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(54) **SYSTEM AND METHOD FOR RULES-BASED CONTROL OF CUSTODY OF ELECTRONIC SIGNATURE TRANSACTIONS**

(58) **Field of Classification Search**
CPC . H04L 9/3247; H04L 9/3297; H04L 63/0853;
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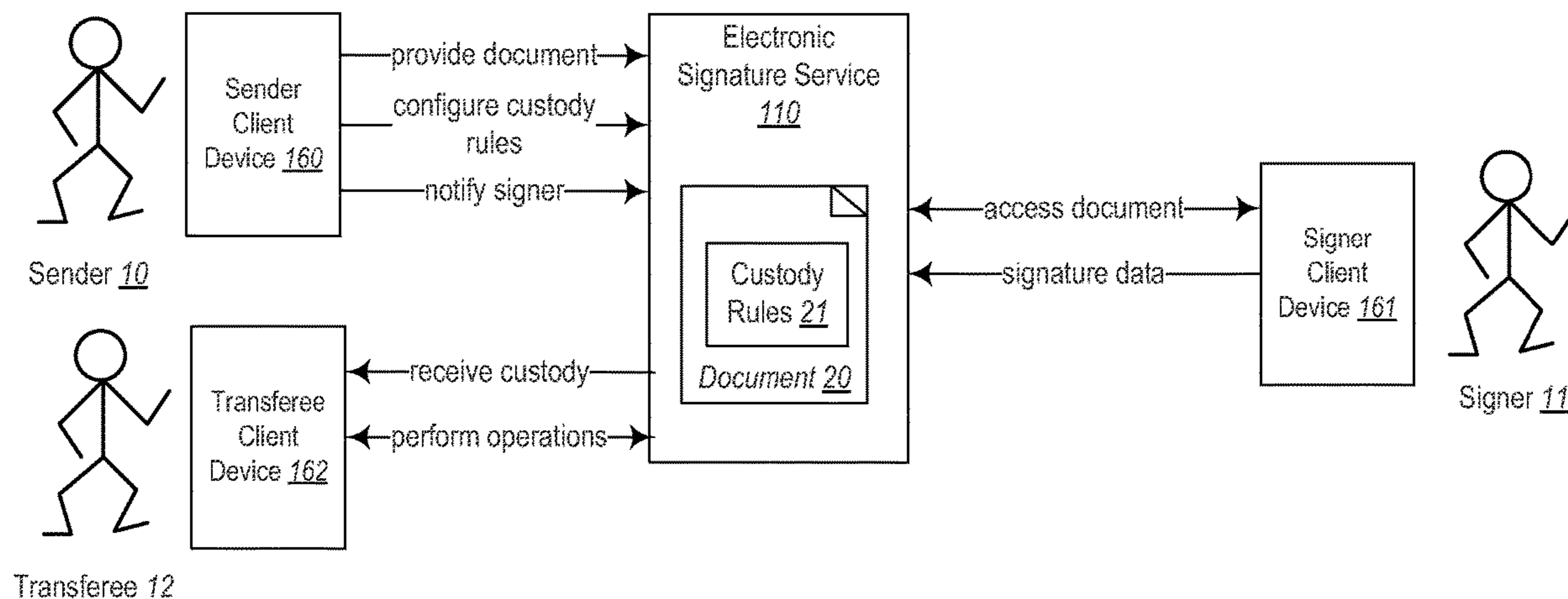
(57) **ABSTRACT**

Techniques for electronic signature processes are described. Some embodiments provide an electronic signature service (“ESS”) configured to facilitate the creation, storage, and management of electronic signature documents. In one embodiment, an electronic signature document may be associated with custody transfer rules that facilitate transfers of custody of an electronic signature document from one user or party to another. A custody transfer may result in a transfer of rights or capabilities to operate upon (e.g., modify, view, send, delete) an electronic signature document and/or its associated data. A custody transfer rule may be triggered by the occurrence of a particular event, such as the receipt of an electronic signature.

