Dispute or claim resolution is facilitated within an online community of users. An initial claim is used to form reference user opinions that may resolve later received claims or disputes. A semantic tree structure having various tree elements are stored for each reference user opinion. If similarity exists between a later submitted claim and the initial claim, the highest rated reference user opinion that resolves the initial claim is automatically recommended to resolve the later submitted claim.
FIG. 2A

FIG. 2B

Begin

Receive Rule Submission Request

Acknowledge-Accept Rule

Accept Additional Rules?

Rules Storage Database

End
Begin

User or Administrator Submitted Rule?

User

User Affiliated with Rule Submitter?

Yes

Reject User Rating

Yes

Rate Another Rule?

Yes

Accept Administrator Rating

No

Rule Ratings Database

Accept User Rating

No

End

FIG. 2C
Receive initial user-submitted claim that requires resolution

Receive request or indication from other users to render opinion on claim

Is user that is rendering opinion on claim same as user submitting claim?

Is user that is rendering opinion affiliated with any party in dispute?

Select Rule

Select additional rule?

Select category for opinion

Render opinion based on selected rules

Render another opinion?

End
350 Begin

354 Receive request to rate opinion

356 User related to opinion writer?

358 Deny Request

360 Receive opinion ratings

362 User wishes to provide additional rating?

364 End

FIG. 3C
CLAIM AND DISPUTE RESOLUTION SYSTEM AND METHOD

CLAIM OF PRIORITY

[0001] The present invention claims priority from U.S. Provisional Application No. 61/761,180 entitled “Claim Resolution System and Method” filed Feb. 4, 2013, which is hereby incorporated by reference as if fully set forth in the present specification.

BACKGROUND OF THE INVENTION

[0002] The present invention relates generally to communication systems and methods and more specifically to claim or dispute resolution communication systems and methods.

[0003] Throughout the recorded history of mankind, interpersonal disputes have been decided in only four ways: (i) trial by combat (where the outcome of the disputants’ fight determined who prevailed in the underlying controversy); (ii) trial by ordeal (where one or both disputants submitted to a painful physical test—such as immersing a hand in boiling oil—to determine which of them should prevail); (iii) negotiated agreement (which includes all of the various forms through which men have resolved disputes by agreement instead of through combat, ordeal, or third-party adjudication); and (iv) determination by third-party arbitrator(s) (which includes all of the various forms through which the disputants have left it to some independent individual (such as a king, tribal chief, chancellor, arbitrator, or judge) or group of individuals (such as a tribal or village council, panel of religious leaders, or judge and jury) to decide their controversy for them).

[0004] Significantly, regardless of the manner employed to reach a decision, the social validity—viz., perceived fairness—of any determination thereby made was conditioned upon the participants’ adherence to established rules governing the process which was used. And those governing rules were established by the society in which the disputants lived.

[0005] In short, the perceived “fairness” of any decision which decides a dispute depends upon whether that decision was reached in accordance with the rules which control that form of dispute resolution. Further, in many legal systems, a party involved in a dispute can initiate disputes by agreement of the dispute by filing a lawsuit. Oftentimes, this process often requires that an attorney be hired, which in itself can be cost prohibitive. Even when an attorney is affordable, it often takes a long time to resolve filed claims typically because of the backlog experienced by many court systems or the procedural rules that are involved in such litigation.

[0006] Alternatively, a party involved in a dispute may also proceed through alternative dispute resolution. Here, the party proceeds by filing a claim and by selecting an arbitrator. Parties involved must also pay the arbitrator for his or her services, and although arbitration is less costly relative to the legal system, it can be both time-consuming and cost prohibitive as well.

[0007] It is within the aforementioned context that a need for the present invention has arisen. Thus, there is a need to address one or more of the foregoing disadvantages of conventional systems and methods, and the present invention meets this need.

BRIEF SUMMARY OF THE INVENTION

[0008] Various aspects of a claim and dispute resolution can be found in exemplary embodiments of the present invention.

[0009] In a first embodiment, a method preferably implemented by a computer server system is disclosed. The computer server system facilitates dispute or claim resolution within an online community of users. The method is initiated when the computer server receives an initial claim or dispute from an online community user. The user may or may not be a party to the claim or dispute.

[0010] The method then uses the initial claim to form reference user opinions that may resolve later received claims or disputes. Each reference user opinion may be based on a different rule or regulation governing conduct. The reference user opinions are then rated and stored. For each reference user opinion, a semantic tree structure having various tree elements are stored.

[0011] As an example, the tree element may be a category or subject matter of each reference user opinion. As another example, the tree element may be a key word within the initial or subsequent claim. Further yet, the tree element may be the rule on which the reference user opinion is based, the resolution of the reference user opinion and the rating of the reference user opinion.

