12.

The district court also failed to consider or allow for the presentation of evidence relating to the technological solution in the patent claims. The patent disclosure and prior publications regarding Internet-user authentication describe the unique problems associated with Internet-based identity verification that led the Inventors to develop this particular computer-implemented solution.<sup>16</sup> Again, this is a factual issue, and the district court's conclusion that the claimed invention can

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<sup>15</sup> The parties completed *Markman* briefing but the court cancelled the hearing and never construed the claims.

<sup>16</sup> *See supra*, fn. 10.

simply be performed by a human being with pencil and paper *if given an infinite amount of time* is also contrary to the law, contrary to the evidence that would be put forth on this issue, and error. *See McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299, 1313 (Fed. Cir. 2016) (“[P]rocesses that automate tasks that humans are capable of performing are patent eligible if properly claimed.”).

The district court erred in finding facts, without a record, at the motion to dismiss stage. It also required the patentee demonstrate the validity of the claims, turning the burden and presumption of validity on its head. This invalidity decision should be reversed.

### **CONCLUSION**

The '432 patent claims are tied to the concrete and tangible application of authenticating a user across a computer network during an electronic transaction, and they pass muster under *Alice* Step One, as patentable subject matter. *See Enfish*, 822 F.3d at 1335-36. Under *Alice* Step Two, they embody an inventive concept in the field of computer network authentication and describe a distributed architecture of electronic devices, which are engaged in predefined forms of communication with one another and perform the algorithm that is recited in the claims. *See Amdocs*, 841 F.3d at 1301-02 (holding analogous claims involving computer-implemented technology patent-eligible under Section 101); *SiRF Tech.*, 601 F.3d at 1333 (holding GPS receiver and two computer system “satellites” in a

distributed architecture and engaging in predefined communications with each other to achieve a concrete and tangible result).

The presence of factual issues that the district court decided as a pure legal matter on a Rule 12(b)(6) motion without evidence in the record and contrary to its own admission, an intra-circuit split on the factual nature and application of those issues (and the appropriate patent eligibility test in general), and the inconsistent patent eligibility analyses used by this Court and the USPTO support this request for consideration by the full Court. For these reasons, the petition for rehearing *en banc* should be granted and the panel's Rule 36 judgment should be reversed.

Dated: October 11, 2018

Respectfully submitted,

*/s/ Antigone Gabriella Peyton*

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**ADDENDUM**

- a. Rule 36 judgment by the Federal Circuit
- b. Opinion and Order by the district court
- c. U.S. Patent No. 8,266,432

NOTE: This disposition is nonprecedential.

**United States Court of Appeals  
for the Federal Circuit**

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**KAMRAN ASGHARI-KAMRANI, NADER ASGHARI-  
KAMRANI,**  
*Plaintiffs-Appellants*

v.

**UNITED SERVICES AUTOMOBILE ASSOCIATION,**  
*Defendant-Cross-Appellant*

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2016-2415, 2017-2101, 2017-2191

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Appeals from the United States District Court for the Eastern District of Virginia in No. 2:15-cv-00478-RGD-LRL, Senior Judge Robert G. Doumar.

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**JUDGMENT**

---

ANTIGONE GABRIELLA PEYTON, Protorae Law PLLC, Tysons, VA, argued for plaintiffs-appellants. Also represented by REECE WERNER NIENSTADT, Nienstadt PLLC, Washington, DC.

AHMED JAMAL DAVIS, Fish & Richardson PC, Washington, DC, argued for defendant-cross-appellant. Also represented by MICHAEL T. ZOPPO, New York, NY; MATTHEW C. BERNTSEN, Boston, MA.

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THIS CAUSE having been heard and considered, it is

ORDERED and ADJUDGED:

PER CURIAM (DYK, WALLACH, and HUGHES, *Circuit Judges*).

**AFFIRMED. See Fed. Cir. R. 36.**

ENTERED BY ORDER OF THE COURT

September 11, 2018  
Date

/s/ Peter R. Marksteiner  
Peter R. Marksteiner  
Clerk of Court

**IN THE UNITED STATES DISTRICT COURT  
FOR THE EASTERN DISTRICT OF VIRGINIA  
NORFOLK DIVISION**

**NADER ASGHARI-KAMRANI and  
KAMRAN ASGHARI-KAMRANI**

**Plaintiffs,**

**v.**

**CIVIL NO. 2:15cv478**

**UNITED SERVICES AUTOMOBILE  
ASSOCIATION**

**Defendant.**

**OPINION AND ORDER**

This is a suit for patent infringement under 35 U.S.C. § 271. Second Am. Compl. ¶ 1, ECF No. 70. Plaintiffs Nader Asghari-Kamrani and Kamran Asghari-Kamrani (“Plaintiffs”) have alleged that the United Services Automobile Association (“USAA” or “Defendant”) has infringed several claims of United States Patent No. 8,266,432 (“the ’432 patent”). *Id.* USAA has filed a Motion to Dismiss Plaintiffs’ Second Amended Complaint. ECF No. 86. For the reasons set forth below, the Court **GRANTS** the Motion to Dismiss, ECF No. 86, and **DISMISSES WITH PREJUDICE** Plaintiffs’ Second Amended Complaint, ECF No. 70. The Court also **DISMISSES AS MOOT** USAA’s Counterclaims. ECF No. 88.

**I. BACKGROUND**

**A. PROCEDURAL HISTORY**

On October 30, 2015, Plaintiffs filed their initial complaint for patent infringement pursuant to 35 U.S.C. § 271. Compl., ECF No. 1. On December 1, 2015, USAA filed a Motion to Dismiss for Failure to State a Claim. ECF No. 15. Before the Court heard argument on this Motion, Plaintiffs filed an Amended Complaint on December 21, 2015. ECF 19. USAA then

filed a Motion to Dismiss for Failure to State a Claim on January 7, 2016. ECF No. 20. The Court granted this motion on the grounds that Plaintiffs had failed to plead with sufficient particularity. Order, ECF No. 60. The Court granted Plaintiffs leave to amend. Id. On April 12, 2016, Plaintiffs filed a Second Amended Complaint. ECF No. 70. On April 28, 2016, USAA filed the instant Motion to Dismiss. ECF No. 86. On May 12, 2016, Plaintiffs filed their Opposition to the Motion to Dismiss. ECF No. 101. On May 18, 2016, USAA filed its Reply. ECF No. 111. A hearing on the instant motion was held on June 27, 2016. ECF No. 137.

USAA moves for dismissal pursuant to Federal Rule of Civil Procedure 12(b) on two grounds: (1) because the claims of the '432 patent are directed to an abstract idea and are thus ineligible for patent protection; and (2) because the Second Amended Complaint fails to identify with sufficient particularity how USAA infringes the patent. USAA's Mem. in Supp. of its Mot. to Dismiss ("USAA's Mem."), ECF No. 87 at 1. Because the Court holds that the patent is directed to patent-ineligible subject matter, it does not reach USAA's second contention.

#### **B. PATENT-IN-SUIT**

Plaintiffs allege that USAA infringes "at least claims 1-10, 12, 13, 16-26, 28-35, 38-42, 45, 47, 48, 50-52, 54, and 55" of the '432 patent. Second Am. Compl. ¶ 1. According to the Summary of the Invention, "[t]he invention relates to a system and method provided by a Central-Entity for centralized identification and authentication of users and their transactions to increase security in e-commerce." '432 patent 2:52-55, ECF No. 70-1, Ex. A. The patent identifies three entities that perform the patent's methods: (1) a "Central-Entity" which "centralizes user's personal and financial information in a secure environment in order to prevent the distribution of the user's information in e-commerce;" (2) a "user" which "represents both a typical person consuming goods and services as well as a business consuming goods and services, who needs to be identified in order to make online purchases or gain access to restricted

web sites;” and (3) an “External-Entity” which “is any party offering goods or services in e-commerce and needs to authenticate the users based on digital identity.” ’432 patent at Summary of Invention, 2:56–3:6.

Initially, the user signs-up at the Central-Entity and provides his or her “personal or financial information.” Id. at 3:7–8. The Central-Entity gives the user a UserName and Password that he or she will utilize when interacting with the Central-Entity. Id. at 3:8–13. When requested by the user, the Central-Entity also gives the user a SecureCode, which is “dynamic, non-predictable and time-dependent.” Id. at 3:13–16. The user may then provide his or her UserName and SecureCode to the External-Entity. Id. at 3:19–21. The External-Entity then sends the UserName and SecureCode to the Central-Entity, which will validate the information and confirm the identity of the user and inform the External-Entity of the result. Id. at 3:21–26.

This process is described in Claim 1 of the patent, which is representative:

A method for authenticating a user during an electronic transaction between the user and an external-entity, the method comprising:

receiving electronically a request for a dynamic code for the user by a computer associated with a central-entity during the transaction between the user and the external-entity;

generating by the central-entity during the transaction a dynamic code for the user in response to the request, wherein the dynamic code is valid for a predefined time and becomes invalid after being used;

providing by the computer associated with the central-entity said generated dynamic code to the user during the transaction;

receiving electronically by the central-entity a request for authenticating the user from a computer associated with the external-entity based on a user-specific information and the dynamic code as a digital identity included in the request which said dynamic code was received by the user during the transaction and was provided to the external-entity by the user during the transaction; and

authenticating by the central-entity the user and providing a result of the authenticating to the external-entity during the transaction if the digital identity is valid.

