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(54) **SYSTEMS AND METHODS FOR DISTRIBUTED ELECTRONIC SIGNATURE DOCUMENTS**

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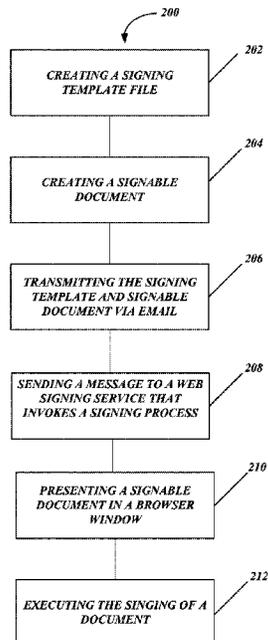
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(58) **Field of Classification Search**
CPC G06F 21/64; G06F 13/24; G06F 13/4291; G06F 21/645; G06F 2213/0016;

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(57) **ABSTRACT**

Systems and methods for distributed electronic signature documents. A method for distributed electronic signature documents includes creating a signing template that contains information about how a signable document is to be signed. A signable document is created to be distributed to a signer for signing. The signable document is electronically transmitted to the signer. A message is sent using an activatable control in the signing document to a web signing server to invoke the signing process. A browser window is opened on a signer's computer in order to execute the signing process.

16 Claims, 2 Drawing Sheets

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See application file for complete search history.