[0012] Upon user submission of another claim or dispute between two or more parties seeking resolution of the later claim, the computer server system determines whether the later claim and the initial claim are similar by comparing their elements (e.g. semantic tree structure elements). If similarity exists, the highest rated reference user opinion that resolves the initial claim is automatically recommended (without user intervention) to resolve the later submitted claim.

[0013] One embodiment of this invention is premised upon the “determination by third-party arbiters” model and has carefully excised the main failiites which have repeatedly shaken public confidence in the decisional integrity of traditional judicial systems from its model. Completely absent from the system are judges—and the procedural nit-picking which too often accompanies the judicial process in much of the world.

[0014] Also excised from the invention is the confidence-shaking concept that a judge or jury can decide a case without disclosing the reasoning—or lack thereof—upon which that decision was based. Conspiciously added to the system is the requirement that each person contributing to the decision upon any claim provide the reasoning upon which his/her decision was premised. Those reasons will, of necessity, include the established body of rules of substantive law—as well as “other opinions,” commonly referred to as decisional precedent.

[0015] A further understanding of the nature and advantages of the present invention herein may be realized by reference to the remaining portions of the specification and the attached drawings. Further features and advantages of the present invention, as well as the structure and operation of various embodiments of the present invention, are described in detail below with respect to the accompanying drawings. In the drawings, the same reference numbers indicate identical or functionally similar elements.
BRIEF DESCRIPTION OF THE DRAWINGS

[0016] FIG. 1 illustrates a dispute resolution communication system according to an exemplary embodiment of the present invention.

[0017] FIG. 2A illustrates a simple rule communication diagram according to an exemplary embodiment of the present invention.

[0018] FIG. 2B illustrates a rule submission routine according to an exemplary embodiment of the present invention.

[0019] FIG. 2C illustrates a rule rating routine according to an exemplary embodiment of the present invention.

[0020] FIG. 3A illustrates a simple claim or dispute communication diagram according to an exemplary embodiment of the present invention.

[0021] FIG. 3B illustrates an opinion rendering routine according to an exemplary embodiment of the present invention.

[0022] FIG. 3C illustrates an opinion rating routine according to an exemplary embodiment of the present invention.

[0023] FIG. 4 illustrates a simplified and automatic claim resolution diagram according to an exemplary embodiment of the present invention.

[0024] FIG. 5A shows a typical computer 10 such as would be operated by a user/participant on the Internet.

[0025] FIG. 5B shows subsystems of the computer of FIG. 5A.

DETAILED DESCRIPTION OF THE INVENTION

[0026] Reference will now be made in detail to the embodiments of the invention, examples of which are illustrated in the accompanying drawings. While the invention will be described in conjunction with the preferred embodiments, it will be understood that they are not intended to limit the invention to these embodiments. On the contrary, the invention is intended to cover alternatives, modifications and equivalents, which may be included within the spirit and scope of the invention as defined by the appended claims. Furthermore, in the following detailed description of the present invention, numerous specific details are set forth to provide a thorough understanding of the present invention. However, it will be obvious to one of ordinary skill in the art that the present invention may be practiced without these specific details. In other instances, well-known methods, procedures, components, and circuits have not been described in detail so as not unnecessarily obscure aspects of the present invention.

[0027] FIG. 1 illustrates dispute resolution communication system 100 according to an exemplary embodiment of the present invention.

[0028] In FIG. 1, among other components, dispute resolution communication system 100 includes user 102 communicably coupled to claim resolution server system 104 via Internet/communication network 106. Although not shown, Internet/communication network 106 represents any distributed network (wired, wireless or otherwise) for data transmission and receipt between two points. The system of the present invention can work effectively with any possible distribution interconnected processors regardless of the specific topology, hardware and protocols used.

[0029] Here, user 102 represents a person, an entity or the like that is a participant within the dispute resolution communication system 100 and wishes to be part of that system to facilitate dispute resolution amongst parties. Specifically, in this embodiment, user 102 can use mobile device 108 to create a rule, guideline or like tenets that can assist users in creating opinions or resolutions to resolve disputes presented by users of dispute resolution communication system 100.

[0030] Claim resolution server system 104 includes web server 105 and application server 132. Web server 105 can be a combination of processors and/or software capable of communicating with user 102 via mobile device 108. Specifically, web server 105 may host a website (not shown) via which user 102 can use mobile device 108 to serve HTTP requests on web server 105.

[0031] Among other functionalities, web server 105 responds to such HTTP requests and in conjunction with application server 132 and database server 134, both of which are communicably coupled to web server 105, provides resolutions to claims or disputes submitted by parties to claim resolution server system 104. Application server 132 can also be a combination of hardware and software dedicated to managing processes for a dispute resolution application (not shown).

[0032] Similarly, database server 134 processes data for retrieval and storage on database storage 138, which might be a single storage system but is preferably individual storage databases that include rules storage database 103A, rule ratings database 103B, claims database 103C, opinions database 103D and opinion ratings database 103E. Any suitable web server, application server, database server and database storage systems consistent with the principles and precepts of the present invention can be utilized.

