

TITLE

METHOD AND SYSTEM FOR ELECTRONIC SIGNATURE WITNESSING

RELATED APPLICATIONS

[0001] This application is a continuation of U.S. Application No. 17/486,874 filed on September 27, 2021, which issues on September 12, 2023 as U.S. Patent No. 11,757,654, which is a continuation of U.S. Application No. 16/083,834 filed on September 10, 2018, which issued on September 28, 2021 as U.S. Patent No. 11,133,937, which claims benefit under 35 U.S.C. § 371 of International Application No. PCT/US2017/031489 filed on May 8, 2017, which claims benefit under the provisions of 35 U.S.C. § 119(e) of U.S. Provisional Application No. 62/305,269 filed on March 8, 2016, which are incorporated herein by reference in its entirety.

[0002] It is intended that the referenced application may be applicable to the concepts and embodiments disclosed herein, even if such concepts and embodiments are disclosed in the referenced application with different limitations and configurations and described using different examples and terminology.

FIELD OF DISCLOSURE

[0003] The present disclosure generally relates to electronic document management and digital signature systems. More particularly, the disclosure relates to methods and systems for facilitating electronic witnessing of electronic signatures on documents.

BACKGROUND

[0004] In some situations, it may be necessary to witness or notarize the signing of a document. The witness or notary may be able to confirm and validate the authenticity of a signature on a document as belonging to the signor. The conventional strategy is to have a witness or notary view the signature process and the sign the document themselves, indicating that they

witness the signing and would be prepared to testify as to the same. However, with the advent of electronic signature technology, the mechanics by which a witness can view and attest to the electronic signature process are yet to be developed.

[0005] In some situations, existing technologies related to electronic document management and digital security have been limited by the requirement for physical presence during the signing and witnessing of documents. For example, traditional document execution processes necessitate the signatories and witnesses to be co-located, leading to delays and logistical challenges. Thus, conventional strategies have included the use of basic electronic signature technologies, which often cause problems because they do not adequately verify the identity of the parties involved or ensure the presence of a witness. For example, such systems may lack the capability to provide a legally binding audit trail or to verify the authenticity of the signatures in a manner that meets stringent legal standards.

[0006] In some situations, existing technologies related to electronic document signing and witnessing have been limited by the requirement for physical presence during the signing process. For example, traditional methods necessitate that all parties involved, including witnesses, be physically present to observe the signing of documents, leading to delays and logistical challenges. Thus, conventional strategies have included arranging in-person meetings for document execution, which often cause problems because they are not feasible or efficient under conditions such as global business operations or health-related mobility restrictions. For example, during a pandemic, the necessity for physical distancing makes these in-person meetings impractical. Moreover, while electronic signature technologies facilitate remote signing, they frequently lack robust mechanisms for verifying the identity of the signor and the witness, which is a critical requirement for legal validity in many jurisdictions. This absence of stringent verification processes may lead to increased risks of fraud and

disputes regarding the authenticity of the signed documents. Additionally, existing systems may not provide an adequate audit trail that captures detailed information about the document execution process, which is essential for legal and security purposes.

[0007] Another significant limitation in the current state of the art is the inability to ensure that witnesses are within a designated proximity to the signor during the signing event. Existing solutions do not typically support real-time proximity verification, which can be crucial for fulfilling certain legal stipulations that require a witness to be 'present' within a specific range during the signing process.

[0008] Electronic signature systems currently face challenges in ensuring the integrity and legal validity of the signing process. These systems generally lack robust methods for verifying the identity of the signor and the physical presence of a witness. As a result, there may be increased risks of fraud and disputes concerning the authenticity of electronically signed documents. Traditional electronic signature methods often do not provide a comprehensive audit trail, which is crucial for tracking the details of the document execution process. The absence of such detailed tracking may lead to difficulties in legal and security validations. Furthermore, existing technologies do not typically support real-time proximity verification between the signor and the witness, which may be required to meet specific legal requirements for witnessing signatures.

[0009] In certain instances, the validation of a signature on a document may be compromised due to the absence of a witness. This problem is exacerbated in contexts where digital or electronic signatures are used, as the traditional methods of witnessing may not be applicable. Additionally, the requirement for a witness to be physically present can introduce significant delays, especially in situations where signatories are geographically dispersed.

[0010] Furthermore, traditional electronic witnessing methods often do not offer sufficient means to verify the identity of the signor or to confirm the

actual presence of the witness during the signature process. This deficiency can lead to potential legal vulnerabilities, such as challenges to the validity of the signed document. In the realm of electronic document management, the lack of a robust verification process for the identities of the parties involved is a notable drawback.

[0011] Moreover, existing electronic systems for document signing and witnessing may lack the capability to ensure that witnesses are in a specific proximity to the signor. This can be a critical issue, especially in jurisdictions where legal frameworks require a witness to be physically near the signor during the signing of a document. The absence of such proximity verification can further complicate the legal standing of electronically signed documents.

[0012] Additionally, the current electronic signature systems often do not provide a comprehensive and legally binding audit trail. Such an audit trail is crucial for documenting the entire process of document signing and witnessing, thereby ensuring that all necessary procedural steps have been followed. Without this, the document's integrity and the legality of its execution may be questioned.

[0013] Lastly, existing methods and systems for electronic signing and witnessing of documents generally lack mechanisms for real-time interaction between the signor and the witness. This can prevent the immediate resolution of issues or questions that may arise during the signing process, potentially leading to errors or disputes regarding the executed documents. These challenges highlight the need for improvements in electronic document signing and witnessing technologies.

[0014] The challenges associated with the current electronic signature and witnessing technologies are manifold. One of the primary issues encountered is the lack of mechanisms to ensure that witnesses are within a legally mandated proximity to the signor during the signing event. This shortfall may result in non-compliance with specific legal requirements necessary for certain transactions or agreements. Additionally, the traditional electronic

systems used for document signing and witnessing often fail to offer real-time interaction capabilities between the signor and the witness. This limitation may hinder the immediate resolution of queries or issues that arise during the document signing process, potentially leading to inaccuracies or disputes regarding the executed documents.

[0015] Moreover, the existing technologies do not typically incorporate robust methods for verifying the identity of the signor. This may lead to increased risks of impersonation and fraud, thereby questioning the authenticity of the signed documents. Furthermore, these systems frequently lack adequate audit trails that comprehensively document the entire process of document execution. This deficiency may complicate the legal verification and security validation of the documents, making it challenging to trace the detailed steps involved in the signing and witnessing procedure.

[0016] Additionally, the requirement for physical presence in traditional witnessing methods introduces significant delays, particularly in scenarios involving geographically dispersed parties. This requirement is often impractical or inefficient in situations such as global business operations or during periods requiring adherence to health-related mobility restrictions.

[0017] In summary, the existing methods and systems for electronic signing and witnessing of documents present several limitations, including inadequate proximity verification, lack of real-time interaction, insufficient identity verification, and poor audit trail capabilities. These issues underscore the necessity for enhanced technologies in the realm of electronic document management to address the complexities of modern legal and business environments.

[0018] The challenges posed by the need for physical presence during the witnessing of document signings are particularly acute in scenarios involving remote or internationally distributed parties. This requirement can lead to operational inefficiencies, especially in the context of global business practices or when health guidelines restrict physical gatherings.

Furthermore, the reliance on traditional electronic signature technologies that lack sophisticated identity verification and proximity validation mechanisms can result in increased risks of fraud and disputes over the authenticity of signed documents. Additionally, the absence of robust audit trails in current systems can compromise the ability to legally validate the signing process, potentially leading to legal vulnerabilities. These issues underscore the limitations of existing electronic signature and witnessing methods, highlighting the necessity for improvements to adequately address the complexities of modern document execution.

[0019] Current electronic witnessing systems for document signing suffer from several technical limitations that impact their reliability and legal validity. Conventional systems lack robust mechanisms for verifying the physical presence of witnesses during signing events, creating uncertainty around proper attestation procedures. Additionally, existing solutions provide insufficient means for authenticating witness identities and maintaining verifiable records of the witnessing process. These technical deficiencies can compromise the enforceability of electronically witnessed documents and raise concerns regarding compliance with legal requirements across different jurisdictions. There is therefore a need in the art for an improved electronic witnessing system that incorporates enhanced identity verification capabilities, proximity validation mechanisms, and comprehensive audit trail functionality to ensure proper execution of witnessed documents in digital environments while maintaining compliance with established legal frameworks.

[0020]

BRIEF OVERVIEW

[0021] This brief overview is provided to introduce a selection of concepts in a simplified form that are further described below in the Detailed Description. This brief overview is not intended to identify key features or essential features of the claimed subject matter. Nor is this brief overview intended to be used to limit the claimed subject matter's scope.

[0022] A method for facilitating the electronic signing of a document may be provided. The method may include identifying an eligible witness electronic device from a signature request initiated by a signor electronic device associated with a signor. Further, the method may include verifying the signor electronic device with the witness electronic device based on at least one parameter associated with the signature request before making the document available to the signor electronic device. Furthermore, the method may include transmitting the document to the signor electronic device upon verification. Further, the method may include receiving an electronic signature of the signor through the signor electronic device. Additionally, the electronic signature may be validated for the signature request based on a confirmation from the witness electronic device. The confirmation may be based on at least one of a signor identifier and the electronic signature of the signor.

[0023] Also provided can be a method that may include receiving a signature access request from a signor electronic device, wherein a confirmation of a signor ID may be provided by the witness. Further, the method may include transmitting the document to the signor electronic device based on the signor ID confirmation. Furthermore, an electronic signature from the signor may be received. Additionally, the method may include receiving the confirmation from the witness electronic device. The electronic signature confirmation may be provided by the witness. Further, the method may include receiving a signed document from the signor electronic device. The signed document may include the electronic signature

of the signor. Additionally, the electronic signature may be validated based on receipt of the signor ID confirmation and the received signature.

[0024] Further provided can be a method where transmitting a code associated with the document to the signor electronic device may include transmitting the code based, at least in part, on a document identifier associated with the document and a signor identifier associated with the signor. The confirmation may be based, at least in part, on the code.

[0025] Also, the method may include that the witness electronic device may be configured to receive the code based on an interaction between the signor electronic device and the witness electronic device. Furthermore, the method may include receiving an image of the signor from the witness electronic device. The image may be captured by the signor electronic device. Additionally, the signor electronic device may be in a webcam session with the witness electronic device.

[0026] Moreover, the method could include receiving, via a communication interface, a biometric feature of the signor from the witness electronic device. This biometric feature would be captured by the witness electronic device. Furthermore, the method may involve receiving, through a communication interface, a scan of an identification card belonging to the signor from the witness electronic device. This scan would be captured by the witness electronic device.

[0027] Also included in the method can be receiving, via a communication interface, a proximity indicator from either the signor electronic device or the witness electronic device, or both. This proximity indicator could be generated based on the closeness of the signor electronic device to the witness electronic device.

[0028] Further, the method may comprise sending, by a communication interface, an activation command to the witness electronic device. This activation command could be based on the proximity of the witness to the signor and would be configured to trigger a scanner contained within the

witness electronic device. The method could involve capturing, through a scanner connected with the witness electronic device, a code that is linked to validating the electronic signature. The scanner may be activated by the previously mentioned activation command from the communication interface.

[0029] Still consistent with embodiments of the present disclosure, methods, systems, and computer readable media (CRM) are provided for facilitating the electronic signing of a document. The disclosure includes methods, systems and CRM for performing at least the following: i) identifying an eligible witness electronic device from a signature request initiated by a signor electronic device associated with a signor; ii) verifying the signor electronic device with the witness electronic device based on at least one parameter associated with the signature request before making a document available to the signor electronic device; iii) transmitting the document to the signor electronic device upon verification; and iv) receiving an electronic signature of the signor through the signor electronic device.