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FIG. 1

200

202

CREATING A SIGNING
TEMPLATE FILE

204

CREATING A SIGNABLE
DOCUMENT

206

TRANSMITTING THE SIGNING
TEMPLATE AND SIGNABLE
DOCUMENT VIA EMAIL

208

SENDING A MESSAGE TO A WEB
SIGNING SERVICE THAT
INVOKES A SIGNING PROCESS

210

PRESENTING A SIGNABLE
DOCUMENT IN A BROWSER
WINDOW

212

EXECUTING THE SINGING OF A
DOCUMENT
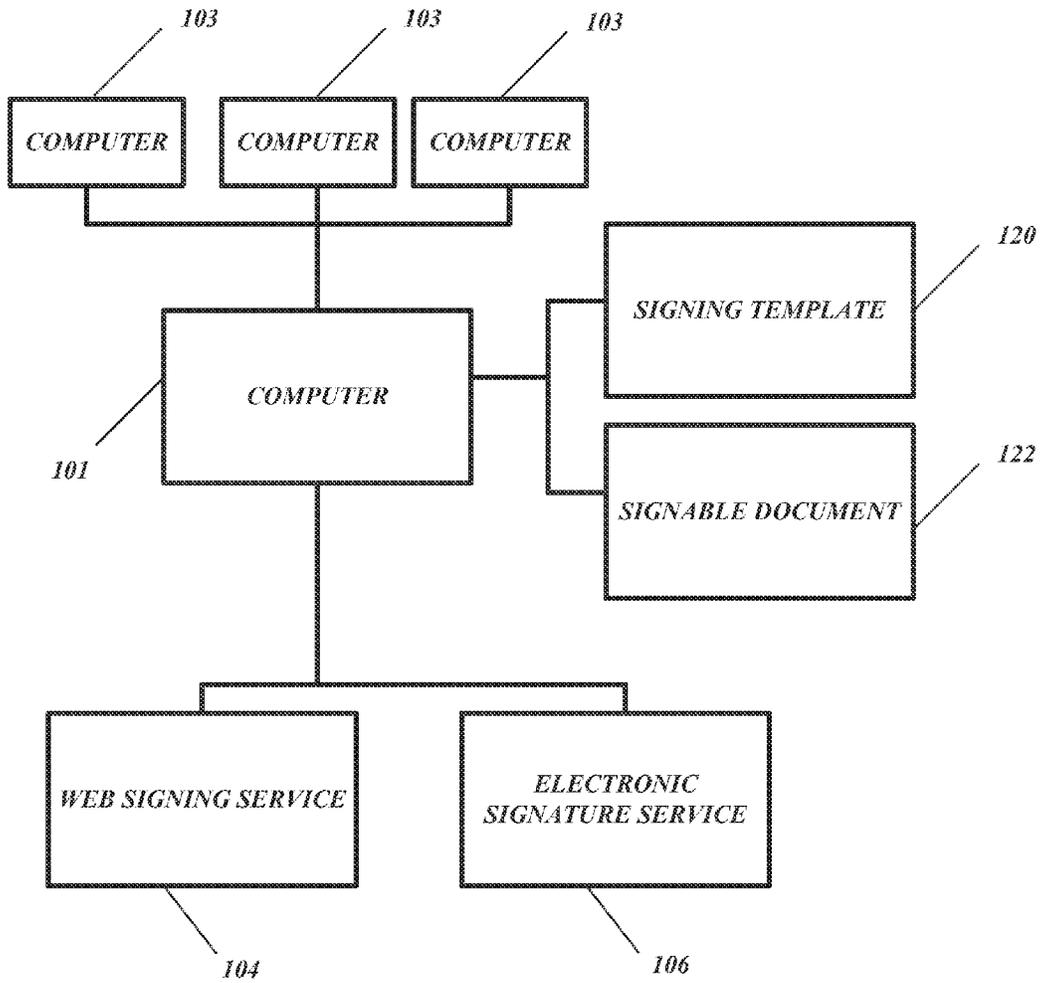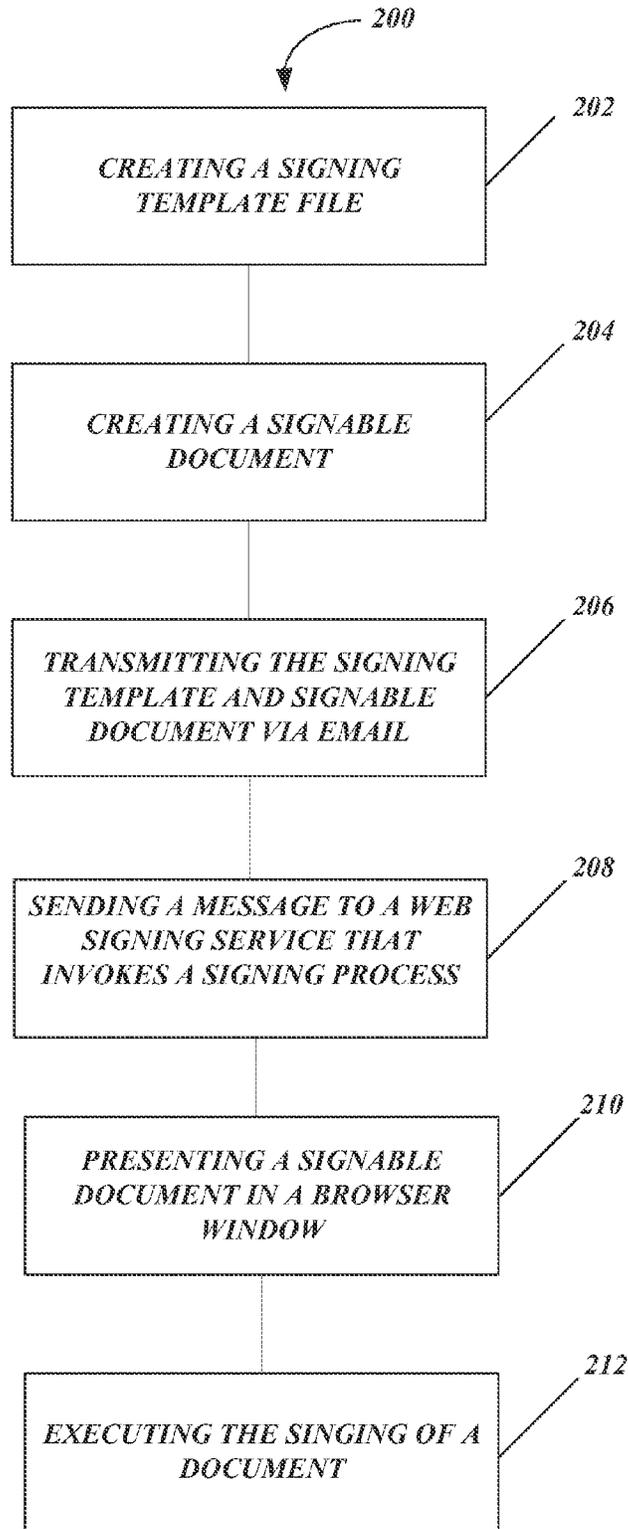
FIG. 2