The dependent claims build on this basic framework. Independent Claim 25 is an apparatus claim version of Claim 1. Claim 25 requires that two computers perform the functions of the Central-Entity—one to generate a dynamic code and a second to validate it. Independent Claim 48 is another method claim very similar to Claim 1. It requires an alphanumeric dynamic code. Independent Claim 52 is an apparatus claim version of Claim 48 and again uses two computers to perform the functions of the Central-Entity. All independent and dependent claims of the patent require a Central-Entity, a user, and an External-Entity. See '432 patent, Claims 1–55. All claims also require the use of a dynamic code. Id.

## II. LEGAL PRINCIPLES

Section 101 of the Patent Act defines the subject matter eligible for patent protection. It provides:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

35 U.S.C. § 101. The Supreme Court has long recognized an implicit exception to this provision and held that three categories of subject matter are not eligible for patent protection: laws of nature, natural phenomena, and abstract ideas. Alice Corp. Pty. v. CLS Bank Int'l, 134 S.Ct. 2347, 2354 (2014). In Mayo Collaborative Services v. Prometheus Laboratories, Inc., 132 S.Ct. 1289 (2012), the Supreme Court set forth a two-part framework for distinguishing patents that claim one of these patent-ineligible concepts from those that claim patent-eligible applications of these concepts. Alice, 134 S.Ct. at 2355. In the first step, a court determines whether the claims at issue are directed to a patent-ineligible concept. Id. (citing Mayo, 132 S.Ct. at 1286–97). If so, in the second step, a court must consider “what else” is in the claims that may justify patent

protection. Id. (quoting Mayo, 132 S.Ct. at 1297). A court must “consider the elements of each claim both individually and as an ordered combination to determine whether the additional elements transform the nature of the claim into a patent-eligible application.” Id. (internal quotations omitted) (quoting Mayo, 132 S.Ct. at 1298, 1297). This second step is a search for an “inventive concept” that ensures that the patent claims amount to “significantly more” than claims upon an ineligible concept. Id. (quoting Mayo, 132 S.Ct. at 1294).

Patentability under section 101 is an issue of law that may be resolved on a Rule 12(b)(6) motion to dismiss. Content Extraction & Transmission LLC v. Wells Fargo Bank, Nat. Ass’n, 776 F.3d 1343, 1349 (Fed. Cir. 2014). Claim construction is not necessary to dismiss patent claims at the pleading stage if the construction advocated by the patent holder would not make the claims eligible for patent protection. Id. In determining patent eligibility a court does not need to address each individual claim if the court can identify a representative claim and “all claims are substantially similar and linked to the same abstract idea.” Id. at 1348 (internal quotation omitted).

### III. ANALYSIS

#### A. MAYO/ALICE STEP ONE

In Alice, the leading Supreme Court case holding that patent claims were invalid because directed to an abstract idea, the Supreme Court declined “to delimit the precise contours of the ‘abstract ideas’ category.” See 132 S.Ct. at 2357. Recognizing that “precision has been elusive in defining an all-purpose boundary between the abstract and the concrete,” Internet Patents Corp. v. Active Network, Inc., 790 F.3d 1343, 1345 (Fed. Cir. 2015), the Federal Circuit has looked to “some important principles” laid down by the Supreme Court in recent cases to decide what is an abstract idea. Content Extraction, 776 F.3d at 1256. For instance, the Supreme Court has held that fundamental economic and longstanding commercial practices are “methods of organizing



human activity” that are “within the realm of ‘abstract ideas’” as the term is used in section 101 analysis. Alice, 134 S.Ct. at 2356–57. The Supreme Court and Federal Circuit have also compared the claims under review to those found to be directed to an abstract idea in prior cases. Id. at 2355–57 (comparing the claims at issue to those in Bilski v. Kappos, 561 U.S. 593 (2010)); Enfish, LLC v. Microsoft Corp., No. 2015-1244, 2016 WL 2756255, at \*4 (Fed. Cir. May 12, 2016) (identifying this comparative approach).

There have been somewhat contradictory points of emphasis in the opinions of the Supreme Court and Federal Circuit that address what constitutes an abstract idea. In the few cases that the Supreme Court has chosen to take it has consistently found that the patent claims were directed to an abstract idea. See, e.g., Alice, 134 S.Ct. at 2356 (finding the concept of intermediate settlement to be patent ineligible); Bilski, 561 U.S. at 611 (same for the “fundamental economic practice” of hedging). By contrast, the Federal Circuit has cautioned that the “first step of the [Mayo/Alice] inquiry is a meaningful one, . . . a substantial class of claims are not directed to a patent-ineligible concept.” Enfish, 2016 WL 2756255, at \*4. Additionally, the Federal Circuit—with support from language in Alice—has warned that describing claims at “a high level of abstraction and untethered from the language of the claims all but ensures that the exceptions to § 101 shallow the rule.” Id. at \*6; see also Alice, 134 S.Ct. at 2354 (“[W]e tread carefully in construing this exclusionary principle [concerning laws of nature, natural phenomena, and abstract ideas] lest it shallow all of patent law.”).

Critically for the present case, the Federal Circuit has added a new inquiry to step one of the Mayo/Alice analysis when the claims involve computer-related technology. The goal of this inquiry is to distinguish between claims that “merely recite the performance of some business practice known from the pre-Internet world along with the requirement to perform it on the

Internet” and those that are “necessarily rooted in computer technology in order to overcome a problem specifically arising in the realm of computer networks.” DDR Holdings, LLC v. Hotels.com, L.P., 773 F.3d 1245, 1257 (Fed. Cir. 2014). The patent claims in Alice were of the first variety: the claims at issue related to a computerized scheme for mitigating settlement risk by means of a third party, a concept the Supreme Court found to be a standard business practice predating the use of computers. See Alice, 134 S.Ct. at 2352, 2356. Although the Supreme Court considered the significance of computerization in performing the second step of the Mayo/Alice analysis, computerization did not factor into the Supreme Court’s analysis of the first step. Compare id. at 2355–57 and id. at 2357–60. However, the Federal Circuit has begun to ask “whether the claims are directed to an improvement to computer technology versus being directed to an abstract idea, even at the first step of the Alice analysis.” Enfish, 2016 WL 2756255, at \*4. Claims that are directed to an improvement to computer technology are not directed to an abstract idea. Id. at \*8.

All of the claims in the ’432 patent require the use of a computer. Claim 1 of the patent, which is representative, claims a “method for authenticating a user during an electronic transaction.” However, despite the electronic setting and purportedly Internet specific problem addressed, the patent claims are directed to a common method for solving an old problem. The claims are directed to the abstract idea of using a third party and a random, time-sensitive code to confirm the identity of a participant to a transaction. This formulation is admittedly verbose. It is verbose because the patent claims combine two abstract ideas: the use of a third party intermediary to confirm the identity of a participant to a transaction and the use of a temporary code to confirm the identity of a participant to a transaction. It is an obvious combination, and nothing about the combination removes the patent claims from the realm of the abstract.

Nothing about the concept behind the patent claims depends upon their implementation by computers. As USAA points out, the concept could easily be performed either by hand or, more simply, with technologies much older than computers. See USAA's Mem. at 17–18. To adapt USAA's example, let's say that a company (the user, in the terms of the patent) wants to buy a new chair. A local retailer (the External-Entity) will sell goods on credit to anyone who has an account at a local bank (the Central-Entity). By previous arrangement, when the company needs something from the retailer an employee will go to the manager of the bank. The manager will, using a set of dice containing both letters and numbers, generate a random code. The manager writes down this code as well as an expiration time for the code and gives it to the employee. The employee then goes to the retailer. The retailer calls the bank manager and confirms that the code is correct and still valid. The code confirmed, the retailer knows that the individual is an employee of a company that has an account at the bank. The retailer gives the employee a chair.

If this seems a rather involved way to purchase a chair, imagine instead that an intelligence service has a source within a foreign country. Periodically the source (the External-Entity) conveys a packet of information to a courier (the user) sent by the intelligence service. Although the same courier is never used twice, it is important that the source confirm the identity of the courier. By previous arrangement, whenever a courier goes to pick up the packet the courier first visits the source's handler (the Central-Entity), who works at an embassy in the foreign country. The handler gives the courier a time sensitive code. The courier then goes to the source and tells the source the code. The source relays the code back to the handler who confirms its validity and thus the identity of the courier. The packet is then handed over.

A comparison with the claims at issue in Alice is instructive. The claims in Alice related

to a “computerized scheme for mitigating ‘settlement risk’—i.e., the risk that only one party to an agreed-upon financial exchange will satisfy its obligation.” 134 S.Ct. at 2352. The patent claims were drawn to an old solution to this problem, “intermediated settlement, i.e., the use of a third party to mitigate settlement risk.” Id. at 2356. Like the claims in this case, intermediate settlement could and had been performed without computers. The Supreme Court in Alice had no trouble concluding that intermediated settlement was longstanding “method of organizing human activity.” Id. The fact that the patent claims used a computer to perform part of this method was of no consequence.