[0030] Both the foregoing brief overview and the following detailed description provide examples and are explanatory only. Accordingly, the foregoing brief overview and the following detailed description should not be considered to be restrictive. Further, features or variations may be provided in addition to those set forth herein. For example, embodiments may be directed to various feature combinations and sub-combinations described in the detailed description.

BRIEF DESCRIPTION OF THE DRAWINGS

[0031] The accompanying drawings, which are incorporated in and constitute a part of this disclosure, illustrate various embodiments of the present disclosure. The drawings contain representations of various trademarks and copyrights owned by the Applicants. In addition, the drawings may contain other marks owned by third parties and are being used for illustrative purposes only. All rights to various trademarks and copyrights represented herein, except those belonging to their respective owners, are vested in and the property of the Applicants. The Applicants retain and

reserve all rights in their trademarks and copyrights included herein, and grant permission to reproduce the material only in connection with reproduction of the granted patent and for no other purpose.

[0032] The present disclosure may be better understood with reference to the following figures. The components in the figures may not be necessarily to scale, emphasis instead being placed upon illustrating the principles of the disclosure. Moreover, in the figures, like reference numerals designate corresponding parts throughout the different views.

[0033] Furthermore, the drawings may contain text or captions that may explain certain embodiments of the present disclosure. This text is included for illustrative, non-limiting, explanatory purposes of certain embodiments detailed in the present disclosure.

[0034] The accompanying drawings, which are incorporated in and constitute a part of this disclosure, illustrate various embodiments of the present disclosure. The drawings contain representations of various trademarks and copyrights owned by the Applicants. In addition, the drawings may contain other marks owned by third parties and are being used for illustrative purposes only. All rights to various trademarks and copyrights represented herein, except those belonging to their respective owners, are vested in and the property of the Applicants. The Applicants retain and reserve all rights in their trademarks and copyrights included herein, and grant permission to reproduce the material only in connection with reproduction of the granted patent and for no other purpose. Furthermore, the drawings may contain text or captions that may explain certain embodiments of the present disclosure. This text is included for illustrative, non-limiting, explanatory purposes of certain embodiments detailed in the present disclosure.

[0035] FIG. 1 illustrates a diagram showing a method and system for facilitating electronic witnessing of electronic signatures.

[0036] FIG. 2 illustrates a diagram of a system for electronic witnessing of signatures.

[0037] FIG. 3A illustrates a web browser window displaying a document and an electronic signing button.

[0038] FIG. 3B illustrates a web browser window displaying a document and buttons for confirming signer ID and witnessing a signature.

[0039] FIG. 4 illustrates a sequence diagram of a method and system for facilitating electronic witnessing of electronic signatures.

[0040] FIG. 5 illustrates a flowchart outlining a process for facilitating electronic witnessing of electronic signatures.

[0041] FIG. 6 illustrates a flowchart depicting steps for establishing witnessing of electronic signing of a document.

[0042] FIG. 7 illustrates a block diagram of an exemplary computing device that may be used to implement various aspects of the disclosure.

DETAILED DESCRIPTION

[0043] As a preliminary matter, it will readily be understood by one having ordinary skill in the relevant art that the present disclosure has broad utility and application. As should be understood, any embodiment may incorporate only one or a plurality of the above-disclosed aspects of the disclosure and may further incorporate only one or a plurality of the above-disclosed features. Furthermore, any embodiment discussed and identified as being “preferred” is considered to be part of a best mode contemplated for carrying out the embodiments of the present disclosure. Other embodiments also may be discussed for additional illustrative purposes in providing a full and enabling disclosure. Moreover, many embodiments, such as adaptations, variations, modifications, and equivalent arrangements, will be implicitly disclosed by the embodiments described herein and fall within the scope of the present disclosure.

[0044] Accordingly, while embodiments are described herein in detail in relation to one or more embodiments, it is to be understood that this

disclosure is illustrative and exemplary of the present disclosure, and are made merely for the purposes of providing a full and enabling disclosure. The detailed disclosure herein of one or more embodiments is not intended, nor is to be construed, to limit the scope of patent protection afforded in any claim of a patent issuing here from, which scope is to be defined by the claims and the equivalents thereof. It is not intended that the scope of patent protection be defined by reading into any claim a limitation found herein that does not explicitly appear in the claim itself.

[0045] Thus, for example, any sequence(s) and/or temporal order of steps of various processes or methods that are described herein are illustrative and not restrictive. Accordingly, it should be understood that, although steps of various processes or methods may be shown and described as being in a sequence or temporal order, the steps of any such processes or methods are not limited to being carried out in any particular sequence or order, absent an indication otherwise. Indeed, the steps in such processes or methods generally may be carried out in various different sequences and orders while still falling within the scope of the present invention. Accordingly, it is intended that the scope of patent protection is to be defined by the issued claim(s) rather than the description set forth herein.

[0046] Additionally, it is important to note that each term used herein refers to that which an ordinary artisan would understand such term to mean based on the contextual use of such term herein. To the extent that the meaning of a term used herein—as understood by the ordinary artisan based on the contextual use of such term—differs in any way from any particular dictionary definition of such term, it is intended that the meaning of the term as understood by the ordinary artisan should prevail.

[0047] Regarding applicability of 35 U.S.C. §112, ¶6, no claim element is intended to be read in accordance with this statutory provision unless the explicit phrase “means for” or “step for” is actually used in such claim

element, whereupon this statutory provision is intended to apply in the interpretation of such claim element.

[0048] Furthermore, it is important to note that, as used herein, “a” and “an” each generally denotes “at least one,” but does not exclude a plurality unless the contextual use dictates otherwise. When used herein to join a list of items, “or” denotes “at least one of the items,” but does not exclude a plurality of items of the list. Finally, when used herein to join a list of items, “and” denotes “all of the items of the list.”

[0049] The following detailed description refers to the accompanying drawings. Wherever possible, the same reference numbers are used in the drawings and the following description to refer to the same or similar elements. While many embodiments of the disclosure may be described, modifications, adaptations, and other implementations are possible. For example, substitutions, additions, or modifications may be made to the elements illustrated in the drawings, and the methods described herein may be modified by substituting, reordering, or adding stages to the disclosed methods. Accordingly, the following detailed description does not limit the disclosure. Instead, the proper scope of the disclosure is defined by the appended claims. The present disclosure contains headers. It should be understood that these headers are used as references and are not to be construed as limiting upon the subjected matter disclosed under the header.

[0050] I. PLATFORM OVERVIEW

[0051] Consistent with embodiments of the present disclosure, an electronic signature platform (also referred to herein as “platform” or E-Signature platform) for facilitating witnessing of electronic signing may be provided. This overview is provided to introduce a selection of concepts in a simplified form that are further described below. This overview is not intended to identify key features or essential features of the claimed subject matter. Nor is this overview intended to be used to limit the claimed subject matter’s scope. The online platform may be used by individuals or companies

to facilitate electronic signing and witnessing of electronic signing of electronic documents.

[0052] Embodiments described herein provide an electronic signature platform that is configured to 1) enable a requester or a signor of an electronic document to specify a witness, 2) determine that the witness is in the proximity of the signor and can view the signing of the electronic document, and 3) generate an audit trail to record and capture the data from both the witness and the signor.

[0053] Accordingly, the E-Signature platform may be configured to be accessible by a plurality of parties, including, but not limited to, a signor, a witness and a requester of electronic signing. Initially, the requester may send a Signature Request for a document to be signed by the signor through the E-Signature Platform. Accordingly, the signor may receive a link corresponding to the document. Upon activating the link, the E-Signature platform may initiate a signature process. Similarly, the witness may also receive a link and upon activating the link, the E-Signature platform may initiate a witnessing process. Once the signing process and the witnessing process are performed, the E-Signature platform retains a copy of the signed document and all parties get notifications, a copy of the signed document and an audit trail corresponding to the signature process and the witnessing process.

[0054]

[0055] The signature process includes a first stage of access and authentication. Accordingly, when the signor clicks the link provide by the E-signature platform, the signor may arrive at a unique URL (webpage, Web-app, or mobile-app) associated with the document to be signed. Subsequently, the audit trail may begin. Further, optionally, the signor's ID may be verified.

[0056] Further, at a second stage, the signature process may include a first witness action. Accordingly, if a witness ID is defined (e.g., who specifically

must witness the document), a first QR code pops up and remains on the signor electronic device until a Witnessing Process Level 1 Verification is completed. In an instance, the requester, during the signature request process, may identify who the witness should be by specifying the witness ID. Alternatively, if the witness ID is not defined, but required by the requester, the requester, during the signature request process, may not define who the witness should be but enable the signor to specify who the witness should be. In this event, an Invite a Witness Process begins. Upon completion of the Invite a Witness Process, the first QR code pops up and remains on the signor electronic device until Witnessing Process Level 1 Verification is completed.

[0057] Further, in a third stage, the signature process may include document execution. Accordingly, when the E-Signature platform receives a notification that the Witnessing Process Level 1 Verification is completed, the signor may be presented with the document to sign electronically. Subsequently, an E-Signature may be received from the signor. Once the signor's signature is received, and the signor hits a "Submit" button, electronic signing of the document may be completed.

[0058] Further, in a fourth stage, the signature process may include a second witness action. Prior to final completion and acceptance of the electronic signature, the E-Signature platform may present (on the signor electronic device) a second QR code, which remains there until a Witnessing Process Level 2 Verification is completed. In some embodiments, the Witnessing Process Level 2 Verification and the second QR code may be combined with Witnessing Process Level 1 Verification and presented at either the beginning or the end. So, the second stage and the fourth stage may be a single stage.

[0059] Further, in a fifth stage, the signature process may include receiving a notification, the E-Signature platform, that the Witnessing Process Level 2 Verification is completed. Upon receipt of the notification, the signature process may be completed.

[0060] Further, initiation of the witnessing process may take place based on the witness clicking the link provided by the E-Signature platform on the witness electronic device. Accordingly, when the witness clicks the link, the witness may arrive at a unique URL (webpage, Web-app, or mobile-app) associated with the document. Subsequently, the audit trail may be updated. Further, optionally, a witness ID corresponding to the witness may be verified. Subsequently, if a proximity rule is defined, the proximity rule may be checked. Accordingly, if the proximity rule is verified, the witness electronic device may load a QR Code Scanner. Accordingly, the witness electronic device may scan the QR code displayed on the signor electronic device using the witness electronic device. Further, the QR code may determine which phase of witnessing verification will begin. For example, if QR code is a first QR Code, Witnessing Process Level 1 Verification may begin. If the QR code is a second QR Code, Witnessing Process Level 1 Verification may begin.

[0061] In the Witnessing Process Level 1 Verification, the E-Signature platform may provide the witness electronic device with document ID details corresponding to the document based on data obtained or made accessible via the first QR code. Further, the document ID details may include one or more of a copy of the document, a copy of signor credentials, and a copy of requester information. Furthermore, the witness may be enabled to take a picture of the signor to confirm the signor ID. Additionally, the witness may also be enabled to capture biometrics of the signor. Additionally, the witness may be enabled to take a picture of the signor's ID card to confirm the signor ID. Accordingly, the witness electronic device may include a feature of automatic ID Card scanning. Alternatively, the witness may simply click a button labeled "I have confirmed the signor ID".