SYSTEMS AND METHODS FOR DISTRIBUTED ELECTRONIC SIGNATURE DOCUMENTS

Matter enclosed in heavy brackets [ ] appears in the original patent but forms no part of this reissue specification; matter printed in italics indicates the additions made by reissue; a claim printed with strikethrough indicates that the claim was canceled, disclaimed, or held invalid by a prior post-patent action or proceeding.

[PRIORITY CLAIM] *CROSS-REFERENCE TO RELATED APPLICATIONS*

[This application is a continuation of U.S. application Ser. No. 12/176,265 filed on Jul. 18, 2008 and claims priority to and the benefit of the filing date of U.S. Provisional Application Ser. No. 60/950,563 filed on Jul. 18, 2007, the contents of which are incorporated by reference.] *This application is a reissue of U.S. Pat. No. 10,198,418, issued Feb. 5, 2019, filed as U.S. application Ser. No. 14/537,713 on Nov. 10, 2014, which application is a continuation application of application Ser. No. 12/176,265, filed Jul. 18, 2008, now U.S. Pat. No. 8,949,706, which claims priority to U.S. Provisional Application No. 60/950,563, filed Jul. 18, 2007.*

BACKGROUND OF THE INVENTION

Email is a popular way of transferring contract documents in the marketplace. Currently, there does not exist an effective system or method for a person to email a document or file to another person and have them fill-in and sign the document in such a way as to enforce a legally binding electronic signature process.

In order to create a legally binding document, the signer must be authenticated, the document may not be modified and the sequence of signing must be controlled. Standard email systems lack the control over any of these processes. One current method is emailing a PKI signed document. A PKI signed document can be cumbersome because it requires the document to be signed by the sender before it is distributed, then again by the signer when they sign the document, and further requires all parties to have special software and certificates to execute the process. This requirement that all parties pre-establish proper technology in order execute a transaction adds extra burden and cost on both parties to the transaction, which severely limits acceptance of PKI in the marketplace.

Advanced electronic signature services such as DocuSign enable contracts to be signed with an esign-compliant signature process. However, this service lacks the ability to simply email the source document to a person to sign; it requires the signer to visit and authenticate before they sign the document. It further requires the sender to register each document with the service prior to sending it for signature.

SUMMARY OF THE INVENTION

A system and method for distributed electronic signature documents includes creating a signing template that contains information about how a signable document is to be signed, where the signatures are to be placed, who is to sign, and all activities that will be required to complete the transaction. A signable document is created and is then distributed by any means to a signer for signing. The signer opens the signable document, provides any data being requested should the document have form fields, and initiates the signing process. When initiated, a secure message is sent to a web signing server to invoke the signing process. This process preferably validates the request for a signing and then, if valid, executes the signing process as defined by the signing template.

BRIEF DESCRIPTION OF THE DRAWINGS

The preferred and alternative embodiments of the present invention are described in detail below with reference to the following drawings:

FIG. 1 shows an example system for creation, processing and execution of distributed electronic signature documents; and

FIG. 2 shows a preferred method for distributed electronic signature documents.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

Systems and methods for distributed electronic signature documents are disclosed herein. One embodiment of the present invention acts like a "Self Addressed Stamped Envelope" and allows a document to be sent for signature via email. Once the signer receives the document, he/she may fill in necessary fields prior to signing. When the signer is ready to sign, a control embedded in the document enables the signing process to be initiated and the signing managed by a web service. The web service authenticates the signer and ensures that the content of the contract can/cannot be modified (determined by the creator of the document). The service preferably enforces the workflow and sequencing of the document and adds any fields to the document that the signer added during review and execution. This approach allows any document to be distributed freely for signature via any means along with the ability to be electronically signed without the need for special software or certificates, and there is no requirement for the sender to take specific actions for each document, but rather allow the document to be distributed freely. In a preferred embodiment, the same signable document may be sent to hundreds of recipients via email, each of which may sign their copy, with the result being that all signed copies and all the data provided by the signed copies is securely captured and available to the sender.