[0033] In FIG. 1, dispute resolution communication system 100 further comprises user 112 and user 116 also communicably coupled to claim resolution server system 104 via Internet/communication network 106. Here, user 112 again represents a participant that may utilize desktop 114 to rate rules submitted by other users such as user 102.

[0034] User 112 is a willing participant; and as such neither user 112 nor other system users have any obligation either legal or otherwise to participate in the dispute resolution system. For example, users are not jurors or necessarily selected by the system to resolve disputes. User 116 can use tablet 118 to submit a first or initial claim to claim resolution server system 104 for evaluation by users of the dispute resolution communication system 100.

[0035] In FIG. 1, dispute resolution communication system 100 also includes user 120 and user 124, both communicably coupled to claim resolution server system 104. User 120 is a system participant and can utilize mobile device 122 to provide opinions (e.g., opinion 308 of FIG. 3) that provides a first resolution to a disputed claim. User 124 is also another participant that may utilize tablet 126 to analyze claims and provide another opinion (e.g., opinion 322 of FIG. 3) that provides a second resolution to the same claim, to which a suggested resolution (opinion 308) has been provided.

[0036] Dispute resolution communication system 100 also includes user 128 as well as user 129 also communicably connected to claim resolution server system 104. User 128 is another participant that uses computing device 130 to rate opinions provided by other users such as user 124 and user 120.

[0037] User 129 may use the computing device 131 to submit a second or subsequent claim for evaluation by claim resolution server system 104. Unlike the first claim that is evaluated by users of dispute resolution communication system 100, the second claim is automatically analyzed and an
immediate opinion with a resolution provided to user 129. Such analysis might be based on semantic similarity (meaning and structure) between the second claim and existing opinions previously rendered by users of dispute resolution communication system 100.

[0038] Briefly, in use, the dispute resolution system is initiated when users such as user 102 (or administrators) submit rules for rendering opinions to claim resolution server system 104. Thereafter, other users such as user 112 can then rate the submitted rules to determine which of said rules are highly regarded or favored by the online community.

[0039] Users such as user 116 may then submit a claim; other users such as user 124 and user 120 can analyze the claim and submit separate opinions for resolving that claim. Other users such as user 128 can rate each of the submitted opinions after which claims submitted by users such as user 129 can be resolved by comparing the semantic structures of the submitted claims and the opinions rendered by users such as user 120 and 124.

[0040] FIG. 2A illustrates a simple rule communication diagram 200 according to an exemplary embodiment of the present invention.

[0041] In FIG. 2A, rule communication diagram 200 involves user 102 (FIG. 1) creating and communicating rule 202 for rating by other system users. Specifically, user 102 employs mobile device 108 to create and transmit rule 202 to claim resolution server system 104 (FIG. 1).

[0042] Once rule 202 is submitted, user 112 (shown as a plurality of users 112A, 112B and 112C) is notified that rule 202 has been created. In turn, user 112A (using desktop 114A), user 112B (using desktop 114B) and user 112C (using desktop 114C) provides user ratings 204 that rates rule 202 according to an established rating scale, further described with reference to the routine of FIG. 2B.

[0043] FIG. 2B illustrates rule submission routine 220 according to an exemplary embodiment of the present invention.

[0044] In FIG. 2B, rule submission routine 220, implemented by claim resolution server system 104, permits a user to submit dispute resolution rules for storage by claim resolution server system 104.

[0045] At block 222, rule submission routine 220 is initiated.

[0046] At block 224, a rule submission request is received by claim resolution server system 104. Specifically, the rule submission request may be sent by user 102 to claim resolution server system 104.

[0047] Responsive thereof, at block 225, claim resolution server system 104 acknowledges the rule submission request and receives and accepts the rule. Specifically, here, user 102 submits rule 202 to claim resolution server system 104. In turn, claim resolution server system 104 accepts the rule for storage in database 103A.

[0048] Any reference to a rule refers to legal rules or the like, or rules based on community standards, or equity or fairness based rules. An example of a legal rule might be "implied warranty of merchantability" for contracts or "implied warranty of habitability" for residential housing. An example of an equity based rule might be "treating others as one expects to be treated, or such Biblical rules such as "Thou shalt not steal."

[0049] In one embodiment, prior to submission of rule 202, user 102 might be presented with pre-populated templates or words that can be used to create rules, or user 102 might simply choose to create his or her own rule without a template. Generally, any user that is a participant in dispute resolution communication system 100 can create a rule.

[0050] However, it is preferred that such a participant be part of a local community. For example, it is preferred that participants who reside in a particular geographical area create rules that are applicable to that geographic area. Rule creators need not have a particular technical or legal background.