The claims in the ’432 patent are not like those considered in the recent Federal Circuit cases that have held that the patent claims under review were not directed to an abstract idea because they were directed to an improvement in computer technology. In DDR Holdings the patent claims were directed to “systems and methods of generating a composite webpage that combines certain visual elements of a ‘host’ website with content of a third party merchant.” 773 F.3d at 1248. The purpose of this system is to prevent the loss of web traffic that occurs when visitors to a “host” website click an advertisement on the website. Id. In the patented system, when visitors click an advertisement on a “host” webpage, rather than being directed away from the “host” website and to the advertiser’s website, the visitors are directed to a hybrid website that maintains the “look and feel” of the “host” website. Id. at 1248–49. It is an Internet-based solution to an Internet-specific problem. Id. at 1257. In Enfish, the patent claims described “an innovative logical model for a computer database” that used a single “self-referential” table to store data. 2016 WL 2756255, at \*1. The Federal Circuit held that the patent claims were “directed to a specific improvement to the way computers operate.” Id. at \*5.

Plaintiffs argue that the patent claims are directed to a “problem unique to computer-

network authentication” and could only be implemented by a computer system. Pls.’ Opp’n to USAA’s Mot. to Dismiss (“Pls.’ Opp’n”), ECF No. 101 at 13–14. Certainly it is true that the problem of authenticating parties to a transaction has been magnified by computer and network technology. Through computer networks many individuals may conduct business over long distances in an instance. However, just because a problem has been magnified by computer and network technology does not make the problem unique to this environment. And just as computers magnify the scale of traditional problems such as authentication, they may also make it easier to perform traditional solutions to these traditional problems. It is true, as Plaintiffs argue, that there are advantages to performing the claimed method on computers. See Pls.’ Opp’n at 14–19. However, these advantages do not transform the method into one directed to an improvement of computer technology. Again, a comparison with Alice, the leading Supreme Court case on this issue, is instructive. The risk that one party to a transaction will not follow through on its obligation is undoubtedly magnified for electronic transactions, and there are advantages to performing intermediated settlement using computer technology. This was not enough to save the claims in Alice.

The Federal Circuit itself has emphasized in a recent decision that limiting claims to a particular environment does not necessarily make the claims any less abstract. See In re TLI Commc’ns LLC Patent Litig., No. 2015-1372, 2016 WL 2865693, at \*5 (Fed. Cir. May 17, 2016). In TLI Communications, the Federal Circuit considered claims that described a method for recording images with a phone, storing those images as digital images, transmitting the images and classification information collected by the phone to a server, and then sorting the images based on the classification information. See id. at \*2 (discussing a representative claim). The Federal Circuit held that the claims were “simply directed to the abstract idea of classifying

and storing digital images in an organized manner.” Id. at \*5. Of course, digital camera technology, in allowing pictures to be taken and developed quickly, magnifies the problem of image classification. Fortunately computers and phones also make it easier to classify and sort images.

**B. MAYO/ALICE STEP TWO**

Having determined that the claims are directed to an abstract idea, in the second step of the Mayo/Alice analysis the Court must consider whether the elements of the claims both individually and as an ordered combination transform the nature of the claims into a patent-eligible application. This is a search for an “inventive concept.” In Alice, the Supreme Court reiterated that “the mere recitation of a generic computer cannot transform a patent-ineligible abstract idea into a patent-eligible invention.” 134 S.Ct. at 2358. Were that the case, “any application could claim any principle of the physical or social sciences by reciting a computer system configured to implement the relevant concept. Id. at 2359.

The representative method claim in this case describes the following steps: (1) “receiving” electronically a request for a dynamic code for the user; (2) “generating” by the Central-Entity a dynamic code; (3) “providing” the generated dynamic code to the user; (4) “receiving” electronically by the Central-Entity a request for authenticating the user from a computer associated with the External-Entity; and (5) “authenticating” by the Central-Entity the user and providing the result to the External-Entity. ’432 patent, Claim 1.

Taken individually, each of these claim elements describes conventional computer functions. The claim elements describe sending data electronically, generating a random code, and comparing two pieces of data to see if they are the same. As in Alice, “each step does no more than require a generic computer to perform generic computer functions.” 134 S.Ct. at 2360.

Considered as an ordered combination, the claim elements do not add anything inventive

to the abstract concept underlying them. They simply instruct a generic computer or computers to verify the identity of a participant to a transaction using a randomly generated code. They do not “purport to improve the functioning of the computer itself.” Id. “Nor do they effect an improvement in any other technology or technological field.” Id. They have generic computers perform an old method of authentication. This is not enough to transform a patent-ineligible abstract idea into a patent-eligible invention. See id. at 2360.

Put simply, there is nothing inventive about Plaintiffs’ patent claims. To allow Plaintiffs to patent a generic computer implementation of an abstract idea would allow Plaintiffs to monopolize the idea itself and inhibit further discovery and invention. See id. at 2354, 2359.

#### C. THE NEED FOR CLAIM CONSTRUCTION AND THE APPARATUS CLAIMS

Finally, the Court notes that while Plaintiffs recite the need for claim construction, they never identify how claim construction might change the meaning of the claims such that they would be eligible for patent protection. Additionally, although Plaintiffs fault USAA for focusing its analysis on Claim 1 of the ’432 patent, they fail to specify how consideration of the other claims would add to the analysis. This is not to say that Plaintiffs have the burden to prove the validity of their patent. The point is simply that Plaintiffs’ arguments on these points are empty. As described above, all of the claims are substantially similar to Claim 1. Independent method Claim 48 adds the limitation of an alphanumeric dynamic code. The two apparatus claims, Claims 25 and 51, simply use two computers to perform the functions of the Central-Entity. None of these additional limitations change the substance of the claims. See Alice, 134 S.Ct. at 2360 (“Put another way, the system claims are no different from the method claims in substance. The method claims recite the abstract idea implemented on a generic computer; the system claims recite a handful of generic computer components configured to implement the same idea.”). Similarly, construction of the claims would not affect the Court’s analysis of whether the

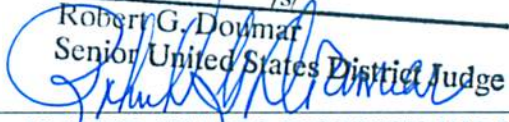
claims are directed to an abstract idea. No matter what construction the Court adopts the substance of the claims is the same.

#### IV. CONCLUSION

For the above reasons, the Court holds that the claims of the '432 patent at issue are invalid because they are directed to an abstract idea and thus ineligible for patent protection under 35 U.S.C. § 101. Because the allegedly infringed patent claims are invalid, Plaintiffs fail to state a claim for relief. Accordingly, the Court **GRANTS** the Motion to Dismiss, ECF No. 86, and **DISMISSES** Plaintiffs' Second Amended Complaint **WITH PREJUDICE**, ECF No. 70. The Court also **DISMISSES AS MOOT** USAA's Counterclaims. ECF No. 88.

The Clerk is **DIRECTED** to forward a copy of this Order to all Counsel of Record.

**IT IS SO ORDERED.**

*/s/*  
Robert G. Dowmar  
Senior United States District Judge  
  
UNITED STATES DISTRICT JUDGE

Norfolk, VA  
July 5, 2016



(12) **United States Patent**  
**Asghari-Kamrani et al.**

(10) **Patent No.:** **US 8,266,432 B2**  
 (45) **Date of Patent:** **\*Sep. 11, 2012**

(54) **CENTRALIZED IDENTIFICATION AND AUTHENTICATION SYSTEM AND METHOD**

(56) **References Cited**

(76) Inventors: **Nader Asghari-Kamrani**, Centreville, VA (US); **Kamran Asghari-Kamrani**, Centreville, VA (US)

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(\*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(Continued)

This patent is subject to a terminal disclaimer.

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(21) Appl. No.: **12/210,926**

(57) **ABSTRACT**

(22) Filed: **Sep. 15, 2008**

A method and system is provided by a Central-Entity, for identification and authorization of users over a communication network such as Internet. Central-Entity centralizes users personal and financial information in a secure environment in order to prevent the distribution of user's information in e-commerce. This information is then used to create digital identity for the users. The digital identity of each user is dynamic, non predictable and time dependable, because it is a combination of user name and a dynamic, non predictable and time dependable secure code that will be provided to the user for his identification. The user will provide his digital identity to an External-Entity such as merchant or service provider. The External-Entity is dependent on Central-Entity to identify the user based on the digital identity given by the user. The External-Entity forwards user's digital identity to the Central-Entity for identification and authentication of the user and the transaction. The identification and authentication system provided by the Central-Entity, determines whether the user is an authorized user by checking whether the digital identity provided by the user to the External-Entity, corresponds to the digital identity being held for the user by the authentication system. If they correspond, then the authentication system identifies the user as an authorized user, and sends an approval identification and authorization message to the External-Entity, otherwise the authentication system will not identify the user as an authorized user and sends a denial identification and authorization message to the External-Entity.