[0062] In the Witnessing Process Level 2 Verification, the E-Signature platform may provide the witness electronic device with document ID details of the document based on data obtained or made accessible via the second QR

code. Further, the document ID details may include a copy of the signature, a copy of ID details and a copy of the signed document. Further, the witness may simply click or check a box “I have confirmed the signor ID”, and/or “I have witnessed the signature”.

[0063] E-Signature platform: An E-Signature platform may be the platform on which a document may be communicated, reviewed, filled-in (the in case of fill-in-the-blank forms/templates), and signed electronically.

[0064] Document: Document may refer to any electronic document, including but not limited to a pdf, doc, template, form, and the like.

[0065] Document details: Document details may refer to all credentials associated with the document (signors, signor emails, witness, witness emails, access data, audit trail data, expiration data, view data, reminder data, communication data, and the like).

[0066] Unique URL: A unique URL may lead to the document stored at a centralized and secure location. The platform may be embodied as a website, web-app, software application, mobile application, or any other software/hardware combination.

[0067] Audit trail: The audit trail keeps track of all user activity and user ID data on the E-Signature platform. For instance, during a security phase, the audit trail may capture pin code, role of party (i.e., signor/witness/CC/approving party etc.), biometrics and ID Card verification. Further, during a tracking phase, the audit trail may capture access data relating to the unique URL such as, IP address and Time/Date of access, document ID details and ID Verification, which may include photos/scans/biometrics data. Based on the above, the audit trail may be employed for each access to the unique URL associated with the document and provided to all parties.

[0068] Proximity Witnessing Requirement: The Requester may define a proximity rule during the signature request. If the proximity rule is active, the E-Signature platform may audit whether or not the witness is in physical

proximity of the signor. If proximity is required, during the signature process the E-Signature Platform may determine whether the GPS location of witness electronic device is in an appropriate proximity to the signor electronic device. Alternatively, the E-Signature platform may determine whether the Wi-Fi Location / IP Address of the signor electronic device match those of the witness electronic device. Alternatively, the E-Signature platform may determine the proximity based on a Bluetooth connection or any other form of near-field communication between the witness electronic device and the signor electronic device.

[0069] However, when the proximity rule is not required, and when the witness may be remote from the signor, then a screen sharing session may be initiated between the signor and the witness. The witness may access the same URL it would have otherwise, go through the same ID verification steps, and view the signing of the document as the signor executes the document via the screen sharing technology. In some embodiments, a webcam may be used to enable the witness to verify the signor ID of the signor. All of this may be recorded and saved as part of the audit trail (the entire screen sharing/webcam session).

[0070] Invite a witness process: If the requester requires the document to be witnessed, but gives the freedom for the signor to choose who they want the witness to be, the signor may be presented with an interface to specify a name of the witness, an email address of the witness and a pass code for use by the Witness. Further, in some embodiments, the signor may choose from a list of approved or certified witnesses (e.g., notaries). The list may be provided by either the requester or the E-Signature platform.

[0071] Requester: The requester is a user of the E-Signature Platform who defines which documents need to be signed, who needs to sign those documents, and who needs to witness the signing of those documents. Each signor may have its own witness. The witness may be predefined by the

requester, or the signor can select their own witness (see Invite a witness process).

[0072] QR code: A QR Code can refer to any type of computerized code (not limited to QR Code) that conveys encrypted information associated with the document details. The computerized code may be transferred by audio/visual transmission/capture from the signor electronic device to the witness electronic device. Further, the transmission/capture of the QR code may indicate that the witness is in proximity to the signor and can actually view the document and the signor. Accordingly, the witness electronic device may capture the QR code presented on the signor electronic device. Further, it may also indicate that the signor has loaded the Document for Signing and has commenced the signing process. Furthermore, the QR code may load at specific times during the signature process. When employing two QR codes at, for example, two different times during the signature process, and requiring the witness to scan each QR code, the E-Signature platform can determine that the witness is in proximity to the signor throughout the different stages of the signature process.

[0073] Each time the QR Code loads, it may indicate document details, information for witness electronic device to access data associated with the document and the stage of the signature process during which the QR code was presented.

II. PLATFORM CONFIGURATION

[0074] **FIG. 1** is an illustration of a platform consistent with various embodiments of the present disclosure. By way of non-limiting example, the online platform 100 for facilitating electronic signing and witnessing of electronic signing may be hosted on a centralized server **110**, such as, for example, a cloud computing service. The centralized server may communicate with other network entities, such as, for example, a mobile device (such as a smartphone, a laptop, a tablet computer etc.) and other electronic devices (such as desktop computers, etc.) over a communication

network **112**, such as, but not limited to, the Internet. Further, users of the platform may include one or more relevant parties such as, a requester of an electronic signature, a signor and one or more witnesses. Accordingly, electronic devices operated by the one or more relevant parties may be in communication with the platform. For example, the platform may be in communication with a signor electronic device **102** operated by the signor, a witness electronic device **104** operated by the witness and a requester electronic device **106** operated by the requester.

[0075] A user **105**, such as the one or more relevant parties, may access platform **100** through a software application. The software application may be embodied as, for example, but not be limited to, a website, a web application, a desktop application, and a mobile application compatible with a computing device **700**. One possible embodiment of the software application may be provided by AdobeSign™ products and services. Accordingly, in an instance, the user **105** may be a requester of an electronic signing who may specify a document to be electronically signed, a signor ID of a signor who is required to provide an electronic signature, a witness ID of a witness (or a list of witnesses) who is required to witness the electronic signing of the document and so on. Further, in another instance, the user **105** may be the signor who may designate one or more witnesses by specifying corresponding one or more witness IDs.

[0076] Accordingly, in some embodiments, the platform may be embodied as a system for facilitating electronic signing of a document. The system may include a communication interface configured to receive a signature access request from a signor electronic device associated with a signor. Further, the communication interface may be configured to receive a first confirmation (for example, but not limited to, a signor ID confirmation) from a witness electronic device associated with a witness. Furthermore, the signor ID confirmation may be provided by the witness. Further, the communication interface may be configured to transmit the document to the signor electronic

device based on the signor ID confirmation. Additionally, the signor electronic device may be configured to present the document to the signor and receive an electronic signature from the signor. Further, the communication interface may be configured to receive a second confirmation (for example, but not limited to, a signature confirmation) from the witness electronic device. Furthermore, the signature confirmation may be provided by the witness. Further, the communication interface may be configured to receive a signed document from the signor electronic device. Additionally, the signed document may include the electronic signature of the signor. Further, the electronic signature may be validated based on receipt of each of the first confirmation and the signature confirmation.

[0077] In some embodiments, the communication interface may be further configured to transmit a first code associated with the document to the signor electronic device. Further, the first code may include a document identifier associated with the document and a signor identifier associated with the signor. Furthermore, the first confirmation may be based on the first code. Additionally, the witness electronic device may be configured to receive the first code based on an interaction between the signor electronic device and the witness electronic device.

[0078] In some embodiments, the communication interface may be further configured to transmit a second code associated with the document to the signor electronic device. Further, the second code may include a signor identifier associated with the signor and the electronic signature of the signor. Furthermore, the signature confirmation may be based on the second code. Additionally, the witness electronic device may be configured to receive the second code based on an interaction between the signor electronic device and the witness electronic device.

[0079] In some embodiments, the communication interface may be further configured to receive one or more of: a) an image of the signor from the witness electronic device, wherein the image may be captured by the witness

electronic device; b) an image of the signor from the witness electronic device, wherein the image may be captured by the signor electronic device, wherein the signor electronic device may be in one or more of a webcam session and a screen sharing session with the witness electronic device; c) a biometric feature of the signor from the witness electronic device, wherein the biometric feature may be captured by the witness electronic device; d) a scan of an identification card of the signor from the witness electronic device, wherein the scan may be captured by the witness electronic device; e) a scan of the signor from the witness electronic device, wherein the scan may be captured by the signor electronic device, wherein the signor electronic device may be in one or more of a webcam session and a screen sharing session with the witness electronic device.

[0080] In some embodiments, the system may further include a processor configured to generate an audit trail including audit data corresponding to at least one event associated with one or more of the signor electronic device, the witness electronic device and the platform (i.e., the system).

[0081] Further provided, is a system of facilitating witnessing of electronic signing of a document. The system may include a communication interface configured to receive a first confirmation from a witness electronic device associated with a witness. Further, the first confirmation may be provided by the witness. Furthermore, the first confirmation may be based on a first code presented on a signor electronic device. Additionally, the witness electronic device may be configured to receive the first code based on an interaction between the signor electronic device and the witness electronic device. Further, the communication interface may be configured to receive a second confirmation from the witness electronic device associated with a witness. Furthermore, the second confirmation may be provided by the witness. Moreover, the second confirmation may be based on a second code presented on the signor electronic device. Further, the witness electronic device may be configured to receive the second code based on an interaction between the

signor electronic device and the witness electronic device. Additionally, the system may include a processor configured to establish witnessing of electronic signing of the document by the signor based on receipt of each of the first confirmation and the second confirmation.

[0082] In some embodiments, the communication interface may be further configured to receive a proximity indicator from one or more of the signor electronic device and the witness electronic device. Further, the proximity indicator may be generated based on proximity of the signor electronic device to the witness electronic device. Additionally, the communication interface may be further configured transmit an activation command to the witness electronic device based on the proximity of the witness to the signor. Further, the activation command may be configured to activate a scanner comprised in the witness electronic device. Furthermore, the scanner may be configured to capture one or more of the first code and the second code.

[0083] Turning to **FIG. 2**, a system for facilitating electronic signing and witnessing of the electronic signing is illustrated, in accordance with some embodiments. As shown, each of the signor electronic device **102** and the witness electronic device **104** may be in communication with the E-signature platform 100 (i.e., the system) over the communication network **112** (such as for example, a long distance communication network). Further, the signor electronic device **102** may be operated by a signor **202**. Accordingly, in order to obtain an electronic signature on a document **204**, the document **204** may be presented to the signor **202** on the signor electronic device **102**. Further, the platform may also transmit one or more QR codes (such as QR code **206**) to be presented on the signor electronic device. Further, the one or more QR codes received by the signor electronic device **102** may be captured by the witness electronic device **104** through a number of techniques. For instance, the witness electronic device **104** may be in communication with the signor electronic device **102** over a communication channel **208** which may be a long distance communication network such as the Internet and/or a short

range communication such as Bluetooth. Alternatively, the witness electronic device **104** may include a QR scanner **212** (or a camera) configured to optically capture the one or more QR codes presented on the signor electronic device **102**. Accordingly, the witness **210** operating the witness electronic device **104** may be able to direct the witness electronic device **104** towards the signor electronic device **102** in order to capture the one or more QR codes. Further, subsequent to capturing the one or more QR codes, the witness electronic device **104** may notify the platform of the one or more QR codes captured. Accordingly, the platform may establish electronic witnessing by witness **210** of the electronic signing process performed by the signor **202**.

[0084] For example, the platform may transmit a first QR code to the signor electronic device **102**. Subsequently, the first QR code may be presented on a display device of the signor electronic device **102**. Further, the witness **210** may capture the first QR code using the camera of the witness electronic device **104** resulting in a copy of the first QR code **214** being available on the witness electronic device **104**. The first QR code may include information regarding the signor ID associated with the signor **202** and document detail regarding the document **204**. The witness electronic device **104** may then notify the platform of the receipt of the copy of the first QR code **214**. For instance, the witness electronic device **104** may transmit the copy of the first QR code **214** to the platform. Since the platform originally generated the first QR code, the platform may be enabled to validate the possession of the first QR code by the witness electronic device **104**. In other words, the platform may establish that the witness electronic device **104** is in physical proximity of the signor electronic device **102**. Therefore, it may be inferred that the witness **210** is in physical presence of the signor **202**. Accordingly, a witnessing of one or more stages of the electronic signing process may be validated.