[0051] All that is required is that a user sign up, indicate their geographic location (in some embodiments) and become authenticated as a dispute resolution community of online users. Note also that administrators of the system may create rules in addition or in lieu of rules created by users. It is also contemplated that each rule includes at least one or more words or text. Note also that although not shown, each user rendering an opinion based on a rule may be required to be from a geographic location where the rule is well accepted and where the dispute or parties to the dispute are located. In this manner, the present invention facilitates providing opinions that are more relevant and applicable to those communities in which disputes arise.

[0052] At decision box 226, it is determined whether user 102 wishes to create additional rules. If yes, flow returns to block 224 where the system accepts the additional rule. Otherwise, the process terminates at 228.

[0053] FIG. 2C illustrates rule rating routine 240 according to an exemplary embodiment of the present invention.

[0054] In FIG. 2C, rule rating routine 240 is initiated when claim resolution server system 104 receives a rule from a user. Specifically, here, user 102 has submitted rule 202 (FIG. 2A) to claim resolution server system 104 which initiated rule rating routine 240. Note that rule rating routine 240 permits rules submitted by users to be rated by other users.

[0055] At block 244, it is determined whether the rule to be rated was submitted by a user or an administrator. As previously mentioned, rules may be submitted by either users or by administrators of dispute resolution communication system 100. If the rule is submitted an administrator, flow proceeds to block 248, where the system accepts the rated rule. T

[0056] That is, rules created by system administrators are automatically accepted by the system. After the rule is accepted, flow proceeds to decision block 250 where it is determined whether another rule is to be rated. If yes, flow returns to decision block 244, and if no, rule rating routine 240 is terminated at 254.

[0057] On the other hand, if the rule is created or submitted by a user, flow proceeds to decision box 246. Specifically, here, rule 202 (FIG. 2A) is submitted for rating by user 102, and thus, flow proceeds to decision 246.

[0058] At decision block 246, it is determined whether the user that is rating the rule is affiliated with the rule submitter. Specifically, here, it is determined whether any one of user 112A, 112B or 112C (FIG. 2A) is affiliated with user 102. By "affiliated," it is meant to indicate whether any family, kin or similar type relationship exists between the user i.e. user 102 and the rule rater i.e. users 112A, 112B and 112C. If the rule rater is affiliated with the rule submitter, then flow proceeds to block 247.

[0059] At block 247, the rule rating is rejected after which flow proceeds to decision block 250, where it is determined whether or not the user wishes to rate another rule.

[0060] Referring back to decision block 246, if there is no affiliation between the rater and the rule submitter, as here
where user 112A, 112B and 112C have no affiliation with user 102, flow proceeds to block 248 where the rating for the rule is accepted and stored in rule ratings database 103B.

[0061] After the rule is stored, flow proceeds to decision block 250 where it is determined whether another rule is to be rated. If so, flow proceeds back to decision block 244. Otherwise, the process terminates at end block 254.

[0062] FIG. 3A illustrates a simple claim or dispute communication diagram 300 according to an exemplary embodiment of the present invention.

[0063] In FIG. 3A, claim or dispute communication diagram 300 shows user 116 communicating claim 302 for resolution. Users 120 and 124 render reference user opinions 308 and 322 resulting in a claim resolution tree 318 and 330, respectively. Here, note that reference user opinion indicates that later claims may be resolved by referring to earlier opinions (reference user opinions) that were used to resolve those earlier claims. FIG. 3A is further described with reference to opinion rendering routine 320 of FIG. 3B and opinion rating routine 350 of FIG. 3C.

[0064] FIG. 3B illustrates opinion rendering routine 320 according to an exemplary embodiment of the present invention.

[0065] In FIG. 3B, opinion rendering route 320 facilitates the rendering of opinions by a community of online users for claims or disputes between two or more parties. The rendered opinions might include a resolution that can either be directly provided to resolve the claim or dispute, or preferably, utilized as a reference user opinion upon which claim resolution server system 104 can automatically base subsequent opinions. Note here that any reference to opinion is also used interchangeably to refer to the resolution in the opinion.

[0066] At begin block 322, opinion rendering routine 320 is initiated.

[0067] At block 324, claim resolution server system 104 receives an initial claim or dispute for which an opinion is to be rendered to resolve the claim or dispute. Referring also to FIG. 3A, user 116 has submitted initial claim 302 to claim resolution server system 104. Once received, the dispute or claim is stored in claims database 103C.

[0068] At decision block 325, claim resolution server system 104 also receives a request or indication from one or more users 120, 124 that wish to provide opinions for the initial claim that is submitted.

[0069] At decision block 326, it is determined whether the user that wishes to render an opinion and the user that submitted the claim are the same. Specifically, it is determined whether user 116 that submitted claim 302 and users 120, 124 are the same.

[0070] Here, user 116 is not the same user as user 120, thus, flow proceeds to decision box 328. Similarly, user 116 that submitted claim 302 is also not the same user as user 124 that wishes to provide an opinion, and thus, flow proceeds to decision block 328.