(65) **Prior Publication Data**

US 2009/0013182 A1 Jan. 8, 2009

**Related U.S. Application Data**

(63) Continuation of application No. 11/239,046, filed on Sep. 30, 2005, now Pat. No. 7,444,676, which is a continuation of application No. 09/940,635, filed on Aug. 29, 2001, now Pat. No. 7,356,837.

(60) Provisional application No. 60/615,603, filed on Oct. 5, 2004.

(51) **Int. Cl.**

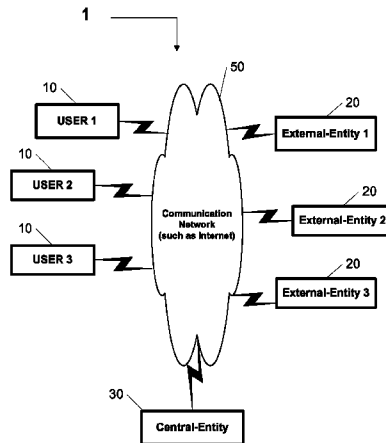
**H04L 29/06** (2006.01)  
**G06Q 20/00** (2012.01)

(52) **U.S. Cl.** ..... **713/168**; 713/184; 705/67; 705/74; 705/78

(58) **Field of Classification Search** ..... 726/21, 726/2-5, 212, 8, 18, 27, 28; 713/155, 168, 713/170, 182-186; 705/35, 39, 44, 50, 64, 705/67, 72, 76, 78

See application file for complete search history.

**55 Claims, 5 Drawing Sheets**



**US 8,266,432 B2**

Page 2

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2002/0069174	A1 *	6/2002	Fox et al.	705/52	2010/0100724	A1 * 4/2010	Kaliski, Jr.	713/155

\* cited by examiner

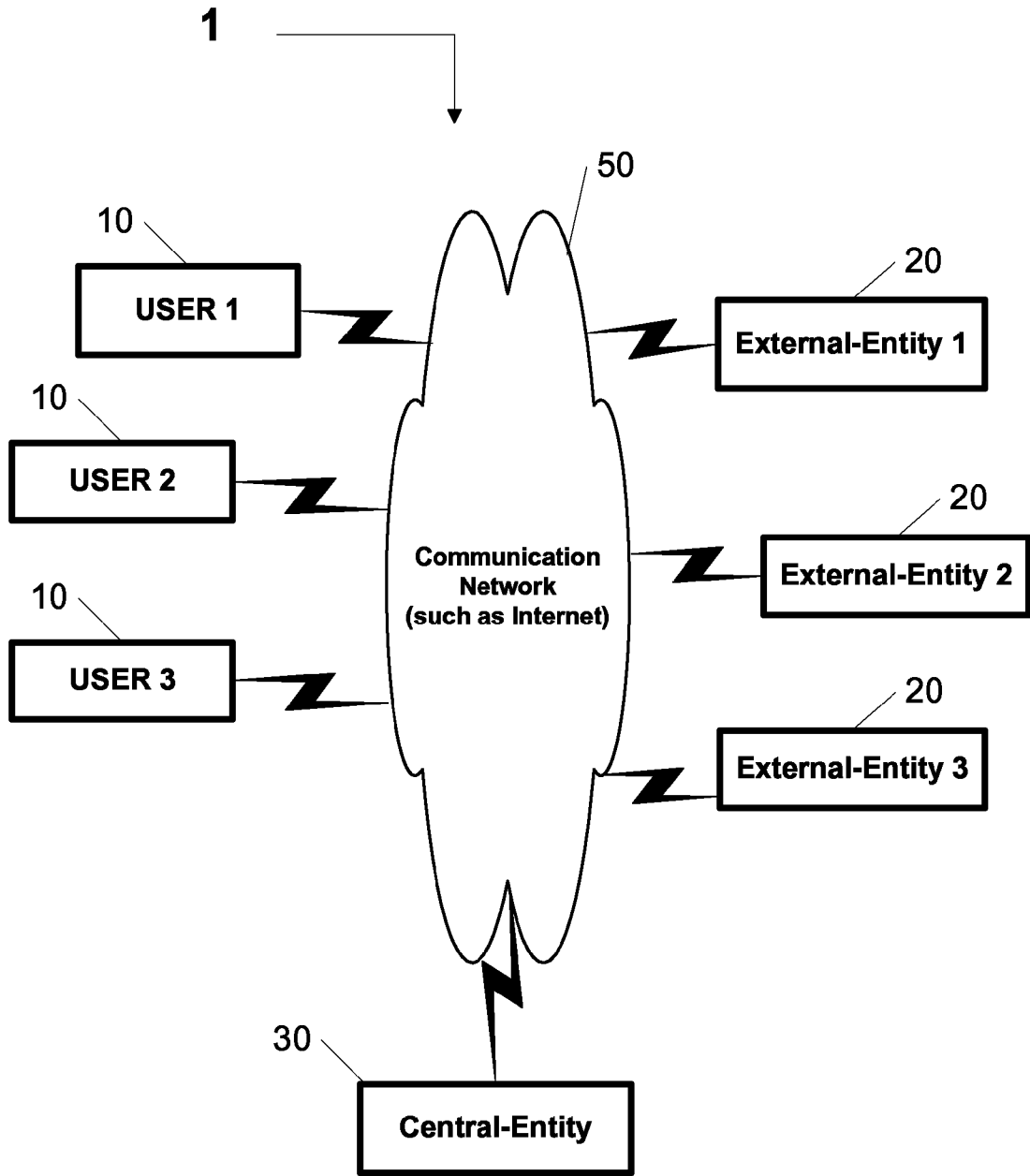
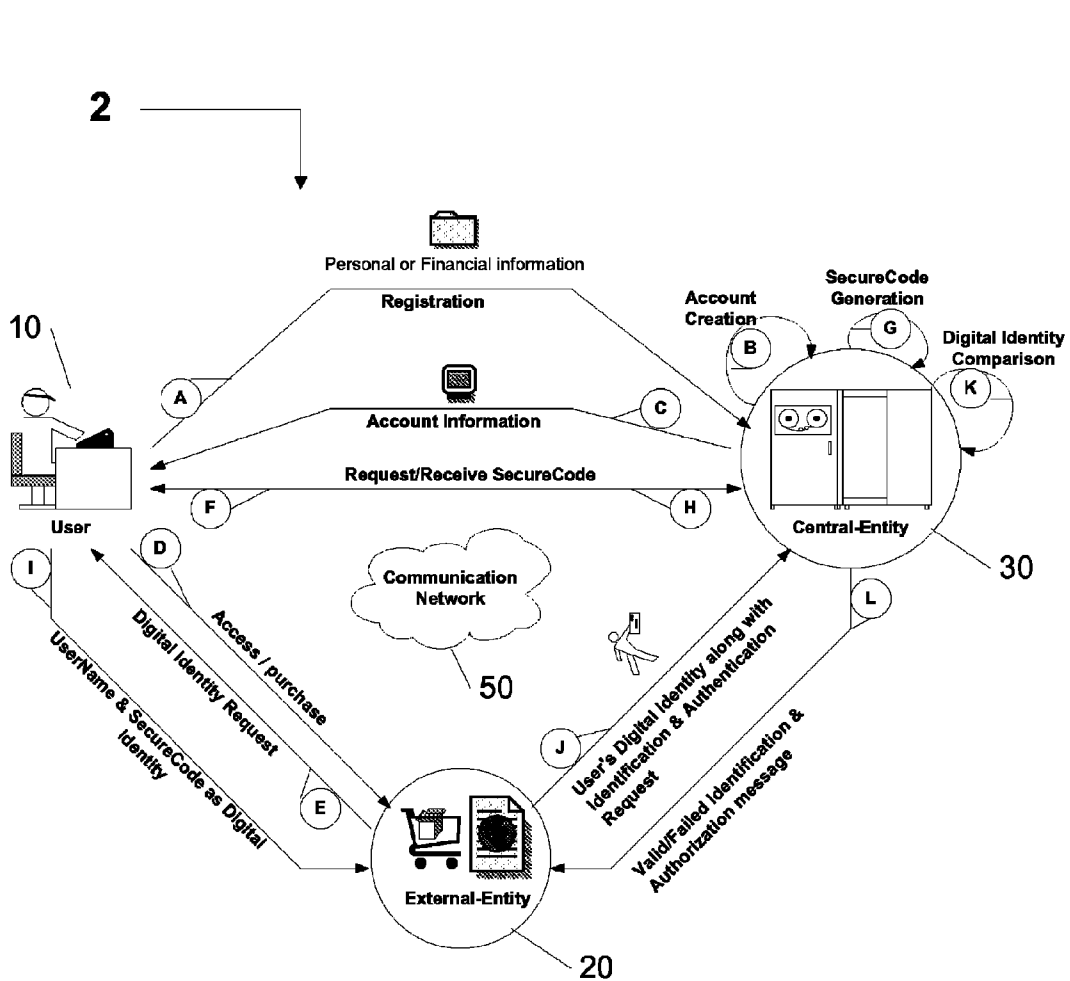