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(52)	U.S. Cl. CPC <i>G06F 21/6272</i> (2013.01); <i>G06F 21/645</i> (2013.01); <i>G06Q 10/06</i> (2013.01); <i>G06Q 10/10</i> (2013.01); <i>G11B 20/00862</i> (2013.01); <i>H04L 9/3297</i> (2013.01); <i>H04L 63/0853</i> (2013.01); <i>H04L 63/108</i> (2013.01); <i>G06F 2221/2137</i> (2013.01); <i>G06F 2221/2141</i> (2013.01); <i>H04L 2209/603</i> (2013.01); <i>H04L 2463/101</i> (2013.01)	7,162,635 B2 7,167,844 B1 7,197,644 B2 7,237,114 B1 7,340,608 B2 *	1/2007 Bisbee et al. 1/2007 Leong et al. 3/2007 Brewington 6/2007 Rosenberg 3/2008 Laurie	
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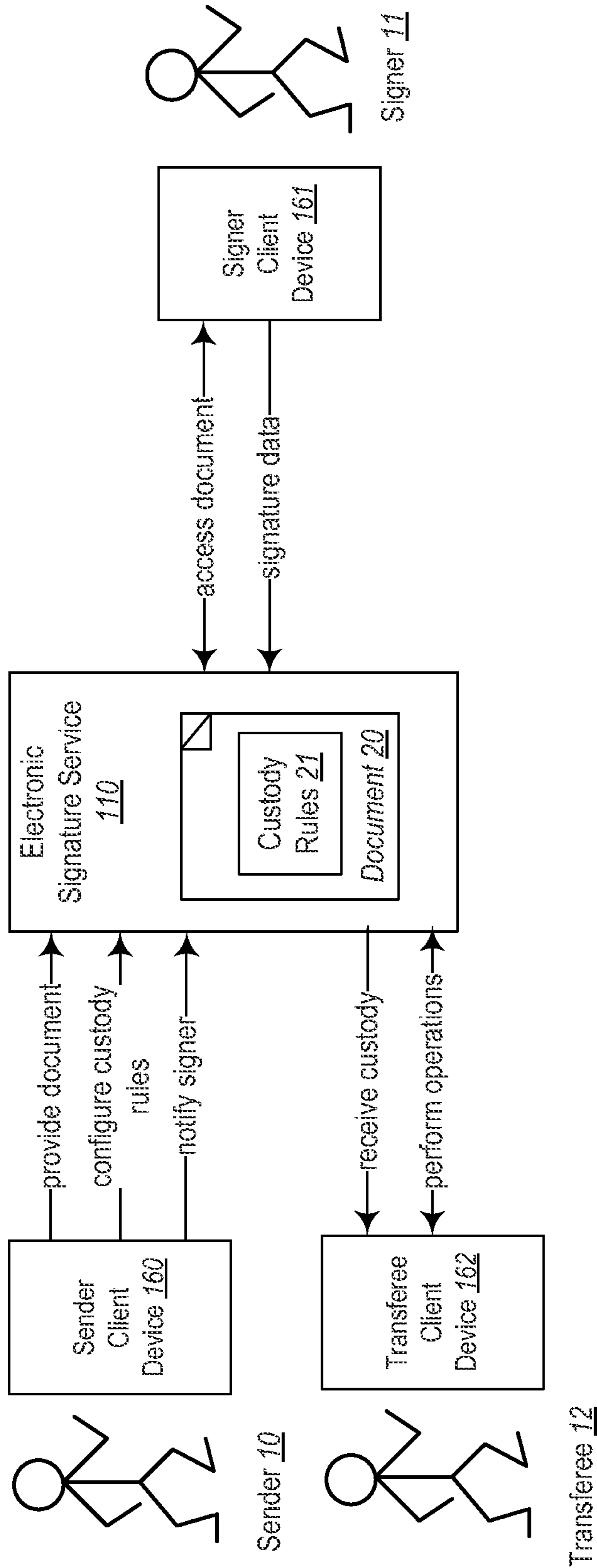