FIG. 1 shows an example system 100 for creation, processing and execution of distributed electronic signature documents. The system 100 includes a single computer 101, or includes a computer 101 in communication with pluralities of other computers 103. The computer 101 is connected with a web signing service 104 and an electronic signature service 106 over a network such as the Internet. In one embodiment, a bank of servers, a wireless device, a cellular telephone and/or other data capture/entry device can be used in place of the computer 101. An application program is run by the computer 101, which then creates a signing template 120 and/or a signable document 122. The computer 101 can include an application program that allows the signing template 120 and/or the signable document 122 to be sent for signature via email.

The signing template 120 is a file that preferably contains information about the signing process, locations, sequence and authentication. It contains linkages to any form fields in the signable document that will be used to fully execute the signing template. It may also contain information about the account holder and any limitations on the signing process. It

may identify other parties that will also sign, as well as any authentication requirements for any of the signers. The signable document **122** is a document file that preferably contains text and/or graphics along with a customizable control or link back to the signing template for execution. The web signing server **104** is a web server on the Internet that preferably hosts the application logic to correlate data transmitted by the embedded control in the signable document **122** with signing template **120** rule sets. An electronic signature service **106**, such as the existing DocuSign service, executes the signing template instructions through the web signing server.

FIG. **2** shows a method for distributed electronic signature documents **200** in one embodiment. At block **202** a document originator creates a signing template file that contains information about how a signable document is to be signed. A document originator may be a user, a party to a transaction, an agency or any entity interested in creating a signable document. The signing template file may include but is not limited to the location of signatures and initials for one or more signers; linkage between form fields in the actual document; information to be used to notify or authenticate the signer; information that may be used by decision systems to decide on different signature execution processes based on what is entered into the document during the signing process; the number of times the signable document can be executed; who will pay for the signature process; information governing whether the signable document content is modifiable by the signer; and other controlling information that may be changed or modified at any time by the sender who has access to it on the web server connected to the Internet. The signing template is preferably stored on a web signing server that is connected to the Internet.

In one embodiment, at block **204**, the document originator may create a signable document that is to be distributed to recipients for signing or viewing. The creation of the signing template and signable document preferably occurs in the same application, but may also occur in a different sequence and in different applications. The core signable document preferably includes an embedded control that provides information about the companion signing template. This information is similar to a secure hyperlink that enables the signer to click a button ("SDButton") or a link in the signable document that contains information about how to connect over the Internet to the signing template for processing. The signable document is preferably paired with a signing template; however, there may be multiple signable documents relating back to one or more Signable Templates.

The document originator, at block **206**, transmits electronically the signing template and signable document to the signer. In an alternative embodiment, the signing template may be distributed via a simple hyperlink back to the signable document stored on a web server available to the Internet. When the signer is ready and when the SDButton is activated, at block **208**, a message is sent to the signing template on the web signing server, which invokes a signing process. This signing process preferably launches a procedure that validates the transaction and uploads the data provided by any form fields in the signable document to the web signing server and invokes a signing process that spawns a local web browser on the signer's computer and begins a signing process as defined by the signing template.

After the signer has been authenticated by the system by any means defined in the signing template, at block **210** a version of the signable document that is created from the server is presented in the browser window. The signing process uses the current method of signing found in the

DocuSign service, but may accommodate alternative methods of signing found in similar services. At block **212**, the signer signs the document.

Preferably only the form field data from the signer is uploaded to the server and merged into the signing template (which contains the signable document copy). In this embodiment, the signers are not able to modify the underlying documents because this data is not used when the contract is presented to them during the signing process.

In an alternative embodiment, if the sender allows the content to be modified prior to submitting to the web signing server for signing, the entire signable document rather than only the field information is uploaded to the web signing server for handling through the signing process. In this embodiment, the modified document is displayed for the signer to sign in the web signing server.

In another embodiment, the sender does not allow the content to be modified and the entire document is posted to the web signing server for the signing process. Next, a document integrity validation occurs on the posted document to ensure that the underlying content has not been changed.