[0085] For instance, the first QR code may be used to validate the signor ID. In other words, by notifying the platform of the receipt of the copy of the QR code, the platform may establish that the witness validates an identity of the signor **202**. Likewise, the platform may transmit a second QR code to the signor electronic device **102** subsequent to validation of the signor ID and during the electronic signing. Accordingly, the witness electronic device **104** may capture the second QR code and notify the platform. Therefore, by notifying the platform of the receipt of the copy of the second QR code, the platform may establish that the witness validates electronic signing of the document **204** by the signor **202**.

[0086] Turning now to **FIG. 3A**, a GUI **300A** for facilitating electronic signing is illustrated, in accordance with some embodiments. The GUI **300A** may be presented on the signor electronic device **102**. Further, the GUI **300A** may be configured to display the document **204** to the signor **202**. Accordingly, subsequent to reviewing the document **204**, the signor **202** may be enabled to provide an electronic signature by activating an electronic signing button **302** in the GUI **300A**.

[0087] Referring to **FIG. 3B**, a GUI **300B** for facilitating electronic witnessing of electronic signing is illustrated, in accordance with some embodiments. The GUI **300B** may be presented on the witness electronic device **104**. Further, the GUI **300B** may be configured to display the document **204** to the witness **210** along with the signor ID of the signor **202**. Further, the GUI **300B** may also provide one or more GUI elements (such as GUI elements **304** and **306**) to confirm one or more of the signor ID and the electronic signing of the document **204**.

[0088] **FIG. 4** illustrates a sequence diagram corresponding to a method of facilitating electronic witnessing of electronic signing of a document, in accordance with some embodiments. At stage **402**, the signor **202** may perform an action on the signor electronic device **102** in order to generate a request to perform electronic signing of a document. For instance, the action

may be clicking a link previously transmitted to the signor electronic device by the platform 100. Based on the request, the platform 100 may transmit a first QR code to the signor electronic device **102** at stage **406**. The first QR code may encode information regarding one or more of the document, signor ID of the signor **202**, witness ID of the witness **210** and a requester ID of the requester of the electronic signing. Subsequently, at stage **408**, the witness electronic device **104** may interact with the signor electronic device **102** in order to receive the first QR code. For example, a camera in the witness electronic device **104** may capture the first QR code displayed on a display of the signor electronic device **102**. Accordingly, the first QR code may be decoded and information encoded in the first QR code may be displayed to the witness **210**. As a result, the witness may be able to view one or more of the document, the signor ID of the signor **202**, the witness ID of the witness **210** and the requester ID of the requester of the electronic signing. Subsequently, the witness **210** may perform a validation of the signor ID at stage **410** by interacting with a GUI (e.g., GUI **300B**) on the witness electronic device **104**. Accordingly, during stage **412**, the witness electronic device **104** may transmit a notification to the platform 100 indicating verification of the signor ID by the witness **210**. Subsequently, at stage **414**, the platform 100 may transmit the document to the signor electronic device **102** for electronic signing. Further, at stage **416**, the platform 100 may transmit a second QR code to the signor electronic device **102**. Accordingly, during the electronic signing process, the second QR code may be displayed on the display of the signor electronic device **102**. Further, while the electronic signing is in progress, the witness electronic device **104** may interact with the signor electronic device **102**, at stage **418**, in order to obtain the second QR code. Subsequently, at stage **420** the witness may interact with the GUI (such as GUI **300B**) in order to validate the electronic signing process as being performed by the individual associated by the signor ID. Further at stage **422**, the witness electronic device **104** may notify the platform 100 of the

validation of the electronic signing. Thereafter, at stage **424**, the platform 100 may receive the signed electronic document from the signor electronic device **102**. Further, based on each of validation of signor ID and validation of electronic signing, the platform 100 may establish electronic witnessing of the electronic signing.

[0089] As will be detailed with reference to **FIG. 7** below, the computing device through which the E-Signature platform may be accessed may comprise, but not be limited to, for example, a desktop computer, laptop, a tablet, or mobile telecommunications device. As will be detailed with reference to **FIG. 7** below, the computing device through which the platform may be accessed may comprise, but not be limited to, for example, a desktop computer, laptop, a tablet, or mobile telecommunications device. Though the present disclosure is written with reference to a mobile telecommunications device, it should be understood that any computing device may be employed to provide the various embodiments disclosed herein.

III. PLATFORM OPERATION

[0090] Although methods **500** and **600** have been described to be performed by platform **100**, it should be understood that computing device **700** may be used to perform the various stages of methods **500** and **600**. Furthermore, in some embodiments, different operations may be performed by different networked elements in operative communication with computing device **700**. For example, server **110** may be employed in the performance of some or all of the stages in methods **500** and **600**. Moreover, server **110** may be configured much like computing device **700**.

[0091] Although the stages illustrated by the flow charts are disclosed in a particular order, it should be understood that the order is disclosed for illustrative purposes only. Stages may be combined, separated, reordered, and various intermediary stages may exist. Accordingly, it should be understood that the various stages illustrated within the flow chart may be, in various embodiments, performed in arrangements that differ from the ones

illustrated. Moreover, various stages may be added or removed from the flow charts without altering or deterring from the fundamental scope of the depicted methods and systems disclosed herein. Ways to implement the stages of methods **500** and **600** will be described in greater detail below.

[0092] **FIG. 5** illustrates a flowchart of a method **500** of facilitating electronic signing of an electronic document, in accordance with some embodiments. The method may include a stage **502** of receiving, using a communication interface, a signature access request from a signor electronic device associated with a signor. Further, the method may include a stage **504** of receiving, using the communication interface, a first confirmation from a witness electronic device associated with a witness. The first confirmation may be provided by the witness. Further, the method may include a stage **506** of transmitting, using the communication interface, the document to the signor electronic device based on the first confirmation. Furthermore, the signor electronic device may be configured to present the document to the signor and receive an electronic signature from the signor. Further, the method may include a stage **508** of receiving, using the communication interface, a second confirmation (for example, but not limited to, a signature confirmation) from the witness electronic device. The signature confirmation may be provided by the witness. Further, the method may include a stage **510** of receiving, using the communication interface, a signed document from the signor electronic device. Furthermore, the signed document may include the electronic signature of the signor. Additionally, the electronic signature may be validated based on receipt of each of the first confirmation and the signature confirmation.

[0093] In some embodiments, the method **500** may further include transmitting, using the communication interface, a first code associated with the document to the signor electronic device. Further, the first code may include a document identifier associated with the document and a signor identifier associated with the signor. Further, the first confirmation may be

based on the first code. Further, the witness electronic device may be configured to receive the first code based on an interaction between the signor electronic device and the witness electronic device.

[0094] In some embodiments, the method **500** may further include transmitting, using the communication interface, a second code associated with the document to the signor electronic device. Further, the second code may include a signor identifier associated with the signor and the electronic signature of the signor. Further, the signature confirmation may be based on the second code. Further, the witness electronic device may be configured to receive the second code based on an interaction between the signor electronic device and the witness electronic device.

[0095] In some embodiments, the method **500** may further include receiving, using the communication interface, one or more of: an image of the signor from the witness electronic device. Further, the image may be captured by the witness electronic device; an image of the signor from the witness electronic device. Further, the image may be captured by the signor electronic device. Further, the signor electronic device may be in one or more of a webcam session and a screen sharing session with the witness electronic device; a biometric feature of the signor from the witness electronic device. Further, the biometric feature may be captured by the witness electronic device; a scan of an identification card of the signor from the witness electronic device. Further, the scan may be captured by the witness electronic device; a scan of the signor from the witness electronic device. Further, the scan may be captured by the signor electronic device. Further, the signor electronic device may be in one or more of a webcam session and a screen sharing session with the witness electronic device.

[0096] In some embodiments, the method **500** may further include generating, using a processor, an audit trail including audit data corresponding to at least one event associated with one or more of the signor electronic device and the witness electronic device.

[0097] FIG. 6 illustrates a flowchart of a method **600** of facilitating witnessing of electronic signing of an electronic document, in accordance with some embodiments. The method **600** may include a stage **602** of receiving, using the communication interface, a first confirmation (for example, but not limited to, a signor ID confirmation) from a witness electronic device associated with a witness. The signor ID confirmation may be provided by the witness. Further, the signor ID confirmation may be based on a first code presented on a signor electronic device associated with the signor. Furthermore, the witness electronic device may be configured to receive the first code based on an interaction between the signor electronic device and the witness electronic device. Additionally, the method may include a stage **604** of receiving, using the communication interface, a signature confirmation from the witness electronic device associated with a witness. The signature confirmation may be provided by the witness. Further, the signature confirmation may be based on a second code presented on the signor electronic device. Furthermore, the witness electronic device may be configured to receive the second code based on an interaction between the signor electronic device and the witness electronic device. Additionally, the method may include a stage **606** of establishing, using a processor, witnessing of electronic signing of the document by the signor based on receipt of each of the signor ID confirmation and the signature confirmation.

[0098] In some embodiments, the method **600** may further include receiving, using the communication interface, a proximity indicator from one or more of the signor electronic device and the witness electronic device. Further, the proximity indicator may be generated based on proximity of the signor electronic device to the witness electronic device. Additionally, the method **600** may include transmitting, using the communication interface, an activation command to the witness electronic device based on the proximity of the witness to the signor. Further, the activation command may be configured to activate a scanner comprised in the witness electronic device.

Furthermore, the scanner may be configured to capture one or more of the first code and the second code.

[0099] A method of facilitating witnessing of electronic signing of a document, according to some embodiments. The method may include transmitting, using a communication interface, a document to a signor electronic device associated with a signor. Further, the signor electronic device may be configured to present the document to the signor and receive an electronic signature from the signor. Further, the method may include transmitting, using the communication interface, a unique code associated with the document to the signor electronic device. Further, the method may include transmitting, using a communication interface, a witness request to a witness electronic device associated with a witness. Further, the witness electronic device may be configured to interact with the signor electronic device. Further, the method may include receiving, using the communication interface, an attestation from the witness electronic device. Further, the attestation may validate authenticity of the electronic signature as belonging to the signor. Further, the attestation may include the unique code. Further, the witness electronic device may be configured to receive the unique code based on an interaction between the signor electronic device and the witness electronic device. Further, the method may include receiving, using the communication interface, a signed document from the signor electronic device. Further, the signed document may include the electronic signature of the signor.

[00100] In some embodiments, the method may further include receiving, using the communication interface, a signature request from a requester electronic device associated with a requester. Further, the signature request may include a document identifier associated with the document and one or more of a signor identifier associated with the signor and a witness identifier associated with the witness.

[00101]In some embodiments, the signature request further may include the document.

[00102]In some embodiments, the method may further include receiving, using the communication interface, a witness invite from the signor electronic device. Further, the witness invite may include a witness identifier associated with the witness.

[00103]In some embodiments, the witness invite further may include an email address of the witness and a witness passcode. Further, the witness passcode may be configured to facilitate authentication of the witness.

[00104]In some embodiments, the method may further include transmitting, using the communication interface, a list of certified witnesses to the signor electronic device. Further, the witness identifier may be selected from the list of certified witnesses.

[00105]In some embodiments, the method may further include: transmitting, using the communication interface, a signature request to the signor electronic device; and transmitting, using the communication interface, a witness request to the witness electronic device.

[00106]In some embodiments, the signature request may include a signature hyperlink. Further, the witness request may include a witness hyperlink.

[00107]In some embodiments, the method may further include: receiving, using the communication interface, a signor credential from the signor electronic device; and authenticating, using a processor, the signor based on the signor credential.