Fig. 1

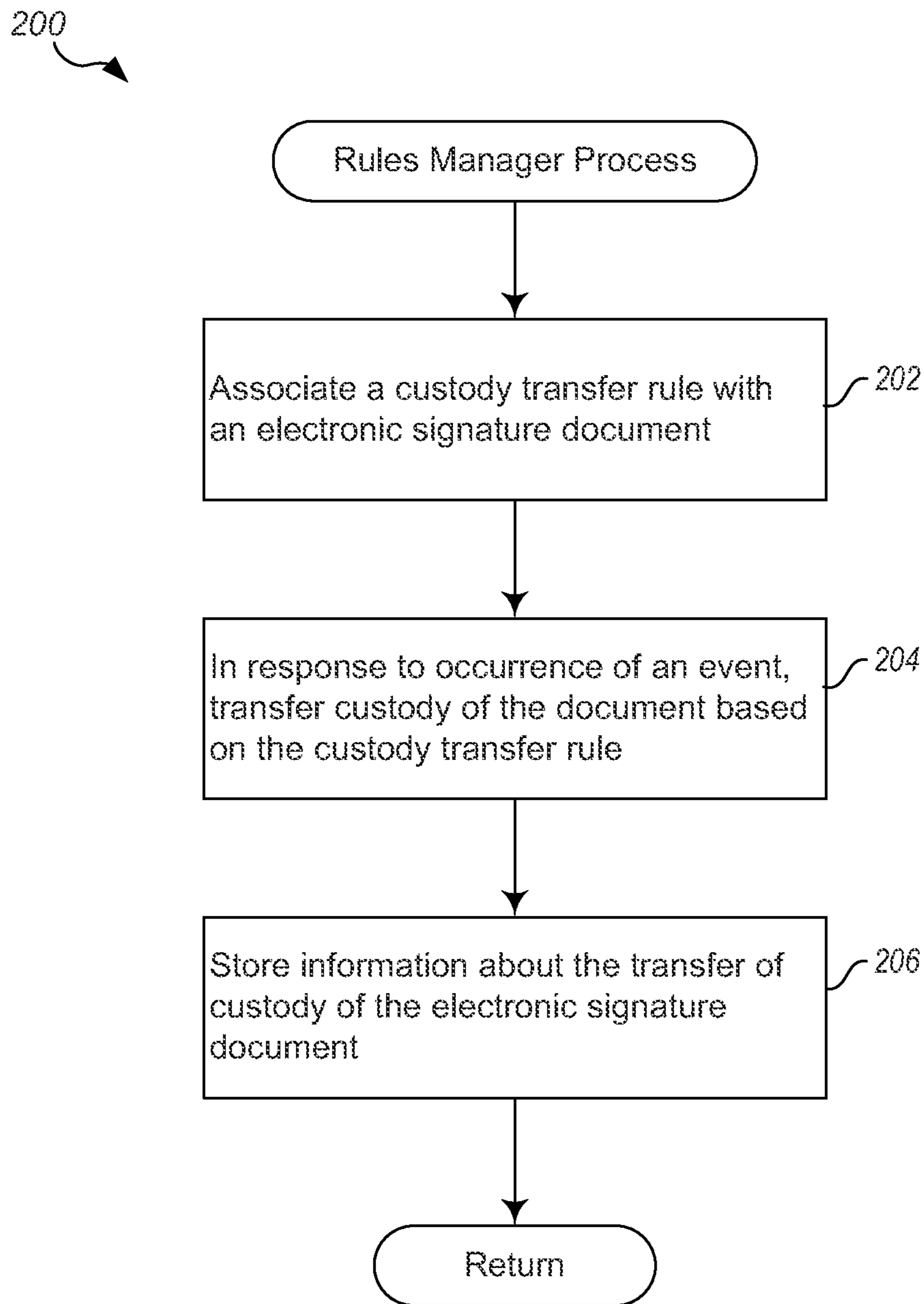


Fig. 2

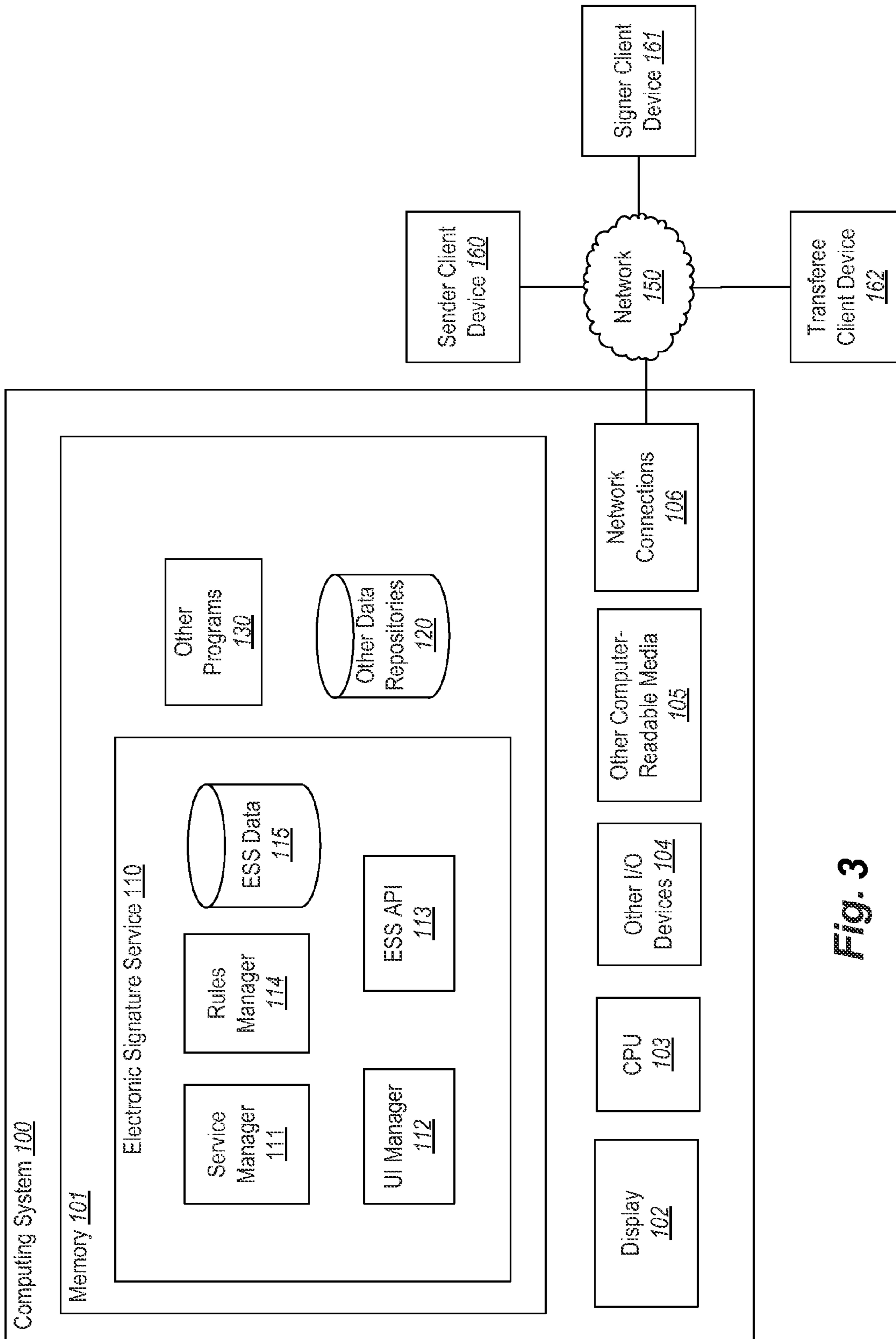


Fig. 3

SYSTEM AND METHOD FOR RULES-BASED CONTROL OF CUSTODY OF ELECTRONIC SIGNATURE TRANSACTIONS

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

This application *is a reissue of U.S. Pat. No. 9,893,895, which was filed as application Ser. No. 14/986,226 on Dec. 31, 2015, which is a Continuation of U.S. patent application Ser. No. 13/838,233, filed Mar. 15, 2013, now U.S. Pat. No. 9,230,130, which application claims the benefit of U.S. Provisional Application No. 61/614,371, filed Mar. 22, 2012, which applications are incorporated herein by reference in their entirety.*

FIELD OF THE INVENTION

The present disclosure relates to systems and methods for electronic signatures and, more particularly, to systems and methods for rules-based control of custody of electronic signature documents.

BRIEF DESCRIPTION OF THE DRAWINGS

Preferred and alternative examples of the present invention are described in detail below with reference to the following drawings:

FIG. 1 illustrates an example block diagram of an example embodiment of an electronic signature service;

FIG. 2 is a flow diagram of an example rules manager process according to an example embodiment; and

FIG. 3 is a block diagram of an example computing system for implementing an electronic signature service according to an example embodiment.