Figure 1



**Registration Phase Steps:**

(A) (B) (C)

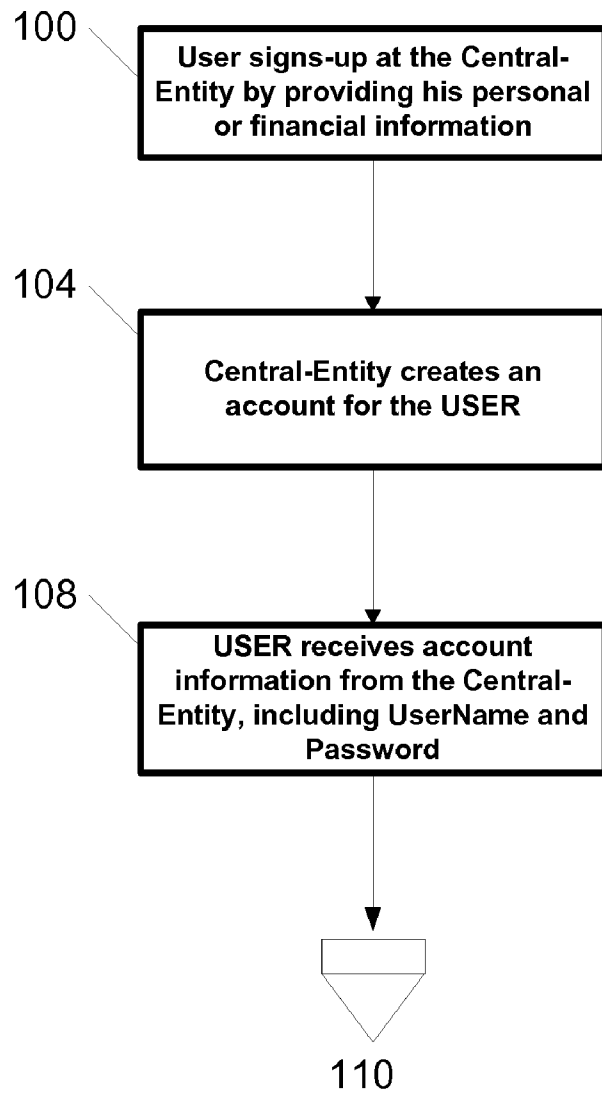
**Transaction Phase Steps:**

(D) (E) (F) (G) (H) (I)

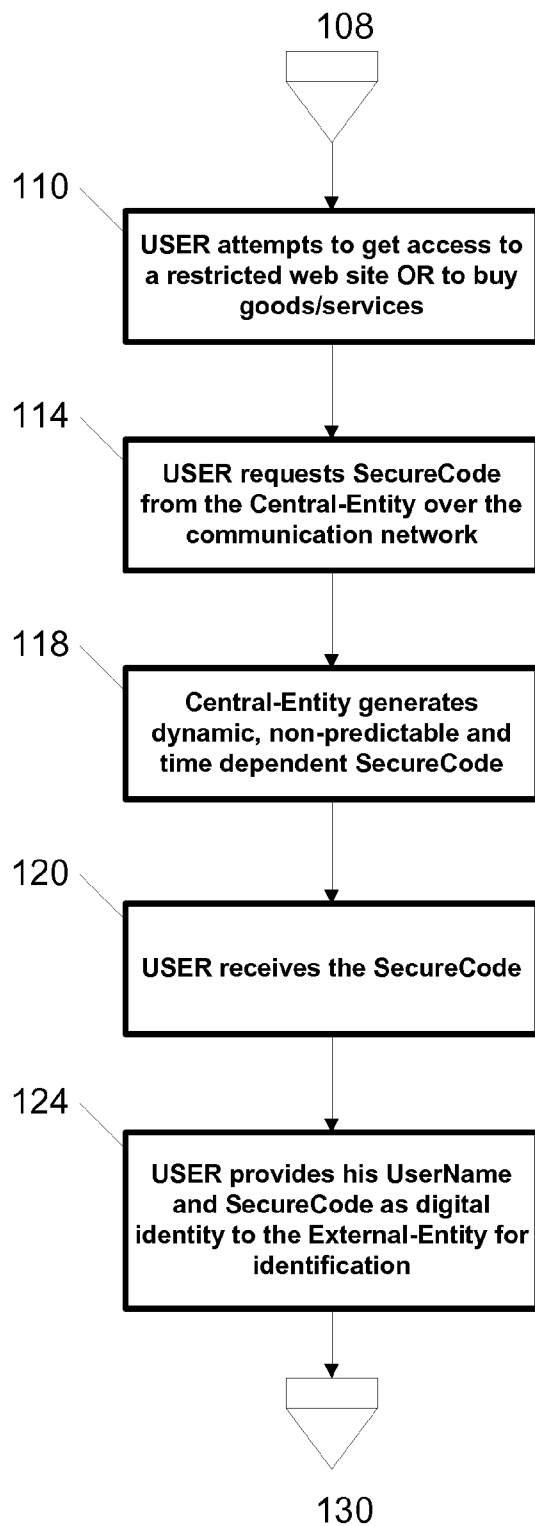
**Identification & Authorization Phase Steps:**

(J) (K) (L)

**Figure 2**



**Figure 3**



**Figure 4**

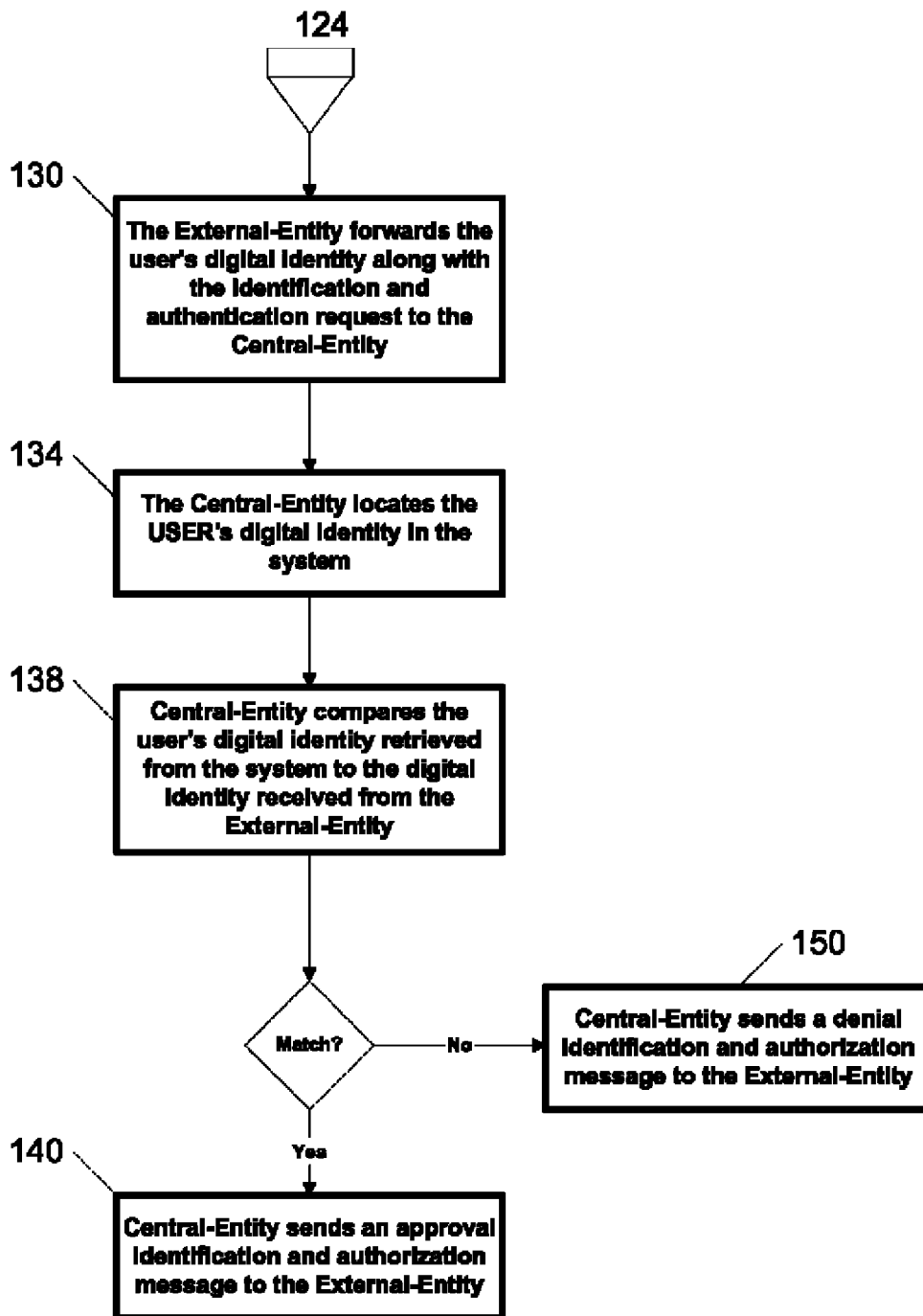


Figure 5

## US 8,266,432 B2

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**CENTRALIZED IDENTIFICATION AND AUTHENTICATION SYSTEM AND METHOD**

## RELATED APPLICATIONS

This application is a Continuation of application Ser. No. 11/239,046, filed Sep. 30, 2005 now U.S. Pat. No. 7,444,676, with a priority of a U.S. provisional application 60/615,603, filed Oct. 5, 2004, with the same inventors and assignee. This application is also a Continuation of another U.S. application Ser. No. 09/940,635, filed Aug. 29, 2001, and patented as U.S. Pat. No. 7,356,837, on Apr. 8, 2008, titled "Centralized identification and authentication system and method", with the same inventors and assignee. Please note that the current application has the same exact specification and Figures as those submitted with the original application Ser. No. 09/940,635, filed Aug. 29, 2001.