[00108]In some embodiments, the method may further include: receiving, using the communication interface, a witness credential from the witness electronic device; and authenticating, using a processor, the witness based on the witness credential.

[00109]In some embodiments, the unique code may include a code configured to be displayed on the signor electronic device.

[00110]In some embodiments, the code may include a first Quick Response (QR code including one or more of a document identifier associated with the document, the document, a signor identifier associated with the signor, a requester identifier associated with a requester.

[00111]In some embodiments, the method may further include receiving, using the communication interface, an image of the signor from the witness electronic device. Further, the image may be captured by the witness electronic device.

[00112]In some embodiments, the method may further include receiving, using the communication interface, an image of the signor from the witness electronic device. Further, the image may be captured by the signor electronic device. Further, the signor electronic device may be in one or more of a webcam session and a screen sharing session with the witness electronic device.

[00113]In some embodiments, the method may further include receiving, using the communication interface, a biometric feature of the signor from the witness electronic device. Further, the biometric feature may be captured by the witness electronic device.

[00114]In some embodiments, the method may further include receiving, using the communication interface, a scan of an identification card of the signor from the witness electronic device. Further, the scan may be captured by the witness electronic device.

[00115]In some embodiments, the method may further include receiving, using the communication interface, a scan of the signor from the witness electronic device. Further, the scan may be captured by the signor electronic device. Further, the signor electronic device may be in one or more of a webcam session and a screen sharing session with the witness electronic device.

[00116]In some embodiments, the method may further include, receiving, using the communication interface, a signor ID confirmation from the witness

electronic device. Further, the signor ID confirmation may be provided by the witness.

[00117]In some embodiments, the code may include a second Quick Response (QR code including one or more of a document identifier associated with the document, the document, a signor identifier associated with the signor, the electronic signature of the signor and the signed document.

[00118]In some embodiments, the method may further include receiving, using the communication interface, a signor ID confirmation from the witness electronic device. Further, the signor ID confirmation may be provided by the witness.

[00119]In some embodiments, the method may further include receiving, using the communication interface, a signature confirmation from the witness electronic device. Further, the signature confirmation may be provided by the witness.

[00120]In some embodiments, the method may further include receiving, using the communication interface a proximity indicator from one or more of the signor electronic device and the witness electronic device. Further, the proximity indicator may be generated based on proximity of the signor electronic device to the witness electronic device.

[00121]In some embodiments, the proximity indicator may be generated based on a near field communication between the signor electronic device and the witness electronic device.

[00122]In some embodiments, the method may further include: receiving, using the communication interface, each of a signor location associated with the signor electronic device and a witness location associated with the witness electronic device; comparing, using a processor, the signor location with the witness location; and determining, using the processor, a proximity of the witness to the signor based on a result of the comparing.

[00123]In some embodiments, the method may further include activating a scanner comprised in the witness electronic device based on the proximity of the witness to the signor.

[00124]In some embodiments, the scanner may include an optical scanner configured to scan a Quick Response (QR) code.

[00125]In some embodiments, the method may further include receiving, using the communication interface, a proximity requirement from a requester electronic device associated with a requester.

[00126]In some embodiments, each of the signor location and the witness location may be based on one or more of a GPS location and a WiFi Location.

[00127]In some embodiments, the method may further include generating, using a processor, an audit trail including audit data corresponding to at least one event associated with one or more of the signor electronic device and the witness electronic device.

[00128]Further disclosed is a method of establishing witnessing of electronic signing of a document, in accordance with some embodiments. The method may include receiving, using a communication interface, a signature request from a requester electronic device associated with a requester. Further, the signature request may include a document identifier associated with a document and one or more of a signor identifier associated with the signor and a witness identifier associated with the witness. Further, the method may include transmitting, using the communication interface, the document to a signor electronic device associated with the signor. Further, the signor electronic device may be configured to present the document to the signor and receive an electronic signature from the signor. Further, the method may include transmitting, using the communication interface, a first Quick Access (QR) code to the signor electronic device. Further, the QR code may include each of the document identifier, the signor identifier and a requester identifier associated with the requester; receiving, using the communication interface, a first notification from the witness electronic

device. Further, the first notification may be generated based on capturing of the first QR code by the witness electronic device; receiving, using the communication interface, a signor ID confirmation from the witness electronic device. Further, the signor ID confirmation may be provided by the witness; transmitting, using the communication interface, a second QR code including a link to each of the electronic signature of the signor and the signed document; receiving, using the communication interface, a second notification from the witness electronic device. Further, the second notification may be generated based on capturing of the second QR code by the witness electronic device; receiving, using the communication interface, a signature confirmation from the witness electronic device. Further, the signature confirmation may be provided by the witness; receiving, using the communication interface, the signed document from the signor electronic device. Further, the signed document may include the electronic signature of the signor; and establishing, using the processor, witnessing of electronic signing of the document based on each of the first notification, the signor ID confirmation, the second notification, the signature confirmation and receipt of the signed document.

Here is a draft of the detailed description for Figure 1, focusing on the technical aspects of the electronic signature and witnessing system:

FIG. 1 illustrates a system 100 for facilitating electronic signing and witnessing of electronic signatures. The system 100 may include a centralized server 110, such as a cloud computing service, that hosts an electronic signature platform. The server 110 may communicate with various electronic devices over a communication network 112, such as the Internet.

The electronic devices may include a signor electronic device 102, a witness electronic device 104, and a requester electronic device 106. These devices

may be implemented as mobile devices like smartphones or tablets, or as desktop/laptop computers.

The signor electronic device 102 may be operated by a signor who needs to electronically sign a document 105. The witness electronic device 104 may be operated by a witness who needs to verify and attest to the signor's identity and signature. The requester electronic device 106 may be operated by a requester who initiates the electronic signature request.

The document 105 to be signed may contain various elements including:

- A document identifier
- A signor identifier associated with the authorized signor
- A list of one or more witness identifiers for authorized witnesses
- Fields for capturing the electronic signature
- Fields for capturing electronic witnessing attestations

The server 110 may manage the overall electronic signing and witnessing process by:

1. Receiving the signature request from the requester device 106
2. Transmitting the document 105 to the signor device 102
3. Generating and transmitting visual codes (e.g. QR codes) to the signor device 102
4. Receiving confirmations from the witness device 104 after scanning the visual codes
5. Validating the electronic signature based on the witness confirmations
6. Generating an audit trail of the entire signing and witnessing process

The system 100 enables a secure, verifiable electronic signature process with integrated witnessing capabilities. The use of visual codes scanned between devices helps ensure the physical proximity of the witness to the signor

during critical stages of the signing process. The centralized server architecture allows for coordinated management of the multi-step workflow across the various participating devices. Based on the provided materials, here is a continuation of the patent specification for the method of determining the position of a mobile device:

The method may further include determining, by the mobile device, a covariance matrix associated with the refined position estimate. In some embodiments, determining the covariance matrix comprises:

forming an observation matrix based on line-of-sight vectors between the coarse position estimate and the plurality of transmitters;

forming a weight matrix based on estimated uncertainties in the pseudorange residuals; and

computing the covariance matrix based on the observation matrix and the weight matrix.

The method may also include determining a protection level associated with the refined position estimate based on the covariance matrix and a specified integrity risk. This allows the mobile device to quantify the reliability of the refined position estimate.

In some embodiments, the plurality of transmitters comprise satellites from one or more Global Navigation Satellite Systems (GNSS). The one or more GNSS may comprise at least one of: Global Positioning System (GPS), Galileo, GLONASS, or BeiDou. This allows the mobile device to leverage signals from multiple satellite constellations to improve positioning accuracy and availability.

In other embodiments, the plurality of transmitters may comprise terrestrial transmitters. The terrestrial transmitters may include at least one of: cellular network base stations, Wi-Fi access points, or Bluetooth beacons. Utilizing terrestrial signals in addition to or instead of satellite signals may improve positioning in environments with poor satellite visibility, such as urban canyons or indoors.

The method may further include:

determining, by the mobile device, differential corrections for the plurality of transmitters; and

applying the differential corrections to the determined pseudoranges before determining the pseudorange residuals.

The differential corrections may be obtained from one or more of: a nearby reference station, a wide area augmentation system, or a precise point positioning service. Applying differential corrections allows the mobile device to mitigate common errors affecting the pseudorange measurements, thereby improving positioning accuracy.

In some embodiments, the method includes:

determining, by the mobile device, tropospheric delays for the plurality of transmitters; and

applying the tropospheric delays to the expected pseudoranges before determining the pseudorange residuals.

The method may also include:

determining, by the mobile device, ionospheric delays for the plurality of transmitters; and

applying the ionospheric delays to the expected pseudoranges before determining the pseudorange residuals.

Accounting for tropospheric and ionospheric delays allows the mobile device to compensate for signal propagation effects through the atmosphere, further improving positioning accuracy.

In some embodiments, determining the pseudorange residuals comprises detecting and excluding outlier measurements based on the differences between the determined pseudoranges and the expected pseudoranges. This allows the mobile device to identify and remove erroneous measurements that may degrade the position solution.

The method may further include determining, by the mobile device, a velocity of the mobile device based on Doppler measurements from the received signals and the refined position estimate. This allows the mobile device to estimate its speed and direction of motion in addition to its position.

In some embodiments, the method includes:

determining, by the mobile device, integer ambiguities for carrier phase measurements from the received signals using the refined position estimate; and

determining, by the mobile device, a further refined position estimate using the carrier phase measurements with resolved integer ambiguities.

Utilizing carrier phase measurements with resolved ambiguities allows the mobile device to achieve centimeter-level positioning accuracy under suitable conditions.

The mobile device implementing the method may comprise a receiver configured to receive signals from the plurality of transmitters, one or more processors, and memory storing instructions that, when executed by the one or more processors, cause the mobile device to perform the various operations described above. The mobile device may be, for example, a smartphone, tablet, wearable device, vehicle navigation system, or other portable electronic device capable of receiving positioning signals.

In some embodiments, the mobile device may be configured to operate in different positioning modes depending on the available signals and desired accuracy. For example, the mobile device may use only GNSS signals when outdoors with good satellite visibility, switch to a hybrid mode using both GNSS and terrestrial signals in urban environments, or rely primarily on terrestrial signals when indoors. The mobile device may automatically select the appropriate mode based on the signal environment and user settings.

The mobile device may also be configured to adapt its position determination strategy based on available computational resources and power constraints. For example, the mobile device may use simplified positioning algorithms when battery power is low or when real-time performance is critical, and switch to more sophisticated algorithms when higher accuracy is required and sufficient resources are available.

In some embodiments, the mobile device may be configured to share its refined position estimate and associated uncertainty information with other nearby devices through short-range wireless communication. This cooperative positioning approach may allow multiple devices to improve their collective positioning accuracy by leveraging their diverse signal reception conditions and computational resources.

The methods and systems described herein may be implemented in various applications requiring accurate positioning, such as location-based services, autonomous navigation, augmented reality, and emergency response. The ability to determine a refined position estimate with associated uncertainty information allows these applications to make informed decisions based on the reliability of the position data.

While the above description contains many specifics, these should not be construed as limitations on the scope of the invention, but rather as examples of several embodiments thereof. Many other variations are possible. Accordingly, the scope of the invention should be determined not by the embodiments illustrated, but by the appended claims and their legal equivalents. Here is a continuation of the detailed description for the electronic signature witnessing system, focusing on the method illustrated in Figure 5:

The method 500 for facilitating electronic signing of a document may include several stages, as illustrated in Figure 5. At stage 502, the method may include receiving, using a communication interface, a signature access request from a signor electronic device associated with a signor. This signature access request may be initiated when the signor activates a link sent to them, for example, via email or text message.