DETAILED DESCRIPTION

Embodiments described herein provide enhanced computer- and network-based methods and systems for facilitating electronic signatures. Example embodiments provide an electronic signature service (“ESS”) configured to facilitate the creation, storage, and management of documents and corresponding electronic signatures. Using the ESS, a first user (a “sender”) can provide or upload a document to be signed (“a signature document”), while a second user (a “signer”) can access, review, and sign the uploaded document.

Some embodiments of the ESS facilitate rules-based control of custody of electronic signature documents. In one embodiment, an electronic signature document includes or is associated with custody transfer rules (or simply, “custody rules”) that govern, control, or facilitate transfers of custody of an electronic signature document from one user or party to another. A custody transfer typically results in a transfer of rights or capabilities to operate upon (e.g., modify, view, send, delete) an electronic signature document and/or its associated data (e.g., history, form data, signature data). In some embodiments, when an electronic signature document changes custody, a first party associated with the document

(e.g., that created, edited, or sent the document) loses one or more previously held rights to the document while a second party gains those and possibly other rights. For example, upon custody transfer, a first user (e.g., the initial document sender) may lose the right to edit or delete the document, while a second user (e.g., a manager) may gain the rights to view, edit, and delete the document. The first user may in some embodiments or configurations retain some rights, such as “read only” access allowing the first user to view the document.

Custody transfer rules may also specify conditions under which transfers of custody are to take place. For example, a sales organization may have two distinct types of users: sales representatives and sales managers. A sales representative may create an electronic signature document (or clone or copy an existing one) that represents a sales contract with a customer. Such an electronic signature document may be associated with custody transfer rules that cause custody of the document to transfer from the sales representative to the sales manager upon the occurrence of one or more events, such as when a customer completes an electronic signature, thereby closing a sale or otherwise completing a transaction. Other conditions may be specified, such as when the sales representative initially sends the electronic signature document to the customer, when a customer indicates refusal to sign the electronic signature document, when a specified amount or period of time passes, or the like.

FIG. 1 illustrates an example block diagram of an example embodiment of an electronic signature service. In particular, FIG. 1 depicts an ESS 110 utilized by a sender user 10 and a signer user 11 to perform an electronic signing of a signature document 20. FIG. 1 also depicts a transferee 12 who receives custody of the signature document 20.

In the illustrated scenario, the sender 10 operates a sender client device 160 in order to provide (e.g., upload, transmit) an electronic document 20 (e.g., an invoice, contract, or agreement) to the ESS 110, where it is securely stored. The electronic document includes or is associated with custody rules 21 that are configured to cause custody of the document 20 to transfer from the sender 10 to the transferee 12, possibly upon the occurrence of one or more conditions. In some embodiments or configurations, the sender 10 and transferee 12 may be in or work for the same organization. For example, the sender 10 may be a sales representative while the transferee 12 may be a sales manager or an in-house attorney who reviews and records sales contracts. In other situations, the sender 10 and transferee 12 may work for distinct organizations or entities.

The sender 10 and/or some other user (e.g., an administrator) may configure the document 20 and/or the custody rules 21. For example, an administrator may interact with a user interface configured to facilitate the specification of custody rules and associated conditions. The custody rules 21 are then stored by the ESS 110 in association with the document 20. In this example, the custody rules 21 are configured to cause custody of the document 20 to transfer to the transferee upon signature by the signer 11. At this time, the sender 10 may further modify, configure, or customize the document 20, such as by changing price and quantity terms, party names, dates, and the like.

After the sender 10 configures the document 20 to his satisfaction, the signer 11 may access the document 20. In one embodiment, the sender 10 notifies the signer 11, such as by causing the ESS 110 to send to the signer 11 a message (e.g., an email) that includes a reference (e.g., a URL) to the document 20 stored by the ESS 110. As another example, the sender 10 may directly include the document 20 in an email

or other message transmitted to the signer **11**. As a further example, the document **20** may be automatically presented to the signer **11** as part of a transaction. For example, an e-commerce system may cause the document **20** to be presented or transmitted to the signer **11** during or as part of a transaction for a good/service purchased via the e-commerce system.

Typically, the signer **11** operates a Web browser or other client module executing on the signer client device **161** to access and review the document **20** via the ESS **110**. For example, if the signer **11** receives an email that includes a link to the document **20**, the signer can click the link to visit the ESS **110** in order review and sign the document **20**. If instead the signer **11** receives the document **20** itself directly from the sender **10**, opening the document will also cause the user to visit the ESS **110** to provide the required signature information. When the document **20** and related data have been reviewed (and possibly modified) to the satisfaction of the signer **11**, the signer attaches (or provides an indication or instruction to attach) his electronic signature to the document **20**.

Once the signing has been completed, the ESS **110** causes custody of the document **20** to change from the sender **10** to the transferee **12**. At this time, the sender **10** may lose one or more rights, such as the right to view, modify, or delete the document **20**. In addition, the transferee **12** may gain one or more rights, such as the right to view, modify, or delete the document **20**. The transferee **12** can access and perform various operations (e.g., view, modify, delete) via the transferee client device **162**. Custody transfer rules may specify custody chains or sequences of arbitrary length (e.g., more than the two parties shown in this example). For example, custody of a document may transfer from a sales representative to a sales manager and thence to an in-house attorney.