Once a signable document/signing template pairing has been created, the signable document can be used in many different ways to enable businesses to easily allow electronic signatures to be collected. The following provide non-limiting examples of alternative embodiments as may be desired or dictated by application requirements.

In one example, a business creates a signable document for the company 401k signing sheet and emails it to multiple employees. Each employee opens the file and fills in the form, clicking a button that may say "Sign." The web signing server responds by presenting a web interface that authenticates and presents the document for signature for each employee and collects the signature and any data provided.

In another example, a business creates a signable document for a sales order form and creates the companion signing template, which requests that after the original signer has signed the document must be countersigned internally by two other people before being completed. To execute a sales transaction, the sales representative opens the document, enters in the data required for the sale, and sends the file to the signer for signature. The signer merely clicks the "Sign" button. The web signing server responds by presenting a web interface that authenticates and provides the document for signature to the first signer. Once the first signer has signed, the document is routed to the other two signers for signatures before it is completed.

A business creates a signable document that is unlocked (i.e. the content is changeable) for the company consulting agreement, and a signing template with instructions about the signing process, which ensures the company signer signs second. This contract is edited by both the company and consultant several times before it is deemed to be the final copy. Once the final copy is reached, either party may click the "Submit for Signature" link or button and the web signing server manages the signing process.

A company has an "Account Setup Form" that currently prospects download, print and fill out manually, and faxing the form back to the company for account setup. Using the systems and methods described herein, the sender company creates the form as a signable document linked to a signing template that defines the signing process for opening an account. When the user clicks on a hyperlink on a web page that says "Open Account," the form is displayed in the browser window, and the user fills out the form using all

form fields defined in the signable document (for example a PDF form). When the user clicks "Sign" the web signing server executes the signing process for the document.

While the preferred embodiment of the invention has been illustrated and described, as noted above, many changes can be made without departing from the spirit and scope of the invention. Accordingly, the scope of the invention is not limited by the disclosure of the preferred embodiment, but to the invention as described above and illustrated in the exemplars shown below.

The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows:

1. A method for distributed electronic signature documents comprising:

generating a signing template [that contains] *specifying first* information about how a document file is to be signed, the *first* information [further] specifying locations within the document file for signatures of one or more users, the *first* information further specifying whether content within the document file that is not modifiable by the one or more users;

[storing] *causing* the signing template *to be stored* on a server;

generating the document file to be emailed to the one or more users for signing, the document file displaying form fields configured to receive input information from the one or more users and an activatable control *embedded in the document file and comprising second information indicating the signing template, the activatable control being* configured to initiate an upload, over a network *and using the second information indicating the signing template*, of the input information to the signing template stored on the server, the content specified by the signing template not being modifiable by the one or more users through the generated document file;

emailing the document file to the one or users over the network;

receiving, from a client device of one of the one or more users, input information input into the form fields of the document file; and

[executing,] in response to activation of the activatable control by the client device, *causing* an electronic signing process defined by the signing template stored on the server *to be executed, wherein the electronic signing process comprises merging, with the signing template, the input information uploaded from the client device through activation of the activatable control of the document file.*

[2. The method of claim 1, wherein executing the electronic signing process comprises:

merging, with the signing template, the input information uploaded from the client device through activation of the activatable control of the document file.]

3. The method of claim [2] *1*, wherein [executing] the electronic signing process comprises:

causing presentation, on the client device, of a web browser displaying a modified version of the document file created from the merged signing template.

4. The method of claim 1, further comprising:

responsive to activation of the activatable control displayed in the document file, causing presentation, on the client device, of a login web interface; and

authenticating a user from *input* information input into the login web interface.

5. The method of claim 1, wherein the form fields and the activatable control are user interface (UI) elements of the document file that are displayable on a display device of the client device.

6. The method of claim 1, wherein the document file is a PDF (Portable Document Format) file, and wherein the [activatable control contains] *second information indicating the signing template specifies* a network link.

7. The method of claim 1 further comprising:

in response to receiving a signature from the client device, automatically emailing the document file to an additional client device for an additional signature, the additional client device specified by a signing order in the signing template.