At stage 504, the method may include receiving, using the communication interface, a first confirmation from a witness electronic device associated with a witness. This first confirmation may be provided by the witness and may serve to verify the identity of the signor. For example, the witness may be presented with signor credentials or other identifying information and may confirm that the person present matches this information.

Upon receiving this first confirmation, at stage 506, the method may include transmitting, using the communication interface, the document to the signor electronic device based on the first confirmation. The signor electronic device may be configured to present the document to the signor and receive an electronic signature from the signor. This stage ensures that the document is only made available for signing after the witness has confirmed the signor's identity.

At stage 508, the method may include receiving, using the communication interface, a second confirmation from the witness electronic device. This second confirmation may be a signature confirmation provided by the witness. For example, the witness may confirm that they observed the signor electronically signing the document.

Finally, at stage 510, the method may include receiving, using the communication interface, a signed document from the signor electronic device. The signed document may include the electronic signature of the signor. Importantly, the electronic signature may be validated based on receipt of each of the first confirmation and the signature confirmation from the witness.

In some embodiments, the method may further include transmitting, using the communication interface, a first code associated with the document to the

signor electronic device. This first code may include a document identifier associated with the document and a signor identifier associated with the signor. The first confirmation received from the witness may be based on this first code. The witness electronic device may be configured to receive the first code based on an interaction between the signor electronic device and the witness electronic device. For example, the first code may be a QR code displayed on the signor's device, which the witness scans using their device.

Similarly, the method may include transmitting, using the communication interface, a second code associated with the document to the signor electronic device. This second code may include a signor identifier associated with the signor and the electronic signature of the signor. The signature confirmation received from the witness may be based on this second code. Again, the witness electronic device may be configured to receive the second code based on an interaction between the signor electronic device and the witness electronic device.

The method may also include receiving various forms of additional verification from the witness electronic device. For example, the method may include receiving an image of the signor captured by the witness electronic device, or an image captured by the signor electronic device during a webcam session or screen sharing session with the witness electronic device. The method may also include receiving a biometric feature of the signor, such as a fingerprint or facial scan, captured by the witness electronic device.

In some embodiments, the method may include receiving a scan of an identification card of the signor from the witness electronic device. This scan may be captured by the witness electronic device, providing an additional layer of identity verification.

To ensure the witness is physically present with the signor, the method may include receiving a proximity indicator from one or more of the signor electronic device and the witness electronic device. This proximity indicator may be generated based on the proximity of the signor electronic device to the witness electronic device. For example, it may be based on GPS data, Wi-Fi network information, or a near-field communication between the devices.

The method may further include generating, using a processor, an audit trail including audit data corresponding to at least one event associated with one or more of the signor electronic device and the witness electronic device. This audit trail may provide a detailed record of the entire signing and witnessing process, enhancing the security and verifiability of the electronic signature.

By following this method, the electronic signature platform may ensure that electronic signatures are properly witnessed, maintaining the legal validity and integrity of electronically signed documents. The use of multiple confirmations, proximity verification, and detailed audit trails provides a robust system for electronic document signing that may be equivalent to or even more secure than traditional paper-based signing processes.

IV. PLATFORM ARCHITECTURE

[00129] The platform 100 may be embodied as, for example, but not be limited to, a website, a web application, a desktop application, and a mobile application compatible with a computing device. The computing device may comprise, but not be limited to, a desktop computer, laptop, a tablet, or mobile telecommunications device. Moreover, the platform **100** may be hosted on a centralized server, such as, for example, a cloud computing service. Although methods **500** and **600** have been described to be performed by a computing device **700**, it should be understood that, in some

embodiments, different operations may be performed by different networked elements in operative communication with computing device **700**.

[00130] Embodiments of the present disclosure may comprise a system having a memory storage and a processing unit. The processing unit coupled to the memory storage, wherein the processing unit is configured to perform the stages of methods **500** and **600**.

[00131] **FIG. 7** is a block diagram of a system including computing device **700**. Consistent with an embodiment of the disclosure, the aforementioned memory storage and processing unit may be implemented in a computing device, such as computing device **700** of **FIG. 7**. Any suitable combination of hardware, software, or firmware may be used to implement the memory storage and processing unit. For example, the memory storage and processing unit may be implemented with computing device **700** or any of other computing devices **718**, in combination with computing device **700**. The aforementioned system, device, and processors are examples and other systems, devices, and processors may comprise the aforementioned memory storage and processing unit, consistent with embodiments of the disclosure.

[00132] With reference to **FIG. 7**, a system consistent with an embodiment of the disclosure may include a computing device or cloud service, such as computing device **700**. In a basic configuration, computing device **700** may include at least one processing unit **702** and a system memory **704**. Depending on the configuration and type of computing device, system memory **704** may comprise, but is not limited to, volatile (e.g., random access memory (RAM)), non-volatile (e.g., read-only memory (ROM)), flash memory, or any combination. System memory **704** may include operating system **705**, one or more programming modules **706**, and may include a program data **707**. Operating system **705**, for example, may be suitable for controlling computing device **700**'s operation. In one embodiment, programming modules **706** may include image encoding module, machine learning module and image classifying module. Furthermore, embodiments of the disclosure

may be practiced in conjunction with a graphics library, other operating systems, or any other application program and is not limited to any particular application or system. This basic configuration is illustrated in **FIG. 7** by those components within a dashed line **708**.

[00133] Computing device **700** may have additional features or functionality. For example, computing device **700** may also include additional data storage devices (removable and/or non-removable) such as, for example, magnetic disks, optical disks, or tape. Such additional storage is illustrated in **FIG. 7** by a removable storage **709** and a non-removable storage **710**. Computer storage media may include volatile and nonvolatile, removable and non-removable media implemented in any method or technology for storage of information, such as computer readable instructions, data structures, program modules, or other data. System memory **704**, removable storage **709**, and non-removable storage **710** are all computer storage media examples (i.e., memory storage). Computer storage media may include, but is not limited to, RAM, ROM, electrically erasable read-only memory (EEPROM), flash memory or other memory technology, CD-ROM, digital versatile disks (DVD) or other optical storage, magnetic cassettes, magnetic tape, magnetic disk storage or other magnetic storage devices, or any other medium which can be used to store information and which can be accessed by computing device **700**. Any such computer storage media may be part of device **700**. Computing device **700** may also have input device(s) **712** such as a keyboard, a mouse, a pen, a sound input device, a touch input device, etc. Output device(s) **714** such as a display, speakers, a printer, etc. may also be included. The aforementioned devices are examples and others may be used.

[00134] Computing device **700** may also contain a communication connection **716** that may allow device **700** to communicate with other computing devices **718**, such as over a network in a distributed computing environment, for example, an intranet or the Internet. Communication connection **716** is one example of communication media. Communication

media may typically be embodied by computer readable instructions, data structures, program modules, or other data in a modulated data signal, such as a carrier wave or other transport mechanism, and includes any information delivery media. The term “modulated data signal” may describe a signal that has one or more characteristics set or changed in such a manner as to encode information in the signal. By way of example, and not limitation, communication media may include wired media such as a wired network or direct-wired connection, and wireless media such as acoustic, radio frequency (RF), infrared, and other wireless media. The term computer readable media as used herein may include both storage media and communication media.

[00135]As stated above, a number of program modules and data files may be stored in system memory **704**, including operating system **705**. While executing on processing unit **702**, programming modules **706** (e.g., application **720**) may perform processes including, for example, stages of one or more of methods **500** and **600** as described above. The aforementioned process is an example, and processing unit **702** may perform other processes. Other programming modules that may be used in accordance with embodiments of the present disclosure may include image encoding applications, machine learning application, image classifiers etc.

[00136]Generally, consistent with embodiments of the disclosure, program modules may include routines, programs, components, data structures, and other types of structures that may perform particular tasks or that may implement particular abstract data types. Moreover, embodiments of the disclosure may be practiced with other computer system configurations, including hand-held devices, multiprocessor systems, microprocessor-based or programmable consumer electronics, minicomputers, mainframe computers, and the like. Embodiments of the disclosure may also be practiced in distributed computing environments where tasks are performed by remote processing devices that are linked through a communications

network. In a distributed computing environment, program modules may be located in both local and remote memory storage devices.

[00137] Furthermore, embodiments of the disclosure may be practiced in an electrical circuit comprising discrete electronic elements, packaged or integrated electronic chips containing logic gates, a circuit utilizing a microprocessor, or on a single chip containing electronic elements or microprocessors. Embodiments of the disclosure may also be practiced using other technologies capable of performing logical operations such as, for example, AND, OR, and NOT, including but not limited to mechanical, optical, fluidic, and quantum technologies. In addition, embodiments of the disclosure may be practiced within a general purpose computer or in any other circuits or systems.

[00138] Embodiments of the disclosure, for example, may be implemented as a computer process (method), a computing system, or as an article of manufacture, such as a computer program product or computer readable media. The computer program product may be a computer storage media readable by a computer system and encoding a computer program of instructions for executing a computer process. The computer program product may also be a propagated signal on a carrier readable by a computing system and encoding a computer program of instructions for executing a computer process. Accordingly, the present disclosure may be embodied in hardware and/or in software (including firmware, resident software, micro-code, etc.). In other words, embodiments of the present disclosure may take the form of a computer program product on a computer-usable or computer-readable storage medium having computer-usable or computer-readable program code embodied in the medium for use by or in connection with an instruction execution system. A computer-usable or computer-readable medium may be any medium that can contain, store, communicate, propagate, or transport the program for use by or in connection with the instruction execution system, apparatus, or device.

[00139] The computer-usable or computer-readable medium may be, for example but not limited to, an electronic, magnetic, optical, electromagnetic, infrared, or semiconductor system, apparatus, device, or propagation medium. More specific computer-readable medium examples (a non-exhaustive list), the computer-readable medium may include the following: an electrical connection having one or more wires, a portable computer diskette, a random access memory (RAM), a read-only memory (ROM), an erasable programmable read-only memory (EPROM or Flash memory), an optical fiber, and a portable compact disc read-only memory (CD-ROM). Note that the computer-usable or computer-readable medium could even be paper or another suitable medium upon which the program is printed, as the program can be electronically captured, via, for instance, optical scanning of the paper or other medium, then compiled, interpreted, or otherwise processed in a suitable manner, if necessary, and then stored in a computer memory.

[00140] Embodiments of the present disclosure, for example, are described above with reference to block diagrams and/or operational illustrations of methods, systems, and computer program products according to embodiments of the disclosure. The functions/acts noted in the blocks may occur out of the order as shown in any flowchart. For example, two blocks shown in succession may in fact be executed substantially concurrently or the blocks may sometimes be executed in the reverse order, depending upon the functionality/acts involved.

[00141] While certain embodiments of the disclosure have been described, other embodiments may exist. Furthermore, although embodiments of the present disclosure have been described as being associated with data stored in memory and other storage mediums, data can also be stored on or read from other types of computer-readable media, such as secondary storage devices, like hard disks, solid state storage (e.g., USB drive), or a CD-ROM, a carrier wave from the Internet, or other forms of RAM or ROM. Further, the disclosed methods' stages may be modified in any manner, including by

reordering stages and/or inserting or deleting stages, without departing from the disclosure.

[00142] All rights including copyrights in the code included herein are vested in and the property of the Applicant. The Applicant retains and reserves all rights in the code included herein, and grants permission to reproduce the material only in connection with reproduction of the granted patent and for no other purpose.