[0071] At decision block 328, claim resolution server system 104 determines whether the user that wishes to render an opinion and one of the party’s in the dispute are affiliated, that is, whether users 120, 124 and user 116 are affiliated. Here, they are not affiliated, thus flow proceeds to block 332.

[0072] Here, it is assumed that user 116 might be a party to dispute since user 116 is submitting the claim. However, user 116 or any system user need not be a party, as users can submit claims or disputes on behalf of third parties. Note also that the term affiliation refers to family members, next of kin and the like.

[0073] If there is an affiliation, flow proceeds to block 329 where claim resolution server system 104 prevents users from providing an opinion. This prevents biased opinions and overly favorable opinions toward a party in the dispute. Flow then terminates at end block 342.

[0074] In another embodiment, an affiliated user can render an opinion provided such affiliation and ratings rendered by the affiliated party when the recommended resolution to a claim or dispute is presented to the claim submitter. Returning now to decision block 328, if the user rendering the opinion is not affiliated with any party, flow proceeds to block 332.

[0075] At block 332, the user rendering the opinion selects an applicable rule for rendering the opinion. In order for an opinion to be valid, that opinion must be based on at least one or more rules. Here, specifically, user 120 has selected rule 1, 202 while user 124 has selected rule 1, 202 (FIG. 3A).

[0076] After selection of the rule, flow proceeds to decision block 334 where it is determined whether the user wishes to use additional rules for rendering the opinion. If so, flow returns to select rule block 332 where the user can select an additional rule for rendering the opinion. Specifically, user 120 has also rule 2, 310. Note that it is preferred that each opinion be based on separate rules. If no additional rule is selected, flow proceeds to decision block 336.

[0077] At decision block 336, the user rendering the opinion is directed to select a category for the opinion or resolution. The category is typically the subject area or subject matter to which the opinion is allocated or categorized. For example, if the opinion deals with implied warranties, it is categorized under contracts. If the opinion pertains to a motor vehicle accident, for example, it may be categorized under traffic incidents.

[0078] Alternatively, the system administrator may simply be tasked to categorize all opinions without the need for input from users. User input may not be required as some or many users may be unable to specifically categorize their opinions according to subject matter. Here, in FIG. 3A, user 120 has categorized the opinion under category A, 304 while user 124 has categorized the opinion under category A, 304 as well.

[0079] Next, flow continues to block 338 where the user renders an opinion based on the selected one or more rules. Specifically, in FIG. 3A, user 120 has rendered opinion 1, 308 based on category A, 304 and key word 1, 306. Opinion 1 is also based on rule 1, 202, rule 2, 310 as well as resolution x, 312. Note here that resolution X is synonymous with opinion 1, 308.

[0080] Opinion 1, 308 is adapted to resolve later received claims or disputes such as claim 402 (FIG. 4) that is received after claim 302, which is resolved by opinion 1, 308. In one embodiment, the semantic tree structure of claim 402 having at least one tree element (key word 1, 306) and the semantic tree structure of claim 302 also having the same tree element (key word 1, 306) are determined to be similar, so that Opinion 1, 308, which resolves claim 302 is also applicable to resolve claim 402.

[0081] In FIG. 3B, similarly, user 124 has rendered opinion 2, 322 based on rule 1, 202, resolution Y, 324, category A, 304 and key word 1, 306. Note also that resolution Y is synonymous with opinion 2, 322 which is also adapted to resolve later received claims. Flow now proceeds to decision block 340.
[0082] At decision block 340, if the user wishes to render another opinion, flow returns to decision block 325. Otherwise, the process terminates at end block 342.

[0083] FIG. 3C illustrates opinion rating routine 350 according to an exemplary embodiment of the present invention.

[0084] In FIG. 3C, opinion rating routine 350 permits users to rate opinions rendered by user to resolve a particular claim. Thus, at block 352, opinion rating routine 350 is initiated.

[0085] At block 354, claim resolution server system 104 receives user requests to rate opinions. Specifically, in FIG. 3A, claim resolution server system 104 receives requests from users 102, 112 and 128 to rate opinion 1, 308 that is rendered by user 120 with regards to claim 302 submitted by user 116. Similarly, users 112, 128 and 129 have also submitted a request to rate opinion 2, 322 rendered by user 124 also providing another resolution to the same claim 302.

[0086] At decision block 356, it is determined whether the user that wishes to rate an opinion and the user that wrote the opinion are affiliated. Here, specifically, it is determined whether any of users 102, 112 or 128 is related to user 120 or whether users 112, 128 or 129 is related to user 124.

[0087] If yes, flow proceeds to block 358 where the request to rate the opinion is denied, after which flow proceeds to decision block 362. At decision block 362, if the user wishes to rate another opinion, flow proceeds back to decision block 356. Otherwise, the process terminates at end block 364.