8. The method of claim 1, further comprising:

validating the document file to ensure the content of the document file is not modified.

9. A system comprising:

one or more processors of a machine; and

a memory storing instructions that, when executed by the one or more processors, cause the machine to perform operations comprising:

generating a signing template [that contains] *specifying first* information about how a document file is to be signed, the *first* information [further] specifying locations within the document file for signatures of one or more users, the *first* information further specifying content the document file that not modifiable the one or more users;

[storing] *causing* the signing template *to be stored* on a server;

generating the document file to be emailed to the one or more users for signing, the document file displaying form fields configured to receive input information from the one or more users and an activatable control *embedded in the document file and comprising second information indicating the signing template, the activatable control being* configured to initiate an upload, over a network *and using the second information indicating the signing template*, of the input information to the signing template stored on the server, the content specified by the signing template not being modifiable by the one or more users through the generated document file;

emailing the document file to the one or users over the network;

receiving, from a client device of one of the one or more users, input information input into the form fields of the document file; and

[executing,] in response to activation of the activatable control by the client device, *causing* an electronic signing process defined by the signing template stored on the server *to be executed, wherein the electronic signing process comprises merging, with the signing template, the input information uploaded from the client device through activation of the activatable control of the document file.*

[10. The system of claim 9, wherein executing the electronic signing process comprises:

merging, with the signing template, the input information uploaded from the client device through the activation of activatable control of the document file.]

11. The system of claim [10] *9*, wherein [executing] the electronic signing process comprises:

causing presentation, on the client device, of a web browser displaying a modified version of the document file created from the merged signing template, and wherein

the document file is a PDF (Portable Document Format) file, and wherein the [activatable control] *second information indicating the signing template* is a network link.

12. The system of claim 9, the operations further comprising:

responsive to activation of the activatable control displayed in the document file, [casing] *causing* presentation, on the client device, of a login web interface; and

authenticating a user from *input* information input into the login web interface.

13. The system of claim 9, the operations further comprising:

validating the document file to ensure the content of the document file is not modified.

14. A non-transitory computer readable storage device storing instructions that, when executed by a machine, cause the machine to perform operations comprising:

generating a signing template [that contains] *specifying first* information about how a document file is to be signed, the *first* information [further] specifying locations within the document file for signatures of one or more users, the *first* information further specifying content the document file that is not modifiable the one or more users;

[storing] *causing* the signing template *to be stored* on a server;

generating a document file to be emailed to the one or more users for signing, the document file displaying form fields configured to receive input information from the one or more users and an activatable control *embedded in the document file and comprising second information indicating the signing template, the activatable control being* configured to initiate an upload, over a network *and using the second information indicating the signing template*, of the input information to the signing template stored on the server, the content specified by the signing template not being modifiable by the one or more users through the generated document file;

emailing the document file to the one or users over the network;

receiving, from a client device of one of the one or more users, input information input into the form fields of the document file; and

[executing,] in response to activation of the activatable control by the client device, *causing* an electronic signing process defined by the signing template stored on the server *to be executed, wherein the electronic signing process comprises merging, with the signing template, the input information uploaded from the client device through activation of the activatable control of the document file.*

[15. The non-transitory computer readable storage device of claim 14, wherein executing the electronic signing process comprises:

merging, with the signing template, the input information uploaded from the client device through activation of the activatable control of the document file.]

16. The non-transitory computer readable storage device of claim [15] *14*, wherein [executing] the electronic signing process comprises:

causing presentation, on the client device, of a web browser displaying a modified version of the document file created from the merged signing template.

17. The non-transitory computer readable storage device of claim 14, the operations further comprising:

responsive to activation of the activatable control displayed in the document file, causing presentation, on the client device, of a login web [interfact] *interface*; and

authenticating a user from *input* information input into the login web interface.

18. The non-transitory computer readable storage device of claim 14, wherein the document file is a PDF (Portable Document Format) file, and wherein the [activatable control contains] *second information indicating the signing template specifies* a network link.

19. The *non-transitory* computer readable storage device of claim 14, the operations further comprising:

in response to receiving a signature from the client device, automatically emailing the document file to an additional client device for an additional signature, the additional client device specified by a signing order in the signing template.

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