In some embodiments, the document **20** may be associated with an envelope or other data structure that functions as a container that includes the document **20** (or a reference thereto) along with meta-information, including signature information, sender information (e.g., names, addresses), recipient/signer information (e.g., email addresses, names), and the like. Custody rules may be configured to manage access to an envelope and its related information. For example, one custody rule may specify that once the sender **10** has transferred control to the transferee **12**, the sender **10** may view but not modify envelope information including the document **20**. The transferee **11**, in turn, may receive additional rights, such as to delete the document **20**, view information added to a form associated with the document **20**, clone the document **20**, or the like. In some embodiments, a user may upload a file that contains information about multiple documents for which custody is to be transferred, so as to effect a bulk transfer from one party to another.

FIG. **2** is a flow diagram of an example rules manager process **200** according to an example embodiment. The process of FIG. **2** may be performed by the ESS **110**.

The illustrated process begins at block **202**, where it associates a custody transfer rule with an electronic signature document. Associating a custody rule may include storing data structure or record that relates the custody rule with the document. The custody rule itself may be a data structure or record that includes indications of the document, users impacted by the custody rule, conditions or events that trigger custody transfers, access rights impacted by the rule, or the like.

At block **204**, the process, in response to occurrence of an event, transfers custody of the document based on the

custody transfer rule. Transferring custody may include removing one or more access rights from the first user, and in turn, granting those access rights to a second user. Different kinds of events may trigger the transfer operation, including the presentation (e.g., viewing), receipt, signature, or other operation upon or with respect to a signature document. Some events may be time based, so that custody transfers are triggered upon a passage of time or on a specified calendar day.

At block **206**, the process stores information about the transfer of custody of the electronic signature document. Storing information about custody transfer may include updating a data structure or record to reflect a new document owner, to remove rights from one user, to grant rights to another user, or the like. After block **206**, the process ends.

The process may perform additional or different operations. In some embodiments, the process may also enforce access rules governed by the custody rule. For example, when the process receives an indication that a user is attempting to perform some operation (e.g., view, edit, delete) with respect to the signature document or its meta-data, the process may allow or disallow the operation based on a determination whether the user has the appropriate access rights to perform the indicated operation.

FIG. **3** is a block diagram of an example computing system for implementing an electronic signature service according to an example embodiment. In particular, FIG. **3** shows a computing system **100** that may be utilized to implement an ESS **110**.

Note that one or more general purpose or special purpose computing systems/devices may be used to implement the ESS **110**. In addition, the computing system **100** may comprise one or more distinct computing systems/devices and may span distributed locations. Furthermore, each block shown may represent one or more such blocks as appropriate to a specific embodiment or may be combined with other blocks. Also, the ESS **110** may be implemented in software, hardware, firmware, or in some combination to achieve the capabilities described herein.

In the embodiment shown, computing system **100** comprises a computer memory ("memory") **101**, a display **102**, one or more Central Processing Units ("CPU") **103**, Input/Output devices **104** (e.g., keyboard, mouse, CRT or LCD display, and the like), other computer-readable media **105**, and network connections **106** connected to a network **150**. The ESS **110** is shown residing in memory **101**. In other embodiments, some portion of the contents, some or all of the components of the ESS **110** may be stored on and/or transmitted over the other computer-readable media **105**. The components of the ESS **110** preferably execute on one or more CPUs **103** and manage electronic signature processes including custody transfers as described herein. Other code or programs **130** (e.g., an administrative interface, a Web server, and the like) and potentially other data repositories, such as data repository **120**, also reside in the memory **101**, and preferably execute on one or more CPUs **103**. Of note, one or more of the components in FIG. **3** may not be present in any specific implementation. For example, some embodiments may not provide other computer readable media **105** or a display **102**.

The ESS **110** includes a service manager **111**, a user interface ("UI") manager **112**, an electronic signature service application program interface ("API") **113**, a rules manager **114**, and an electronic signature service data store **115**.

The ESS **110**, via the service manager **111** and related logic, generally performs electronic signature-related func-

tions for or on behalf of users operating a sender client device **160**, a signer client device **161**, and a transferee client device **162**. In one embodiment, a sender operating the sender client device **160** provides (e.g., transmits, uploads, sends) a document to be electronically signed to the ESS **110**. The ESS **110** stores the document securely in data store **115**. Secure document storage may include using cryptographic techniques to detect document tampering, such as generating hashes, message digests, or the like. In some embodiments, the document is stored as part of (or in association with) an “envelope” that is used to track and record information about the document as it progresses through its lifecycle of creation, transfer, signature, completion, and the like.

A signer operating the signer client device **161** then accesses, reviews, and signs the document stored by the ESS **110**. In some embodiments, the ESS **110** transmits images or some other representation of the document to the signer client device **161**, which in turn transmits signature data including an indication of the signer’s signature (or intent to sign) to the ESS **110**. The ESS **110** then securely stores the provided signature data in association with the document in the data store **115**.

The rules manager **114** facilitates custody transfers of electronic signature documents as discussed herein. Initially, a sender or other user operating the sender client device **160** may associate custody transfer rules with an electronic signature document stored in the data store **115**. The rules manager **114** tracks and executes the specified rules as appropriate. For example, if a rule indicates custody transfer upon document signature, the rules manager **114** monitors the document and, in response to a received signature, modifies (or causes to be modified) data structures or other records that specify or control access rights or operations associated with the document. In particular, access rights may be removed or disassociated from a first user. In addition or instead, the same or different access rights may be granted or otherwise associated with a second user. In some embodiments, custody transfers may occur between groups of users.

A custody transfer rule may be represented as a data structure, record in a database, or similar. The custody transfer rule may include indications of users that are impacted by the rule, events that trigger the rule, and access rights (e.g., view, modify, delete) that are shifted based on the rule and one or more events.