## BACKGROUND OF THE INVENTION

## 1. Field of the Invention

The present invention relates to a centralized identification and authentication system and method for identifying an individual over a communication network such as Internet, to increase security in e-commerce. More particularly a method and system for generation of a dynamic, non-predictable and time dependent SecureCode for the purpose of positively identifying an individual.

## 2. Description of the Related Art

The increasing use of the Internet and the increase of businesses utilizing e-commerce have lead to a dramatic increase in customers releasing confidential personal and financial information, in the form of social security numbers, names, addresses, credit card numbers and bank account numbers, to identify themselves. This will allow them to get access to the restricted web sites or electronically purchase desired goods or services. Unfortunately this type of identification is not only unsafe but also it is not a foot proof that the user is really the person he says he is. The effect of these increases is reflected in the related art.

U.S. Pat. No. 5,732,137 issued to Aziz outlines a system and method for providing remote user authentication in a public computer network such as the Internet. More specifically, the system and method provides for remote authentication using a one-time password scheme having a secure out-of-band channel for initial password delivery.

U.S. Pat. No. 5,815,665 issued to Teper et al. outlines the use of a system and method for enabling consumers to anonymously, securely and conveniently purchase on-line services from multiple service providers over a distributed network, such as the Internet. Specifically, a trusted third-party broker provides billing and security services for registered service providers via an online brokering service, eliminating the need for the service providers to provide these services.

U.S. Pat. No. 5,991,408 issued to Pearson, et al. outlines a system and method for using a biometric element to create a secure identification and verification system, and more specifically to an apparatus and a method for creating a hard problem which has a representation of a biometric element as its solution.

Although each of the previous patents outline a valuable system and method, what is really needed is a system and method that offers digital identity to the users and allows them to participate in e-commerce without worrying about the privacy and security. In addition to offering security and privacy to the users, the new system has to be simple for businesses to adopt and also doesn't require the financial

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institutions to change their existing systems. Such a secure, flexible and scalable system and method would be of great value to the businesses that would like to participate in today's electronic commerce.

None of the above inventions and patents, taken either singularly or in combination, is seen to describe the instant invention as claimed. Thus a centralized identification and authentication system and method solving the aforementioned problems is desired.

For convenience, the term "user" is used throughout to represent both a typical person consuming goods and services as well as a business consuming goods and services.

As used herein, a "Central-Entity" is any party that has user's personal and/or financial information, UserName, Password and generates dynamic, non-predictable and time dependable SecureCode for the user. Examples of Central-Entity are: banks, credit card issuing companies or any intermediary service companies.

As also used herein, an "External-Entity" is any party offering goods or services that users utilize by directly providing their UserName and SecureCode as digital identity. Such entity could be a merchant, service provider or an online site. An "External-Entity" could also be an entity that receives the user's digital identity indirectly from the user through another External-Entity, in order to authenticate the user, such entity could be a bank or a credit card issuing company.

The term "UserName" is used herein to denote any alphanumeric name, id, login name or other identification phrase, which may be used by the "Central-Entity" to identify the user.

The term "Password" is used herein to denote any alphanumeric password, secret code, PIN, prose phrase or other code, which may be stored in the system to authenticate the user by the "Central-Entity".

The term "SecureCode" is used herein to denote any dynamic, non-predictable and time dependent alphanumeric code, secret code, PIN or other code, which may be broadcast to the user over a communication network, and may be used as part of a digital identity to identify a user as an authorized user.

The term "digital identity" is used herein to denote a combination of user's "SecureCode" and user's information such as "UserName", which may result in a dynamic, non-predictable and time dependable digital identity that could be used to identify a user as an authorized user.

The term "financial information" is used herein to denote any credit card and banking account information such as debit cards, savings accounts and checking accounts.

## SUMMARY OF THE INVENTION

The invention relates to a system and method provided by a Central-Entity for centralized identification and authentication of users and their transactions to increase security in e-commerce. The system includes:

A Central-Entity: This entity centralizes users personal and financial information in a secure environment in order to prevent the distribution of user's information in e-commerce. This information is then used to create digital identity for the users. The users may use their digital identity to identify themselves instead of providing their personal and financial information to the External-Entities;

A plurality of users: A user represents both a typical person consuming goods and services as well as a business consuming goods and services, who needs to be identified in order to make online purchases or to get access to



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the restricted web sites. The user registers at the Central-Entity to receive his digital identity, which is then provided to the External-Entity for identification;

A plurality of External-Entities: An External-Entity is any party offering goods or services in e-commerce and needs to authenticate the users based on digital identity.

The user signs-up at the Central-Entity by providing his personal or financial information. The Central-Entity creates a new account with user's personal or financial information and issues a unique Username and Password to the user. The user provides his Username and Password to the Central-Entity for identification and authentication purposes when accessing the services provided by the Central-Entity. The Central-Entity also generates dynamic, non-predictable and time dependent SecureCode for the user per user's request and issues the SecureCode to the user. The Central-Entity maintains a copy of the SecureCode for identification and authentication of the user's digital identity. The user presents his Username and SecureCode as digital identity to the External-Entity for identification. When an External-Entity receives the user's digital identity (Username and SecureCode), the External-Entity will forward this information to the Central-Entity to identify and authenticate the user. The Central-Entity will validate the information and sends an approval or denial response back to the External-Entity.

There are also communications networks for the user, the Central-Entity and the External-Entity to give and receive information between each other.

This invention also relates to a system and method provided by a Central-Entity for centralized identification and authentication of users to allow them access to restricted web sites using their digital identity, preferably without revealing confidential personal or financial information.

This invention further relates to a system and method provided by a Central-Entity for centralized identification and authentication of users to allow them to purchase goods and services from an External-Entity using their digital identity, preferably without revealing confidential personal or financial information.

Accordingly, it is a principal object of the invention to offer digital identity to the users for identification in e-commerce.

It is another object of the invention to centralize user's personal and financial information in a secure environment.

It is another object of the invention to prevent the user from distributing their personal and financial information.

It is a further object of the invention to keep merchants, service providers, Internet sites and financial institutions satisfied by positively identifying and authenticating the users.

It is another object of the invention to reduce fraud and increase security for e-commerce.

It is another object of the invention to allow businesses to control visitor's access to their web sites.

It is another object of the invention to protect the customer from getting bills for goods and services that were not ordered.

It is another object of the invention to increase customers' trust and reduce customers' fear for e-commerce.

It is another object to decrease damages to the customers, merchants and financial institutions.

It is an object of the invention to provide improved elements and arrangements thereof for the purposes described which are inexpensive, dependable and fully effective in accomplishing its intended purposes.

These and other objects of the present invention will become readily apparent upon further review of the following specification and drawings.

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## BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a high-level overview of a centralized identification and authentication system and method according to the present invention.

FIG. 2 is a detailed overview of a centralized identification and authentication system and method according to the present invention.

FIG. 3 is a block diagram of the registration of a customer utilizing a centralized identification and authentication system and method according to the present invention.

FIG. 4 is a block diagram of the transaction of a customer utilizing a centralized identification and authentication system and method according to the present invention.

FIG. 5 is a block diagram of a Central-Entity authorizing a user utilizing a centralized identification and authentication system and method according to the present invention.

## DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

Detailed descriptions of the preferred embodiment are provided herein. It is to be understood, however, that the present invention may be embodied in various forms. Therefore, specific details disclosed herein are not to be interpreted as limiting, but rather as a basis for the claims and as a representative basis for teaching one skilled in the art to employ the present invention in virtually any appropriately detailed system, structure or manner.

The invention relates to a system **1** and method **2** to identify and authenticate the users and their transactions to increase security in e-commerce. FIG. 1 illustrates a system to positively identify the users **10** in e-commerce based on digital identity.

The system **1** comprises a plurality of users **10**, a plurality of External-Entities **20** with goods and services that are desired by the users **10** and a Central-Entity **30** providing a unique Username and Password to the users **10** and generating dynamic, non-predictable and time dependent SecureCode for the users **10** per user's request. There are also communication networks **50** for the user **10**, the Central-Entity **30** and the External-Entity **20** to give and receive information between each other.