[0088] Returning now to decision block 356, if there is no relationship between the user that will rate the opinion and the opinion writer, flow proceeds to block 360. At block 360, claim resolution server system 104 then receives the ratings from users on a scale of low to high. As an example, users may rate opinions as either good or bad or rate opinions from 1 to 5 with 5 being the highest or assign one to five stars to each opinion. In one embodiment, if opinion ratings for two different opinions are the same, a requesting user might be presented with both opinions and given the opportunity to select a resolution.

[0089] Here in FIG. 3A, specifically, user ratings 314 are received from users 102, 112 and 128. The combined rating of user ratings 314 is rating 1, 316. Similarly, user 112, 128 and 129 also submit user ratings 326 for opinion 2, 322 for an average rating 2, 328 as shown in FIG. 3A. The ratings are then saved in opinion ratings database 103E.

[0090] Here as a result, the claim resolution tree A, 318 is produced as well as a claim resolution tree B, 330. Claim resolution tree A, 318 comprises tree elements that indicate categorical rule, key word, rating and resolution relations between the tree elements. The system produces semantic structures, each having at least one tree element (category or key word) to represent a claim. As can be shown, claim resolution 3A results in elements 320 and 332. Elements 320 includes category A, key word 1, rule 1, resolution X and rating 1 as shown, category A, and elements 332 also includes category A, key word 1, rule 1, resolution Y and rating 2.

[0091] FIG. 4 illustrates a simplified and automatic claim resolution diagram 400 according to an exemplary embodiment of the present invention.

[0092] In FIG. 4, claim resolution diagram 400 includes user 129 submitting subsequent claim 402 for resolution by claim resolution server system 104. Specifically, user 129 submits claim 402 in category A, 304 having key word 1, 306. In turn, claim resolution server system 104 determines that tree elements 320 and 332 include a similar key word 1, 306 and category 306. Tree elements 404 and 406 are not selected. Consequently, resolution X, 312 based on rule 1, 202 from elements 320 which has a higher rating 1, 408 (relative to rating 2, 410 of tree elements 322) is suggested as the resolution for claim 403.

Use Case

[0093] A user is involved in a dispute with a contractor who the user hired to install a new roof on user’s house. The dispute relates to whether the contractor is required to repair the roof when it is discovered that it leaks during rain. The user posts a Claim X to the system. For example, the claim might read “I hired a contractor to install a roof on my house. Two weeks after the contractor finished, the roof leaked when it rained. The contractor says he did not warranty the roof and refuses to repair the roof for free. I believe the contractor should repair the roof for free.”

[0094] Other users can review this Claim and write opinions on how the claim should be resolved applying rules previously stored by the system. For example, a user might write an Opinion 1 stating “There was an implied warranty that the roof the contractor installed would adequately protect the house during rain. The roof failed to adequately protect the house during rain. Accordingly, the contractor should repair the roof for free.” Such user might designate this opinion as being in the category of Contracts and cite a rule relating to Implied Warranties.

[0095] Another user might write Opinion 2 stating “If the roof leaked during rain, the contractor had not fully performed the work. Accordingly, the contractor should complete the work and install the roof for free.” Such user might designate this opinion as being in the category of Contracts and cite a rule relating to Completion. The system then allows other users to review either or both Opinions and rate them as being good or bad.

[0096] Using these examples, the semantic structure of the Claim Resolution Tree for Opinion 1 could consist of:

[0097] Category: Contracts
[0098] Key Word 1: Roof
[0099] Key Word 2: Warranty
[0100] Rule: Implied Warranties
[0101] Resolution: Contractor to repair roof for free.
[0102] Rating: 75% Good, 25% Bad
[0103] The semantic structure of the Claim Resolution Tree for Opinion 2 could consist of:

[0104] Category: Contracts
[0105] Key Word 1: Roof
[0106] Key Word 2: Warranty
[0107] Rule: Completion
[0108] Resolution: Contractor to finish installing roof for free.
[0109] Rating: 50% Good, 50% Bad
[0110] Thereafter, a new user may post a Claim Y to the system stating “I hired a contractor to install a roof on my house. Two weeks after the contractor finished, the roof collapsed. The contractor says he did not warranty the roof and refuses to repair the roof for free. I believe the contractor should repair the roof for free.”

[0111] The system could identify the semantic structure of Claim Y as consisting of:

[0112] Key Word 1: Roof
[0113] Key Word 2: Warranty
Using the identified similarities between the semantic structure of Claim Y and that of the Claim Resolution Trees for Opinion 1 and 2, the system might suggest the Category of “Contracts” and a Resolution of “Contractor to repair roof for free” due to Opinion 1’s higher rating value.

An immediate advantage of the present invention relates to dispute resolution. Contracting parties can use the system to generate an immediate resolution if a dispute occurs between the parties. Parties can avoid conventional expensive alternatives such as the legal system or alternative dispute resolution.