The UI manager **112** provides a view and a controller that facilitate user interaction with the ESS **110** and its various components. For example, the UI manager **112** may provide interactive access to the ESS **110**, such that users can upload or download documents for signature, create and/or configure custody rules associated with or incorporated into signature documents, and the like. In some embodiments, access to the functionality of the UI manager **112** may be provided via a Web server, possibly executing as one of the other programs **130**. In such embodiments, a user operating a Web browser (or other client) executing on one of the client devices **160-162** can interact with the ESS **110** via the UI manager **112**.

The API **113** provides programmatic access to one or more functions of the ESS **110**. For example, the API **113** may provide a programmatic interface to one or more functions of the ESS **110** that may be invoked by one of the other programs **130** or some other module. In this manner, the API **113** facilitates the development of third-party software, such as user interfaces, plug-ins, news feeds, adapters (e.g., for integrating functions of the ESS **110** into Web

applications), and the like. In addition, the API **113** may be in at least some embodiments invoked or otherwise accessed via remote entities, such as a third-party system (not shown), to access various functions of the ESS **110**. For example, a customer relationship management system may push or otherwise import customer data and/or agreements into the ESS via the API **113**.

The data store **115** is used by the other modules of the ESS **110** to store and/or communicate information. The components of the ESS **110** use the data store **115** to record various types of information, including documents, signatures, custody rules, and the like. Although the components of the ESS **110** are described as communicating primarily through the data store **115**, other communication mechanisms are contemplated, including message passing, function calls, pipes, sockets, shared memory, and the like.

The ESS **110** interacts via the network **150** with client devices **160-162**. The network **150** may be any combination of one or more media (e.g., twisted pair, coaxial, fiber optic, radio frequency), hardware (e.g., routers, switches, repeaters, transceivers), and one or more protocols (e.g., TCP/IP, UDP, Ethernet, Wi-Fi, WiMAX) that facilitate communication between remotely situated humans and/or devices. In some embodiments, the network **150** may be or include multiple distinct communication channels or mechanisms (e.g., cable-based and wireless). The client devices **160-162** include personal computers, laptop computers, smart phones, personal digital assistants, tablet computers, and the like.

In an example embodiment, components/modules of the ESS **110** are implemented using standard programming techniques. For example, the ESS **110** may be implemented as a “native” executable running on the CPU **103**, along with one or more static or dynamic libraries. In other embodiments, the ESS **110** may be implemented as instructions processed by a virtual machine that executes as one of the other programs **130**. In general, a range of programming languages known in the art may be employed for implementing such example embodiments, including representative implementations of various programming language paradigms, including but not limited to, object-oriented (e.g., Java, C++, C#, Visual Basic.NET, Smalltalk, and the like), functional (e.g., ML, Lisp, Scheme, and the like), procedural (e.g., C, Pascal, Ada, Modula, and the like), scripting (e.g., Perl, Ruby, Python, JavaScript, VBScript, and the like), and declarative (e.g., SQL, Prolog, and the like).

The embodiments described above may also use either well-known or proprietary synchronous or asynchronous client-server computing techniques. Also, the various components may be implemented using more monolithic programming techniques, for example, as an executable running on a single CPU computer system, or alternatively decomposed using a variety of structuring techniques known in the art, including but not limited to, multiprogramming, multithreading, client-server, or peer-to-peer, running on one or more computer systems each having one or more CPUs. Some embodiments may execute concurrently and asynchronously, and communicate using message passing techniques. Equivalent synchronous embodiments are also supported. Also, other functions could be implemented and/or performed by each component/module, and in different orders, and by different components/modules, yet still achieve the described functions.

In addition, programming interfaces to the data stored as part of the ESS **110**, such as in the data store **118**, can be available by standard mechanisms such as through C, C++,

C#, and Java APIs; libraries for accessing files, databases, or other data repositories; through scripting languages such as XML; or through Web servers, FTP servers, or other types of servers providing access to stored data. The data store **118** may be implemented as one or more database systems, file systems, or any other technique for storing such information, or any combination of the above, including implementations using distributed computing techniques.

Different configurations and locations of programs and data are contemplated for use with techniques described herein. A variety of distributed computing techniques are appropriate for implementing the components of the illustrated embodiments in a distributed manner including but not limited to TCP/IP sockets, RPC, RMI, HTTP, Web Services (XML-RPC, JAX-RPC, SOAP, and the like). Other variations are possible. Also, other functionality could be provided by each component/module, or existing functionality could be distributed amongst the components/modules in different ways, yet still achieve the functions described herein.

Furthermore, in some embodiments, some or all of the components of the ESS **110** may be implemented or provided in other manners, such as at least partially in firmware and/or hardware, including, but not limited to one or more application-specific integrated circuits (“ASICs”), standard integrated circuits, controllers executing appropriate instructions, and including microcontrollers and/or embedded controllers, field-programmable gate arrays (“FPGAs”), complex programmable logic devices (“CPLDs”), and the like. Some or all of the system components and/or data structures may also be stored as contents (e.g., as executable or other machine-readable software instructions or structured data) on a computer-readable medium (e.g., as a hard disk; a memory; a computer network or cellular wireless network or other data transmission medium; or a portable media article to be read by an appropriate drive or via an appropriate connection, such as a DVD or flash memory device) so as to enable or configure the computer-readable medium and/or one or more associated computing systems or devices to execute or otherwise use or provide the contents to perform at least some of the described techniques. Some or all of the system components and data structures may also be stored as data signals (e.g., by being encoded as part of a carrier wave or included as part of an analog or digital propagated signal) on a variety of computer-readable transmission mediums, which are then transmitted, including across wireless-based and wired/cable-based mediums, and may take a variety of forms (e.g., as part of a single or multiplexed analog signal, or as multiple discrete digital packets or frames). Such computer program products may also take other forms in other embodiments. Accordingly, embodiments of this disclosure may be practiced with other computer system configurations.