V. ASPECTS

[00143] The following disclose various Aspects of the present instructions for executing a computer process . The computer disclosure . The various Aspects are not to be construed as patent aspects unless the language of the Aspect appears as a patent aspect . The Aspects describe various non - limiting embodiments of the present disclosure.

Aspect 1. A method of facilitating electronic signing of a document, the method comprising:

- receiving an indication of a signature access request from a signor electronic device associated with a signor;

- receiving a first confirmation from a witness electronic device associated with a witness, wherein receiving the first confirmation comprises receiving a first code comprising a document identifier associated with the document and a signor identifier associated with the signor, the first code being received based on an interaction between the witness electronic device and the signor electronic device;

- enabling the electronic signing of the document to the signor electronic device based on the first confirmation, wherein the signor electronic device is configured to present the document to the signor and receive an electronic signature from the signor;

- receiving a second confirmation from the witness electronic device; and

receiving an indication of a signed document, wherein the signed document comprises the electronic signature of the signor.

Aspect 2. The method of aspect 1, further comprising: receiving a second code comprising the signor identifier associated with the signor and the electronic signature of the signor, wherein the second confirmation is based on the second code, wherein receiving the second code comprises receiving the second code associated with an interaction between the signor electronic device and the witness electronic device.

Aspect 3. The method of aspect 1, further comprising; receiving at least one of the following:

- an image of the signor from the witness electronic device, wherein the image is captured by the witness electronic device,

- an image of the signor from the witness electronic device, wherein the image is captured by the signor electronic device, wherein the signor electronic device is in at least one of the following: a webcam session and a screen sharing session with the witness electronic device,

- a biometric feature of the signor from the witness electronic device, wherein the biometric feature is captured by the witness electronic device,

- a scan of an identification card of the signor from the witness electronic device, wherein the scan is captured by the witness electronic device, and

- a scan of the signor from the witness electronic device, wherein the scan is captured by the signor electronic device, wherein the signor electronic device is in at least one of the following: the webcam session and the screen sharing session with the witness electronic device.

Aspect 4. The method of aspect 1, further comprising generating, using a processor, an audit trail comprising audit data corresponding to at least one event associated with at least one of the following: the signor electronic device and the witness electronic device.

Aspect 5. A method of facilitating witnessing of electronic signing of a document by a signor, the method comprising:

receiving a first confirmation from a witness electronic device associated with a witness,

wherein receiving the first confirmation comprising receiving an indication the witness is to attest an execution of the document by the signor and that the first confirmation is based on a first code that is transmitted in response to an interaction of the witness electronic device with at least one of the following: the signor and a signor electronic device;

making the document available for execution to the signor electronic device;

receiving a second confirmation from the witness electronic device, wherein the second confirmation is provided in response to a completion of the electronic signing of the document; and

establishing witnessing of the electronic signing of the document by the signor based on receipt of each of the following: the first confirmation and the second confirmation.

Aspect 6. The method of aspect 5, wherein receiving the first confirmation comprises:

receiving a proximity indicator from at least one of the signor electronic device and the witness electronic device, wherein the proximity indicator is generated based on proximity of the signor electronic device to the witness electronic device, and

transmitting an activation command to the witness electronic device based on the proximity of the witness electronic device to the signor electronic device, wherein the activation command is configured to activate a scanner comprised in the witness electronic device, wherein the scanner is configured to capture the first code.

Aspect 7. A system for facilitating electronic signing of a document, the system comprising:

- a memory storage; and

- a processing unit coupled to the memory storage, wherein the processing unit is configured to:

 - receive an indication that a witness is to attest an execution of the document by a signor using a signor electronic device,

 - receive a first confirmation from a witness electronic device associated with the witness, wherein the first confirmation comprises a document identifier associated with the document and a signor identifier associated with the signor, wherein the first confirmation is based on a first code associated with an interaction between the signor electronic device and the witness electronic device,

 - enable the electronic signing of the document to the signor electronic device based on the first confirmation, wherein the signor electronic device is configured to present the document to the signor and receive an electronic signature from the signor,

 - receive a second confirmation from the witness electronic device, and

 - validate the electronic signing based on, at least in part, receipt of each of the first confirmation and the second confirmation.

Aspect 8. The system of aspect 7, wherein the processing unit is further configured to transmit a second code associated with the document to the signor electronic device, wherein the second confirmation is based on the second code.

Aspect 9. The system of aspect 7, wherein the processing unit is further configured to receive at least one of the following:

- an image of the signor from the witness electronic device, wherein the image is captured by the witness electronic device,

an image of the signor from the witness electronic device, wherein the image is captured by the signor electronic device, wherein the signor electronic device is in at least one of the following: a webcam session and a screen sharing session with the witness electronic device,

a biometric feature of the signor from the witness electronic device, wherein the biometric feature is captured by the witness electronic device,

a scan of an identification card of the signor from the witness electronic device, wherein the scan is captured by the witness electronic device, and

a scan of the signor from the witness electronic device, wherein the scan is captured by the signor electronic device, wherein the signor electronic device is in at least one of the following: the webcam session and the screen sharing session with the witness electronic device.

Aspect 10. The system of aspect 7, wherein the processing unit is configured to generate an audit trail comprising audit data corresponding to at least one event associated with at least one of the following: the signor electronic device and the witness electronic device.

Aspect 11. A system of facilitating witnessing of electronic signing of a document, the system comprising:

a memory storage; and

a processing unit coupled to the memory storage, wherein the processing unit is configured to:

receive a first confirmation from a witness electronic device associated with a witness, wherein the first confirmation is based on a first code made available on a signor electronic device, wherein the witness electronic device is configured to receive the first code based on a first interaction between the signor electronic device and the witness electronic device,

enable the electronic signing of the document by the signor electronic device, and

receive a second confirmation from the witness electronic device associated with the witness, wherein the second confirmation is provided by the witness, wherein the second confirmation is based on a second code made available on the signor electronic device, wherein the witness electronic device is configured to receive the second code based on a second interaction between the signor electronic device and the witness electronic device.

Aspect 12. The system of aspect 11, wherein the processing unit is further configured to:

receive a proximity indicator from at least one of the signor electronic device and the witness electronic device, wherein the proximity indicator is generated based on proximity of the signor electronic device to the witness electronic device; and

transmit an activation command to the witness electronic device based on the proximity of the witness electronic device to the signor electronic device, wherein the activation command is configured to activate a scanner comprised in the witness electronic device, wherein the scanner is configured to capture at least one of the following: the first code and the second code.

Aspect 13. A non-transient computer readable medium comprising program code for facilitating electronic signing of a document, wherein execution of the program code by a processor cause the processor to:

receive a signature access request from a signor electronic device associated with a signor;

receive a first confirmation from a witness electronic device associated with a witness,

wherein the first confirmation is based on a first code, wherein the first code is associated with an interaction between the signor electronic device and the witness electronic device;

transmit the document to the signor electronic device based on the first confirmation, wherein the signor electronic device is configured to present

the document to the signor and receive an electronic signature from the signor;

receive a second confirmation from the witness electronic device; and
validate the electronic signature based on receipt of each of the following: the first confirmation and the second confirmation.

Aspect 14. The non-transient computer readable medium of aspect 13, wherein the program code further comprises instructions executable by the processor to cause the processor to receiving the second confirmation comprising a second code, wherein the second code is associated with a subsequent interaction between the signor electronic device and the witness electronic device.

Aspect 15. The non-transient computer readable medium of aspect 13, wherein the program code further comprises instructions executable by the processor to cause the communication interface to receive at least one of:

an image of the signor from the witness electronic device, wherein the image is captured by the witness electronic device;

an image of the signor from the witness electronic device, wherein the image is captured by the signor electronic device, wherein the signor electronic device is in at least one of the following: a webcam session and a screen sharing session with the witness electronic device;

a biometric feature of the signor from the witness electronic device, wherein the biometric feature is captured by the witness electronic device;

a scan of an identification card of the signor from the witness electronic device, wherein the scan is captured by the witness electronic device; and

a scan of the signor from the witness electronic device, wherein the scan is captured by the signor electronic device, wherein the signor electronic device is in at least one of the following: the webcam session and the screen sharing session with the witness electronic device.

Aspect 16. The non-transient computer readable medium of aspect 13, wherein the program code further comprises instructions executable by the processor to cause the processor to generate an audit trail comprising audit data corresponding to at least one event associated with at least one of the signor electronic device and the witness electronic device.

Aspect 17. A non-transient computer readable medium comprising program code for facilitating witnessing of electronic signing of a document, wherein execution of the program code by a processor causes the processor to:

- receive a specification of a witness identifier;
- communicate data to an address associated with the witness identifier;
- establish communication with a witness electronic device associated with the witness identifier;
- receive a first confirmation from the witness electronic device, the first confirmation being associated with a code comprising a document identifier associated with the document and a signor identifier associated with the signor, wherein the first confirmation is received in response to an interaction between a signor electronic device and the witness electronic device;
- enable the document for the electronic signing; and
- receive a second confirmation from the witness electronic device, wherein the second confirmation is provided in response to a completion of the electronic signing of the document; and
- establish witnessing of the electronic signing of the document by the signor based on receipt of each of the following: the first confirmation and the second confirmation.

Aspect 18. A method of facilitating electronic signing of a document, the method comprising:

- receiving an indication of a signature access request from a signor electronic device associated with a signor;

receiving a first confirmation from a witness electronic device associated with a witness;

enabling the electronic signing of the document to the signor electronic device based on the first confirmation, wherein the signor electronic device is configured to present the document to the signor and receive an electronic signature from the signor;

receiving a second confirmation from the witness electronic device, wherein receiving the second confirmation comprises receiving a second code comprising a signor identifier associated with the signor and the electronic signature of the signor, the second code being received based on an interaction between the signor electronic device and the witness electronic device; and

receiving an indication of a signed document, wherein the signed document comprises the electronic signature of the signor.

Aspect 19. The method of aspect 18, wherein receiving the first confirmation comprises: receiving a second code comprising the document identifier associated with the document and the signor identifier associated with the signor.

Aspect 20. A method, comprising: transmitting an electronic document for electronic signature, the electronic document requiring a witness with one or more witness qualifications to verify one or more signor identification parameters; specifying a witness selected to verify at least one of the one or more signor identification parameters; determining that the witness meets the one or more witness qualifications; transmitting, to the witness, at least an indicator of the signor identification parameters to be verified; receiving an indication that the witness has verified at least one signor identification parameter of the one or more identification parameters from the signor identification parameters; and responsive to receiving the indication that the witness meets the one or more witness qualifications and

the indication that the witness has verified the at least one identification parameter, enabling the electronic document for electronic signature.

Aspect 21. The method of any of the preceding Aspects, wherein enabling the electronic document for electronic signature comprises transmitting a uniform resource locator (URL) associated with the electronic document to a signor for electronic signature.

Aspect 22. The method of any of the preceding Aspects, wherein receiving the indication that the witness has verified at least one of the one or more identification parameters further comprises receiving an attestation from the witness indicating that the witness verified the at least one of the one or more identification parameters.

Aspect 23. The method any of the preceding Aspects, wherein receiving the indication that the witness has verified the at least one identification parameter comprises: receiving location information associated with the witness; and wherein determining that the witness satisfies the one or more witness qualification comprises determining that distance between the witness and the signor is less than a threshold distance.

Aspect 24. The method of any of the preceding Aspects, wherein the indication that the witness has verified the at least one signor identification parameter comprises one or more of a picture, biometric information, or information associated with an identification card to confirm an identity of a signor.

Aspect 25. The method of any of the preceding Aspects, wherein transmitting the indication of the signor identification parameters comprises transmitting the indication of the signor identification parameters in response to verifying that the witness meets the one or more witness qualifications.