FIG. 5A shows a typical computer 10 such as would be operated by a user/party on the Internet. Computer 10 includes a cabinet 12 housing familiar computer components such as a processor, memory, disk drive, Compact Digital Read Only Memory (CDROM), etc. (not shown). User input devices include keyboard 16 and mouse 18. Output devices include display 20 having a display screen 22. Naturally, many other configurations of a computer system are possible. Some computer systems may have additional components to those shown in FIG. 5A while others will have fewer components. For example, server computers need not have attached input and output devices since they may only be accessed from time to time by other computers over a network. Human interaction with such a server computer can be at another computer that is equipped with input and output devices. Input and output devices exist in many variations from those shown in FIG. 5A. Displays can be liquid crystal displays (LCD), computer monitors, plasma, etc. Input devices can include a trackball, digitizing tablet, microphone, etc. In general, use of the term “input device” is intended to include all possible types of devices and ways to input information into a computer system or onto a network. Likewise the term “output device” includes all possible types of devices and ways to output information from a computer system to a human or to another machine.

The computer itself can be of varying types including laptop, notebook, palm-top, pen-top, etc. The computer may not resemble the computer of FIG. 5A as in the case where a processor is embedded into another device or appliance such as an automobile or a cellular telephone. Because of the ever-changing nature of computers and networks, the description of hardware in this specification is intended only by way of example for the purpose of illustrating the preferred embodiment. Any distributed networked system capable of executing programmed instructions is suitable for use with the present invention.

FIG. 5B shows subsystems of the computer of FIG. 5A. In FIG. 5B, subsystems within box 40 are internal to, for example, the cabinet 12 of FIG. 5A. Bus 42 is used to transfer information in the form of digital data between processor 44, memory 46, disk drive 48, CDROM drive 50, serial port 52, parallel port 54, network card 56 and graphics card 58. Many other subsystems may be included in an arbitrary computer system and some of the subsystems shown in FIG. 5B may be omitted. External devices can connect to the computer system’s bus (or another bus or line, not shown) to exchange information with the subsystems in box 40. For example, devices such as keyboard 60 can communicate with processor 44 via dedicated ports and drivers (shown symbolically as a direct connection to bus 42). Mouse 62 is connected to serial port 52. Devices such as printer 64 can connect through parallel port 54. Network card 56 can connect the computer system to a network. Display 68 is updated via graphics card 58. Again, many configurations of subsystems and external devices are possible.

Any suitable programming language can be used to implement the routines of particular embodiments including C, C++, Java, assembly language, etc. Different programming techniques can be employed such as procedural or object oriented. The routines can execute on a single processing device or multiple processors. Although the steps, operations, or computations may be presented in a specific order, this order may be changed in different particular embodiments. In some particular embodiments, multiple steps shown as sequential in this specification can be performed at the same time. The sequence of operations described herein can be interrupted, suspended, or otherwise controlled by another process, such as an operating system, kernel, etc. The routines can operate in an operating system environment or as stand-alone routines occupying all, or a substantial part, of the system processing. Functions can be performed in hardware, software, or a combination of both. Unless otherwise stated, functions may also be performed manually, in whole or in part.

In the description herein, numerous specific details are provided, such as examples of components and/or methods, to provide a thorough understanding of particular embodiments. One skilled in the relevant art will recognize, however, that a particular embodiment can be practiced without one or more of the specific details, or with other apparatus, systems, assemblies, methods, components, materials, parts, and/or the like. In other instances, well-known structures, materials, or operations are not specifically shown or described in detail to avoid obscuring aspects of particular embodiments.

A “computer-readable medium” for purposes of particular embodiments 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, system, or device. The computer readable medium can be, by way of example only but not by limitation, an electronic, magnetic, optical, electromagnetic, infrared, or semiconductor system, apparatus, system, device, propagation medium, or computer memory.

Particular embodiments can be implemented in the form of control logic in software or hardware or a combination of both. The control logic, when executed by one or more processors, may be operable to perform that which is described in particular embodiments.

A “processor” or “process” includes any human, hardware and/or software system, mechanism or component that processes data, signals, or other information. A processor can include a system with a general-purpose central processing unit, multiple processing units, dedicated circuitry for achieving functionality, or other systems. Processing need not be limited to a geographic location, or have temporal limitations. For example, a processor can perform its functions in “real time,” “offline,” in a “batch mode,” etc. Portions of processing can be performed at different times and at different locations, by different (or the same) processing systems.

Reference throughout this specification to “one embodiment”, “an embodiment”, “a specific embodiment”, or “particular embodiment” means that a particular feature, structure, or characteristic described in connection with the particular embodiment is included in at least one embodiment.
and not necessarily in all particular embodiments. Thus, respective appearances of the phrases “in a particular embodiment”, “in an embodiment”, or “in a specific embodiment” in various places throughout this specification are not necessarily referring to the same embodiment. Furthermore, the particular features, structures, or characteristics of any specific embodiment may be combined in any suitable manner with one or more other particular embodiments. It is to be understood that other variations and modifications of the particular embodiments described and illustrated herein are possible in light of the teachings herein and are to be considered as part of the spirit and scope.