It should be apparent to those skilled in the art that many more modifications besides those already described are possible without departing from the inventive concepts herein. Moreover, in interpreting both the specification and the claims, all terms should be interpreted in the broadest possible manner consistent with the context. In particular, the terms “includes,” “including,” “comprises,” and “comprising” should be interpreted as referring to elements, components, or steps in a non-exclusive manner, indicating that the referenced elements, components, or steps may be present, or utilized, or combined with other elements, components, or steps that are not expressly referenced. Where the specification claims refers to at least one of something selected from the group consisting of A, B, C and N,

the text should be interpreted as requiring one or more elements from the set {A, B, C, . . . N}, and not N in addition to one or more elements from the set {A, B, C}.

All of the above-cited references, including U.S. Provisional Application No. 61/614,371, filed Mar. 22, 2012, entitled “SYSTEM AND METHOD FOR RULES-BASED CONTROL OF CUSTODY OF ELECTRONIC SIGNATURE TRANSACTIONS” are incorporated herein by reference in their entireties. Where a definition or use of a term in an incorporated reference is inconsistent with or contrary to the definition or use of that term provided herein, the definition or use of that term provided herein governs.

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.

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

1. A computer-implemented method comprising:
 - accessing, by an Electronic *Signature* Service [System] (ESS) computing device, an electronic document uploaded to the ESS computing device by a first client computing device of a first user;
 - accessing, by the ESS computing device, a set of custody rules associated with the electronic document, the set of custody rules controlling access to the document by a plurality of users including the first user and a second user of a second client computing device, the set of custody rules including a custody rule transferring an access right from the first user to the second user based on occurrence of at least one event, *the first user and the second user belonging to a same organization*;
 - processing, by the ESS computing device, a transaction associated with the electronic document and involving a third client computing device of a third user of the plurality of users;
 - detecting, *by the ESS computing device*, based at least in part on evaluation of operations performed by the third client computing device in reference to the transaction, an occurrence of the at least one event; and
 - in response to the occurrence of the at least one event, transferring, *by the ESS computing device*, custody of the electronic document from the first user to the second user in accordance with the access right, and denying the first user access, via the first client computing device, to the electronic document governed by the access right while granting the second user access, via the second client computing device, to the electronic document governed by the access right.
- [2. The method of claim 1, wherein the event includes a response to an electronic signature request by the third user.]
- [3. The method of claim 2, wherein the response includes one of:
 - a receipt of signature of the electronic document by the third user; or
 - a refusal of signature of the electronic document by the third user.]
- [4. The method of claim 1, wherein the access right comprises at least one of:
 - a right to modify the contents of the electronic document; and
 - a right to delete the electronic document from the computing device.]
- [5. The method of claim 1, wherein after the transferring custody of the electronic document from the first user to the second user, the first user is to retain a second access right

to view the electronic document and to view a data structure comprising information corresponding to the signature of the electronic document.]

[6. The method of claim 1, further comprising storing data indicating the transfer of custody of the electronic document to prevent a client device associated with the first user from accessing the electronic document according to the access right with respect to the electronic document, and to allow access to the electronic document according to the access right with respect to the electronic document to a client device associated with the second user.]

[7. The method of claim 1, wherein the method further comprises:

transmitting an email to the third user, the email including a link operable to access the electronic document on the computing device, wherein the event comprises receiving an indication that the third user has activated the link to access the electronic document.]

[8. An Electronic Service System (ESS) computing device comprising:

a processor; and

memory coupled to the processor and storing instructions that, when executed by the processor, cause the ESS computing device to perform operations comprising: accessing an electronic document uploaded to the ESS computing device by a first client computing device of a first user;

accessing a set of custody rules associated with the electronic document, the set of custody rules controlling access to the document by a plurality of users including the first user and a second user of a second client computing device, the set of custody rules including a custody rule transferring an access right from the first user to a second user of the plurality of users based on occurrence of at least one event;

processing a transaction associated with the electronic document and involving a third client computing device of a third user of the plurality of users;

detecting, based at least in part on evaluation of operations performed by the third client computing device in reference to the transaction, an occurrence of the at least one event; and

in response to the occurrence of the at least one event, transferring custody of the electronic document from the first user to the second user in accordance with the access right, and denying the first user access, via the first client computing device, to the electronic document governed by the access right while granting the second user access, via the second client computing device, to the electronic document governed by the access right.]

[9. The computing system of claim 8, wherein the event includes a response to an electronic signature request by the third user.]

[10. The computing system of claim 9, wherein the response includes one of:

a receipt of signature of the electronic document by the third user; or

a refusal of signature of the electronic document by the third user.]

[11. The computing system of claim 8, wherein the access right comprises at least one of:

a right to modify the contents of the electronic document; and

a right to delete the electronic document from the computing device.]

[12. The computing system of claim 8, wherein after the transferring custody of the electronic document from the first user to the second user, the first user is to retain a second access right to view the electronic document and to view a data structure comprising information corresponding to the signature of the electronic document.]

[13. The computing system of claim 8, wherein the instructions further include instructions that cause the computing system to perform an operation including storing data indicating the transfer of custody of the electronic document to prevent a client device associated with the first user from accessing the electronic document according to the access right with respect to the electronic document, and to allow access to the electronic document according to the access right with respect to the electronic document to a client device associated with the second user.]

[14. The computing system of claim 8, wherein the instructions further include instructions that cause the computing system to perform an operation including:

transmitting an email to the third user, the email including a link operable to access the electronic document on the computing device, wherein the event comprises receiving an indication that the third user has activated the link to access the electronic document.]