Aspect 26. The method of any of the preceding Aspects, further comprising transmitting, to the witness, a uniform resource locator (URL), and wherein receiving the indication of the witness qualifications comprises receiving the indication based on the witness accessing the URL.

Aspect 27. A method, comprising: receiving a specification of one or more witness qualifications from a requestor indication of initiation of an electronic signature process for an electronic document, the electronic document requiring a witness to verify one or more signor identification parameters; transmitting, to the signor, the electronic document with an indication of the one or more witness qualifications, wherein the witness must meet the one or more witness qualifications; receiving a specification of contact information associated with a witness to verify at least one of the one or more identification parameters; verifying based on the witness qualifications, that the witness meets the one or more witness qualifications prior to providing the electronic document to the signor; transmitting, to the witness, an indication associated with the one or more signor identification parameters to be verified; receiving an indication that the witness has verified the one or more signor identification parameters; and responsive to receiving the indication that the witness has verified the one or more signor identification parameters, enabling the electronic document to a signor for electronic signature.

Aspect 28. The method of any of the preceding Aspects, wherein receiving the indication that the witness has verified the one or more signor identification parameters comprises receiving an attestation from the witness indicating that the witness verified the one or more signor identification parameters.

Aspect 29. The method of any of the preceding Aspects, wherein receiving the indication that the witness has verified the one or more signor identification parameters comprises: receiving location information

associated with the witness; and wherein determining that the witness satisfies the one or more witness qualification comprises determining that a distance between the witness and the signor is less than a threshold distance.

Aspect 30. The method of any of the preceding Aspects, wherein the indication that the witness has verified the one or more signor identification parameters comprises one or more of a picture, biometric information, or information associated with an identification card to confirm an identity of the signor.

Aspect 31. The method of any of the preceding Aspects, wherein transmitting the indication of the one or more signor identification parameters comprises transmitting the one or more signor identification parameters in response to verifying that the witness meets the one or more witness qualifications.

Aspect 32. The method of any of the preceding Aspects, further comprising transmitting, to the witness, a uniform resource locator (URL), and wherein receiving the indication of the signor identification parameters comprises receiving the indication in response to the witness accessing the URL.

Aspect 33. A method comprising: providing an indication of one or more witness qualifications, wherein a witness to an electronic document must satisfy the one or more witness qualifications; receiving an indication of a witness to verify at least one of an one or more signor identification parameters; transmitting, to the witness, in response to the indication of the witness, the at least one of the one or more signor identification parameters to be verified; receiving an indication that the witness has verified the at least one of the one or more signor identification parameters from the signor identification parameters; determining, based on the indication that the witness has verified the at least one of the one or more signor identification parameters, that the witness satisfies the one or more witness qualifications;

and responsive to receiving the indication that the witness has verified the at least one of the one or more signor identification parameters and determining that the witness satisfies the one or more witness qualifications, making the electronic document available for electronic signature.

Aspect 34. The method of any of the preceding Aspects, wherein receiving the indication that the witness has verified the at least one of the one or more signor identification parameters comprises receiving an attestation from the witness indicating that the witness verified the at least one of the one or more signor identification parameters.

Aspect 35. The method of any of the preceding Aspects, wherein receiving the indication that the witness has verified the at least one identification parameter comprises: receiving location information associated with the witness; and wherein determining that the witness satisfies the one or more witness qualifications comprises determining that a distance between the witness and a signor is less than a threshold distance.

Aspect 36. The method of any of the preceding Aspects, wherein the indication that the witness has verified the at least one identification parameter comprises one or more of a picture, biometric information, or information associated with an identification card to confirm an identity of a signor.

Aspect 37. The method of any of the preceding Aspects, wherein making the electronic document available for electronic signature comprises transmitting a uniform resource locator (URL) associated with the electronic document to a signor for electronic signature.

Aspect 38. The method of any of the preceding Aspects, further comprising transmitting, to the witness, a uniform resource locator (URL), and wherein receiving the indication that the witness has verified the at least one of the one or more signor identification parameters comprises receiving the indication that

the witness has verified the at least of the one or more signor identification parameters based on the witness accessing the URL.

Aspect 39. A method, comprising: receiving an indication for a signature request process from a signor electronic device; identifying a witness to verify the signature request; inviting the witness to the signature request; transmitting signature verification information to a witness electronic device; receiving a witness action; transmitting the document to the signor electronic device for signature; and receiving the signature associated with the signature request process.

Aspect 40. The method of any of the preceding Aspects, wherein identifying a witness further includes determining proximity of the witness electronic device to the signor electronic device.

Aspect 41. The method of any of the preceding Aspects, wherein inviting the witness comprises providing the witness with a unique code to access the signature request.

Aspect 42. The method of any of the preceding Aspects, wherein transmitting signature verification information includes a copy of the document, a copy of the signor electronic device credentials, and a copy of the signature request.

Aspect 43. The method of any of the preceding Aspects, wherein receiving a witness action includes collecting pictures, biometrics, or ID cards to confirm the identity of the signor electronic device.

Aspect 44. The method of any of the preceding Aspects, wherein receiving a witness action includes the witness electronic device providing the signature verification information.

Aspect 45. The method of any of the preceding Aspects, wherein receiving a witness action includes using a webcam to verify the signature verification information.

Aspect 46. A method, comprising: receiving an electronic signature request; receiving signor identification information; determining witness eligibility parameters; generating a first code; receiving a first indication that the first code is activated; authenticating the signor and witness electronic devices; generating a second code; receiving a second indication that the second code is activated; transmitting a document for signature to the signor electronic device; and receiving an indication of document execution.

Aspect 47. The method of any of the preceding Aspects, wherein generating the second code further comprises providing access to signature verification information for the electronic signature request.

Aspect 48. The method of any of the preceding Aspects, wherein generating the first code produces a webpage, Web-app, or mobile app associated with an E-Signature platform.

Aspect 49. The method of any of the preceding Aspects, wherein signor identification information includes biometric information, IP address, photos, and scans.

Aspect 50. The method of any of the preceding Aspects, wherein authenticating the signor and witness electronic devices involves comparing the geo-location of the two devices.

Aspect 51. The method of any of the preceding Aspects, wherein receiving the second indication comprises the witness electronic device providing the signature verification action.

Aspect 52. The method of any of the preceding Aspects, wherein generating the second code involves an interaction between the signor electronic device and the witness electronic device.

Aspect 53. The method of any of the preceding Aspects, wherein generating the first code includes creating an audit trail corresponding to at least one event associated with the signor or witness electronic device.

Aspect 54. A non-transitory computer-readable medium comprising instructions, which when executed, perform a method comprising: generating a unique code for a communication interface; establishing the communication interface from a signor electronic device; collecting signor verification information; identifying a witness electronic device; inviting the witness electronic device to the communication interface; monitoring interactions with the communication interface; receiving a verification from the witness electronic device; transmitting the document for signature; receiving an electronic signature; and validating the electronic signature.

Aspect 55. The non-transitory computer-readable medium of any of the preceding Aspects, wherein collecting signor identification information includes biometric data, IP address, photos, and scans.

Aspect 56. The non-transitory computer-readable medium of any of the preceding Aspects, wherein generating the unique code directs to a webpage, Web-app, or mobile app.

Aspect 57. The non-transitory computer-readable medium of any of the preceding Aspects, wherein the communication interface includes geo-location limitations for the signor electronic device.

Aspect 58. The non-transitory computer-readable medium of any of the preceding Aspects, wherein receiving a verification for the signor electronic

device includes the witness electronic device providing the signature verification action.

VI. CLAIMS

[00144] While the specification includes examples, the disclosure's scope is indicated by the following claims. Furthermore, while the specification has been described in language specific to structural features and/or methodological acts, the claims are not limited to the features or acts described above. Rather, the specific features and acts described above are disclosed as example for embodiments of the disclosure.

[00145] Insofar as the description above and the accompanying drawing disclose any additional subject matter that is not within the scope of the claims below, the disclosures are not dedicated to the public and the right to file one or more applications to claims such additional disclosures is reserved.

THE FOLLOWING IS CLAIMED:

1. A method for facilitating the electronic signing of a document, the method comprising:
 - identifying an eligible witness electronic device from a signature request initiated by a signor electronic device associated with a signor;
 - verifying the signor electronic device with the witness electronic device based on at least one parameter associated with the signature request before making a document available to the signor electronic device;
 - transmitting the document to the signor electronic device upon verification; and
 - receiving an electronic signature of the signor through the signor electronic device.
2. The method of Claim 1, wherein verifying the signor electronic device further comprises confirming a code associated with the document on the signor electronic device.
3. The method of Claim 2, further comprising receiving a signed document from the signor electronic device, wherein the signed document includes the electronic signature of the signor, and validating the electronic signature based on the confirmation and the electronic signature.
4. The method of Claim 3, further comprising receiving a signature access request from a signor electronic device, wherein confirmation of a signor ID is provided by the witness electronic device.
5. The method of Claim 4, further comprising transmitting the document to the signor electronic device based on the confirmation and receiving an electronic signature from the signor electronic device.

6. The method of Claim 5, further comprising receiving the confirmation from a witness associated with the witness electronic device.

7. The method of Claim 6, wherein confirming the code associated with the document triggers transmitting the document.

8. The method of Claim 7, wherein the witness electronic device is configured to receive the code based on an interaction between the signor electronic device and the witness electronic device.

9. The method of Claim 8, further comprising receiving a confirmation from the witness electronic device, wherein the confirmation is provided by the witness and is based on the code presented on the signor electronic device.

10. The method of Claim 9, further comprising witnessing electronic signing of the document by the signor based on receipt of the confirmation.

11. The method of Claim 6, wherein the witness electronic device is configured to receive the code based on an interaction between the signor electronic device and the witness electronic device.

12. The method of Claim 11, further comprising receiving the confirmation from the witness electronic device.

13. The method of Claim 12, further comprising validating the electronic signature for the signature request based on a confirmation from the witness electronic device.

14. The method of Claim 3, wherein the confirmation is based on at least one of: a signor identifier and the electronic signature of the signor.

15. The method of Claim 1, further comprising receiving, by a communication interface, an image of the signor from the witness electronic device, wherein the image is captured by at least one of: the witness electronic device and the signor electronic device in a webcam session with the witness electronic device.

16. The method of Claim 1, further comprising receiving, by a communication interface, a biometric feature of the signor from the witness electronic device, wherein the biometric feature is captured by the witness electronic device.

17. The method of Claim 1, further comprising receiving, by a communication interface, a scan of an identification card of the signor from the witness electronic device, wherein the scan is captured by the witness electronic device.

18. The method of Claim 1, further comprising receiving, by a communication interface, a proximity indicator from one or more of the signor electronic device and the witness electronic device.

19. The method of Claim 18, wherein the proximity indicator is generated based on proximity of the signor electronic device to the witness electronic device.

20. The method of Claim 1, further comprising transmitting, by a communication interface, an activation command to the witness electronic device based on proximity to the signor electronic device, wherein the

activation command is configured to activate a scanner comprised in the witness electronic device.

ABSTRACT

Methods, systems, and computer-readable media (CRM) are disclosed for facilitating the electronic signing of a document. The disclosure includes methods, systems and CRM for performing at least the following: i) identifying an eligible witness electronic device from a signature request initiated by a signor electronic device associated with a signor; ii) verifying the signor electronic device with the witness electronic device based on at least one parameter associated with the signature request before making a document available to the signor electronic device; iii) transmitting the document to the signor electronic device upon verification; and iv) receiving an electronic signature of the signor through the signor electronic device.