It would be desirable to develop a new system **1** and method **2** to centralize user's personal and financial information in a secure environment and to offer digital identity to the users **10** in order to provide privacy, increase security and reduce fraud in e-commerce. Ideally, a secure identification and authentication system **1** would identify legitimate users **10** and unauthorized users **10**. This would increase the user's trust, which leads to more sales and cash flow for the merchants/service providers.

The present invention relates to a system **1** and method **2** to support this ideal identification and authentication system. For identification purpose, a digital identity (a unique Username and a dynamic, non-predictable and time dependent SecureCode) is used by the user **10** at the time of ordering or at the time of accessing a restricted Internet site. A series of steps describing the overall method are conducted between the users **10**, the Central-Entity **30** and the External-Entity **20** and are outlined in FIG. 3,4,5.

There are three distinct phases involved in using the centralized identification and authentication system FIG. 2, the first of which being the registration phase, which is depicted in FIG. 3. During the registration phase, the user **10** provides his personal or financial information to the Central-Entity **30**. The user **10** registers at the Central-Entity **30**, **100**, **104** and

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receives his account and login information such as UserName and Password **108**. User **10** can access his account at any time by accessing the Central-Entity's system using a communication network **50** and logging into the system.

Next is the transaction phase, where the user **10** attempts to access a restricted web site or attempts to buy services or products **110**, as illustrated in FIG. **4**, through a standard interface provided by the External-Entity **20**, similar to what exists today and selects digital identity as his identification and authorization or payment option. The External-Entity **20** displays the access or purchase authorization form requesting the user **10** to authenticate himself using his UserName and SecureCode as digital identity. The user **10** requests SecureCode from the Central-Entity **30** by accessing his account over the communication network **50**, **114**. The Central-Entity **30** generates dynamic, non-predictable and time dependable SecureCode **118** for the user **10**. The Central-Entity **30** maintains a copy of the SecureCode for identification and authentication of the user **10** and issues the SecureCode to the user **10**. When the user **10** receives the SecureCode **120**, the user **10** provides his UserName and SecureCode as digital identity to the External-Entity **20**, **124**, FIG. **4**.

The third phase is identification and authorization phase. Once the user **10** provides his digital identity to the External-Entity **20**, the External-Entity **20** forwards user's digital identity along with the identification and authentication request to the Central-Entity **30**, **130**, as illustrated in FIG. **5**. When the Central-Entity **30** receives the request containing the user's digital identity, the Central-Entity **30** locates the user's digital identity (UserName and SecureCode) in the system **134** and compares it to the digital identity received from the External-Entity **20** to identify and validate the user **10**, **138**. The Central-Entity **30** generates a reply back to the External-Entity **20** via a communication network **50** as a result of the comparison. If both digital identities match, the Central-Entity **30** will identify the user **10** and will send an approval of the identification and authorization request to the External-Entity **20**, **140**, otherwise will send a denial of the identification and authorization request to the External-Entity **20**, **150**. The External-Entity **20** receives the approval or denial response in a matter of seconds. The External-Entity **20** might also display the identification and authentication response to the user **10**.

To use the digital identity feature, the Central-Entity **30** provides the authorized user **10** the capability to obtain a dynamic, non-predictable and time dependable SecureCode. The user **10** will provide his UserName and SecureCode as digital identity to the External-Entity **20** when this information is required by the External-Entity **20** to identify the user **10**.

The Central-Entity **30** may add other information to the SecureCode before sending it to the user **10**, by algorithmically combining SecureCode with user's information such as UserName. The generated SecureCode will have all the information needed by the Central-Entity **30** to identify the user **10**. In this case the user will only need to provide his SecureCode as digital identity to the External-Entity **20** for identification.

In the preferred embodiment, the user **10** uses the communication network **50** to receive the SecureCode from the Central-Entity **30**. The user **10** submits the SecureCode in response to External-Entity's request **124**. The SecureCode is preferably implemented through the use of an indicator. This indicator has two states: "on" for valid and "off" for invalid. When the user **10** receives the SecureCode, the SecureCode is in "on" or "valid" state. The Central-Entity **30** may improve the level of security by invalidating the SecureCode after it's

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use. This may increase the level of difficulty for unauthorized user. Two events may cause a valid SecureCode to become invalid:

1. Timer event: This event occurs when the predefined time passes. As mentioned above the SecureCode is time dependent.

2. Validation event: This event occurs when the SecureCode forwarded to the Central-Entity **30** (as part of digital identity) corresponds to the user's SecureCode held in the system. When this happens the Central-Entity **30** will invalidate the SecureCode to prevent future use and sends an approval identification and authorization message to the External-Entity **20**, **140**.

A valid digital identity corresponds to a valid SecureCode. When the SecureCode becomes invalid, the digital identity will also become invalid.

While the invention has been described in connection with a preferred embodiment, it is not intended to limit the scope of the invention to the particular form set forth, but on the contrary, it is intended to cover such alternatives, modifications, and equivalents as may be included within the spirit and scope of the invention as defined by the appended claims.

The invention claimed is:

1. A method for authenticating a user during an electronic transaction between the user and an external-entity, the method comprising:

receiving electronically a request for a dynamic code for the user by a computer associated with a central-entity during the transaction between the user and the external-entity;

generating by the central-entity during the transaction a dynamic code for the user in response to the request, wherein the dynamic code is valid for a predefined time and becomes invalid after being used;

providing by the computer associated with the central-entity said generated dynamic code to the user during the transaction;

receiving electronically by the central-entity a request for authenticating the user from a computer associated with the external-entity based on a user-specific information and the dynamic code as a digital identity included in the request which said dynamic code was received by the user during the transaction and was provided to the external-entity by the user during the transaction; and authenticating by the central-entity the user and providing a result of the authenticating to the external-entity during the transaction if the digital identity is valid.

2. A method as recited in claim 1, further comprising: combining said generated dynamic code with the user-specific information using a predetermined algorithm to form a combined dynamic code and user specific information;

maintaining the combined dynamic code and user specific information at the central-entity;

comparing the combined dynamic code and user specific information with a received combined dynamic code and user specific information to validate the user.

3. The method of claim 1, wherein the user specific information comprises one or more of the following: an alphanumeric name, an ID, a login name, and an identification phrase.

4. The method of claim 1, wherein the transaction corresponds to a financial transaction.

5. The method of claim 1, wherein the transaction corresponds to a non-financial transaction.

6. The method of claim 1, wherein the transaction corresponds to access to restricted web-site or restricted computer/server.

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7. The method of claim 1, wherein said transaction occurs over a communication network, wherein said communication network comprises one or more of the following: a public network, the Internet, a wireless network, a mobile network, a satellite network, and a private network.

8. The method of claim 1, wherein said transaction occurs over a communication network to which is coupled said user, said central-entity, and said external-entity.

9. A method as recited in claim 2, wherein said algorithmically combined dynamic code and user specific information is used to authenticate a user's identity.

10. A method as recited in claim 2, wherein said central-entity is using said algorithmically combined dynamic code and user specific information to authenticate a user's identity.

11. A method as recited in claim 1, wherein said external-entity and said central-entity are the same entity.

12. The method as recited in claim 1, wherein said central-entity invalidates the dynamic code after authenticating the user.

13. The method as recited in claim 1, wherein the central-entity invalidates the dynamic code after a predefined period of time passes from when the dynamic code was generated.

14. The method as recited in claim 1, wherein said central-entity generates the dynamic code with dependence on the user information.

15. The method as recited in claim 14, wherein said user information comprises one or more of the following: an alphanumeric name, an ID, a login name, and an identification phrase.

16. The method as recited in claim 1, wherein said user communicates with said central-entity over a communication network.

17. The method as recited in claim 1, wherein said user communicates with said external-entity over a communication network.

18. The method as recited in claim 1, wherein said dynamic code is generated based on a request submitted by said user over a communication network.

19. The method as recited in claim 18, wherein said request is initiated by said user through a standard interface provided to said user.

20. A method as recited in claim 1, wherein said digital identity is invalid if the dynamic code is invalid.

21. A method as recited in claim 1, wherein said digital identity is valid if at least the dynamic code is valid.

22. A method as recited in claim 1, wherein said external-entity authenticates the user upon receiving an affirmation authentication message from the central-entity.

23. A method as recited in claim 1, wherein said external-entity authenticates the user if said central-entity authenticates the user based on the dynamic code.

24. The method of claim 1, wherein the user-specific information includes user-identifying information.

25. An apparatus for authenticating a user during an electronic transaction with an external-entity, the apparatus comprising:

a first central-entity computer adapted to:

generate a dynamic code for the user in response to a request during the electronic transaction, wherein the dynamic code is valid for a predefined time and becomes invalid after being used; and provide said dynamic code to the user during the electronic transaction;

a second central-entity computer adapted to validate a digital identity in response to an authentication request from the external-entity, which authentication request includes a user-specific information and the dynamic

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code as the digital identity which dynamic code was received by the user during the electronic transaction and was provided to the external-entity by the user during the electronic transaction, and to authenticate the user if the digital identity is valid and to provide a result of the authentication of the user to the external-entity during the electronic transaction.