[15. A non-transitory computer-readable storage medium including instructions that, when executed on an Electronic Service System (ESS) computing device, cause the ESS computing device to perform operations including:

accessing an electronic document uploaded to the ESS computing device by a first client computing device of a first user;

accessing a set of custody rules associated with the electronic document, the set of custody rules controlling access to the document by a plurality of users including the first user, the set of custody rules including a first custody rule transferring an access right from the first user to a second user of the plurality of users based on occurrence of at least one event;

processing a transaction associated with the electronic document and involving a third client computing device of a third user of the plurality of users;

detecting, based at least in part on evaluation of operations performed by the third client computing device in reference to the transaction, an occurrence of the at least one event; and

in response to the occurrence of the at least one event, transferring custody of the electronic document from the first user to the second user in accordance with the access right, and denying the first user access, via the first client computing device, to the electronic document governed by the access right while granting the second user access, via the second client computing device, to the electronic document governed by the access right.]

[16. The non-transitory computer-readable storage medium of claim 15, wherein the event includes a response to an electronic signature request by the third user.]

[17. The non-transitory computer-readable storage medium of claim 16, wherein the response includes one of: a receipt of signature of the electronic document by the third user; or

a refusal of signature of the electronic document by the third user.]

[18. The non-transitory computer-readable storage medium of claim 15, wherein the access right comprises at least one of:

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a right to modify the contents of the electronic document;
and
a right to delete the electronic document from the computing device.]

[19. The non-transitory computer-readable storage medium of claim 15, wherein after the transferring custody of the electronic document from the first user to the second user, the first user is to retain a second access right to view the electronic document and to view a data structure comprising information corresponding to the signature of the electronic document.]

[20. The non-transitory computer-readable storage medium of claim 15, wherein the instructions further include instructions that cause the computing device to perform an operation including storing data indicating the transfer of custody of the electronic document to prevent a client device associated with the first user from accessing the electronic document according to the access right with respect to the electronic document, and to allow access to the electronic document according to the access right with respect to the electronic document to a client device associated with the second user.]

[21. The non-transitory computer-readable storage medium of claim 15, wherein the instructions further include instructions that cause the computing device to perform an operation including:

transmitting an email to the third user, the email including a link operable to access the electronic document on the computing device, wherein the event comprises receiving an indication that the third user has activated the link to access the electronic document.]

22. A computer-implemented method comprising:
processing, by a server, a transaction associated with an electronic document and involving a third client computing device of a third user of a plurality of users, a first user and a second user of the plurality of users having respective access rights via first and second client computing devices to the electronic document, the first user and the second user belonging to a same organization, wherein client computing devices of the plurality of users operate independently of the server;
detecting, by the server, an occurrence of at least one event based at least in part on an operation performed by the third client computing device; and
in response to detecting the occurrence of the at least one event, transferring, by the server, custody of the electronic document from the first user to the second user, wherein transferring custody comprises modifying the respective access rights of the first user and second user.

23. The method of claim 22, wherein the at least one event includes a response to an electronic signature request by the third user.

24. The method of claim 23, wherein the response includes a signing of the electronic document by the third user or a refusal by the third user to sign the electronic document.

25. The method of claim 22, wherein the respective access rights comprises at least one of:

a right to modify contents of the electronic document and a right to delete the electronic document from the server.

26. The method of claim 22, wherein after transferring custody of the electronic document from the first user to the second user, the first user retains a second access right to view the electronic document and to view a data structure comprising information corresponding to a signature of the electronic document.

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27. The method of claim 22, further comprising storing data indicating a transfer of custody of the electronic document to prevent the first user from accessing the electronic document and to allow access to the electronic document by the second user.

28. The method of claim 22, further comprising:
transmitting an email to the third user, the email including a link to access the electronic document, wherein the event comprises receiving an indication that the third user has selected the link to access the electronic document.

29. A server comprising:
a processor; and

a non-transitory computer-readable storage medium storing instructions that, when executed by the processor, cause the server to perform operations comprising:

processing a transaction associated with an electronic document and involving a third client computing device of a third user of a plurality of users, a first user and a second user of the plurality of users having respective access rights via first and second client computing devices to the electronic document, the first user and the second user belonging to a same organization, wherein client computing devices of the plurality of users operate independently of the server;

detecting an occurrence of at least one event based at least in part on an operation performed by the third client computing device; and

in response to detecting the occurrence of the at least one event, transferring custody of the electronic document from the first user to the second user, wherein transferring custody comprises modifying the respective access rights of the first user and second user.

30. The server of claim 29, wherein the at least one event includes a response to an electronic signature request by the third user.

31. The server of claim 30, wherein the response includes a signing of the electronic document by the third user or a refusal by the third user to sign the electronic document.

32. The server of claim 29, wherein the respective access rights comprises at least one of:

a right to modify contents of the electronic document and a right to delete the electronic document from the server.

33. The server of claim 29, wherein after transferring custody of the electronic document from the first user to the second user, the first user retains a second access right to view the electronic document and to view a data structure comprising information corresponding to a signature of the electronic document.

34. The server of claim 29, the instructions, when executed by the processor, cause the server to perform further operations comprising: storing data indicating a transfer of custody of the electronic document to prevent the first user from accessing the electronic document and to allow access to the electronic document by the second user.

35. The server of claim 29, the instructions, when executed by the processor, cause the server to perform further operations comprising:

transmitting an email to the third user, the email including a link to access the electronic document, wherein the event comprises receiving an indication that the third user has selected the link to access the electronic document.