26. The apparatus as recited in claim 25, wherein said user has a pre-existing relationship with the external-entity.

27. The apparatus as recited in claim 25, wherein said user has no pre-existing relationship with the external-entity.

28. The apparatus as recited in claim 25, wherein said external-entity and said central-entity use a dynamic code that is algorithmically combined with said the user-specific information.

29. The apparatus of claim 25, wherein the transaction corresponds to a financial transaction.

30. The apparatus of claim 25, wherein the transaction corresponds to a non-financial transaction.

31. The apparatus of claim 25, wherein the transaction corresponds to access to restricted web-site or restricted computer/server.

32. The apparatus of claim 25, wherein said transaction occurs over a communication network and wherein said communication network comprises one or more of the following: a public network, the Internet, a wireless network, a mobile network, a satellite network, and a private network.

33. The apparatus of claim 25, wherein said transaction occurs over a communication network to which is coupled said user, said central-entity, and said external-entity.

34. The apparatus as recited in claim 25, wherein said user communicates with said central-entity over a communication network.

35. The apparatus as recited in claim 25, wherein said user communicates with said external-entity over a communication network.

36. The apparatus according to claim 25, wherein said first central-entity computer and said second central-entity computer are the same.

37. The apparatus according to claim 25, wherein said first central-entity computer and said second central-entity computer are different.

38. The apparatus of claim 25, wherein said digital identity is invalid if the dynamic code is invalid.

39. The apparatus of claim 25, wherein said digital identity is valid if at least the dynamic code is valid.

40. The apparatus of claim 25, wherein said external-entity authenticates the user upon receiving an affirmation authentication message from the central-entity.

41. The apparatus of claim 25, wherein said central-entity invalidates the dynamic code after authenticating the user.

42. The apparatus of claim 25, wherein the central-entity invalidates the dynamic code after a predefined period of time passes after the dynamic code was generated.

43. The apparatus of claim 25, wherein said central-entity generates the dynamic code based on said user-specific information.

44. The apparatus of claim 43, wherein said user-specific information comprises one or more of the following: an alphanumeric name, an ID, a login name, a password, and an identification phrase.

45. The apparatus of claim 25, wherein said external-entity authenticates the user if said central-entity authenticates the user based on the dynamic code.

46. The apparatus of claim 25, wherein said external-entity and central-entity are the same entity.

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47. The apparatus of claim 25, wherein the user-specific information includes user-identifying information.

48. A method for authenticating a user during an electronic transaction between the user and an external-entity, the method comprising:

receiving electronically a request for a dynamic code for the user by a computer associated with a central-entity during the electronic transaction between the user and the external-entity;

generating by the central-entity during the electronic transaction a dynamic code for the user in response to the request, wherein the dynamic code is valid for a pre-defined time and becomes invalid after being used;

providing by a computer associated with the central-entity said generated dynamic code to the user during the transaction;

receiving during the electronic transaction by another computer associated with the central-entity a request from the external-entity for authenticating the user based on a user-specific information and the dynamic code as a digital identity included in the request, which said dynamic code was received by the user during the transaction and was provided by the user to the external-entity during the electronic transaction; and

authenticating by the central-entity the user and providing a result of the authentication of the user to the external-entity during the transaction if the digital identity is valid, wherein said dynamic code is alphanumeric.

49. A method as recited in claim 48, wherein said external-entity and central-entity are the same entity.

50. The method of claim 48, wherein the user-specific information includes user-identifying information.

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51. The method of claim 48, wherein the user-specific information comprises one or more of the following: an alphanumeric name, an ID, a login name, and an identification phrase.

52. An apparatus for authenticating a user during an electronic transaction with an external-entity, the apparatus comprising:

a first central-entity computer adapted to:  
generate a dynamic code for the user in response to a request from the user during the electronic transaction, wherein the dynamic code is valid for a pre-defined time and becomes invalid after being used; and  
provide said dynamic code to the user during the electronic transaction;

a second central-entity computer adapted to validate a user-specific information and the dynamic code as a digital identity included in an authentication request from the external-entity, which said dynamic code was received by the user during the electronic transaction and was provided by the user to the external-entity during the electronic transaction, and to authenticate the user if the digital identity is valid and to provide a result of the authentication of the user to the external-entity during the electronic transaction, wherein said dynamic code is alphanumeric.

53. The apparatus of claim 52, wherein said external-entity and central-entity are the same entity.

54. The apparatus of claim 52, wherein the user-specific information includes user-identifying information.

55. The method of claim 52, wherein the user-specific information comprises one or more of the following: an alphanumeric name, an ID, a login name, and an identification phrase.

\* \* \* \* \*

UNITED STATES PATENT AND TRADEMARK OFFICE  
**CERTIFICATE OF CORRECTION**

PATENT NO. : 8,266,432 B2  
APPLICATION NO. : 12/210926  
DATED : September 11, 2012  
INVENTOR(S) : Nader Asghari-Kamrani et al.

Page 1 of 2

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Title Page,

Item (63) - "Continuation of application No. 11/239,046, filed on Sep. 30, 2005, now Pat. No. 7,444,676, which is a continuation of application No. 09/940,635, filed on Aug. 29, 2001, now Pat. No. 7,356,837." should read,

-- Continuation-in-part of application No. 11/239,048, filed on Sep. 30, 2005, now Pat. No. 7,444,676, which is a continuation-in-part of application No. 09/940,635, filed on Aug. 29, 2001, now Pat. No. 7,356,837. Continuation-in-part of application No. 11/333,400, filed on Jan. 18, 2006, now Pat. No. 8,281,129, which is a continuation-in-part of application No. 09/940,635, filed on Aug. 29, 2001, now Pat. No. 7,356,837. --

Item (60) - "Provisional application No. 60/615,603, filed on Oct. 5, 2004." should read,

-- Provisional application No. 60/615,603, filed on Oct. 5, 2004. Provisional application No. 60/650,137 filed on Feb. 7, 2005. --

In the Specification,

Column 1, Lines 6-17 - "This application is a Continuation of application Ser. No. 11/239,046, filed Sep. 30, 2005 now U.S. Pat. No. 7,444,676, with a priority of a U.S. provisional application 60/615,603, filed Oct. 5, 2004, with the same inventors and assignee. This application is also a Continuation of another U.S. application Ser. No. 09/940,635, filed Aug. 29, 2001, and patented as U.S. Pat. No. 7,356,837, on Apr. 8, 2008, titled "Centralized identification and authentication system and method", with the same inventors and assignee. Please note that the current application has the same exact specification and Figures as those submitted with the original application Ser. No. 09/940,635, filed Aug. 29, 2001." should read,

Signed and Sealed this  
Twenty-fifth Day of October, 2016



Michelle K. Lee  
Director of the United States Patent and Trademark Office

**CERTIFICATE OF CORRECTION (continued)**

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**U.S. Pat. No. 8,266,432 B2**

-- This application is a Continuation-in-part of application Ser. No. 11/239,046, filed Sep. 30, 2005, now U.S. Pat. No. 7,444,676, which claims the benefit of a U.S. provisional application 60/615,603, filed Oct. 5, 2004, and which is also a Continuation-in-part of application No. 09/940,635, filed Aug. 29, 2001, now Pat. No. 7,356,837. Further, this application is a Continuation-in-part of U.S. patent application Ser. No. 11/333,400, filed Jan. 18, 2006, now U.S. Pat. No. 8,281,129, which claims the benefit of U.S. provisional application No. 60/650,137, filed Feb. 7, 2005, which is also a Continuation-in-part of application No. 09/940,635, filed Aug. 29, 2001, now Pat. No. 7,356,837. Please note that the current application has the same exact specification and Figures as those submitted with the original application Ser. No. 09/940,635, filed Aug. 29, 2001. --

**CERTIFICATE OF COMPLIANCE**

I hereby certify that this petition complies with the type-volume limitation of Fed. R. App. P. 35(b)(2) because the brief contains 3,830 words, according to the word-count function of the word processing system used to prepare the brief (Microsoft Word for Mac, Office 365 Version), excluding the parts of the petition exempted by Fed. R. App. P. 32(f) and Fed. Cir. R. 35(c).

This petition complies with the typeface requirements of Federal Rule of Appellate Procedure 32(a)(5) and the type style requirements of Federal Rule of Appellate Procedure 32(a)(6). This petition has been prepared in a proportionally spaced typeface using (Microsoft Word for Mac, Office 365 Version) in fourteen (14) point Times New Roman font.

Dated: October 11, 2018

/s/ Antigone Gabriella Peyton  
Antigone Gabriella Peyton

**CERTIFICATE OF SERVICE**

I hereby certify that I electronically filed the foregoing Appellants' Petition for Rehearing *En Banc* and the addendum thereto with the Clerk of the Court for the United States Court of Appeals for the Federal Circuit through the appellate CM/ECF system on October 11, 2018. I further certify that counsel of record for Appellee are being served with a copy of this filing via the Court's ECF system.

/s/ Antigone Gabriella Peyton  
Antigone Gabriella Peyton