0125] Particular embodiments may be implemented by using a programmed general purpose digital computer, by using application specific integrated circuits, programmable logic devices, field programmable gate arrays, optical, chemical, biological, quantum or nanoengineered systems, components and mechanisms may be used. In general, the functions of particular embodiments can be achieved by any means as is known in the art. Distributed, networked systems, components, and/or circuits can be used. Communication, or transfer, of data may be wired, wireless, or by any other means.

0126] It will also be appreciated that one or more of the elements depicted in the drawings/figures can also be implemented in a more separated or integrated manner, or even removed or rendered as inoperable in certain cases, as is useful in accordance with a particular application. It is also within the spirit and scope to implement a program or code that can be stored in a machine-readable medium to permit a computer to perform any of the methods described above.

0127] Additionally, any signal arrows in the drawings/figures should be considered only as exemplary, and not limiting, unless otherwise specifically noted. Furthermore, the term “or” as used herein is generally intended to mean “and/or” unless otherwise indicated. Combinations of components or steps will also be considered as being noted, where terminology is foreseen as rendering the ability to separate or combine is unclear.

0128] As used in the description herein and throughout the claims that follow, “a”, “an” and “the” includes plural references unless the context clearly dictates otherwise. Also, as used in the description herein and throughout the claims that follow, the meaning of “in” includes “in” and “on” unless the context clearly dictates otherwise.

0129] While the above is a complete description of exemplary specific embodiments of the invention, additional embodiments are also possible. Thus, the above description should not be taken as limiting the scope of the invention, which is defined by the appended claims along with their full scope of equivalents.

1 claim:

1. A computer-implemented method comprising:

upon receipt by a computer server, of an initial claim or dispute, establishing a plurality of reference user opinions adapted to resolve later received claims or disputes, wherein said plurality of reference user opinions are established by accepting user opinions rendered by an online community of users to resolve the initial claim or dispute between two or more parties, wherein each one of the rendered user opinions is based on a different rule or regulation governing conduct, and storing each one of said different rendered user opinions as the plurality of reference user opinions;

accepting by the computer server, a plurality of ratings from the online community of users for each reference user opinion, the plurality of ratings rating each reference user opinion on a low to high scale such that at least a first reference user opinion is rated higher relative to a second reference user opinion, and storing the plurality of ratings including ratings for the first reference user opinion and second reference user opinion;

receiving by the computer server, a user submission of a subsequent claim or dispute between two or more parties seeking resolution of the subsequent claim;

determining by the computer server, whether the subsequent claim and the initial claim are similar by comparing elements of the subsequent claim and that of the initial claim; and

upon determining that the subsequent claim and the initial claim are similar, recommending by the computer server, the first reference user opinion rendered for the initial claim as a resolution for the subsequent claim based on the higher rating of the first reference user opinion relative to that of the second reference user opinion.

2. The computer-implemented method of claim 1 further comprising:

storing for each reference user opinion, a semantic tree structure having tree elements for at least a category or subject matter of each reference user opinion, a key word within the initial or subsequent claim, the rule on which the reference user opinion is based, the resolution of the reference user opinion and the rating of the reference user opinion.

3. The computer-implemented method of claim 1 further comprising:

providing for each of the initial and subsequent claim a semantic tree structure having at least one keyword as a tree element.

4. The computer-implemented method of claim 3 wherein the elements of the subsequent claim and the initial claim that are compared are semantic tree structures of the subsequent claim and the initial claim, wherein the subsequent claim and the initial claim are similar if key word similarities exist between the semantic tree structure of the subsequent claim and that of the initial claim.

5. The computer-implemented method of claim 2 wherein the tree elements include a semantic tree structure having tree elements for at least a category or subject matter of each reference user opinion, a key word within the initial or subsequent claim, the rule on which the reference user opinion is based, the resolution of the reference user opinion and the rating of the reference user opinion.

6. The computer-implemented method of claim 1 wherein a rule, reference user opinion and rating are based on geographical location.

7. A computer program product including a non-transitory computer readable storage medium having executable code, the code when executed by a processor is adapted for performing the following:

upon receipt by a computer server, of an initial claim or dispute, establishing a plurality of reference user opinions adapted to resolve later received claims or disputes, wherein said plurality of reference user opinions are established by accepting user opinions rendered by an online community of users to resolve the initial claim or dispute between two or more parties, wherein each one of the rendered user opinions is based on a different rule or regulation governing conduct, and storing each one of said different rendered user opinions as the plurality of reference user opinions;
of the rendered user opinions is based on a different rule or regulation governing conduct, and storing each one of said different rendered user opinions as the plurality of reference user opinions;
accepting by the computer server, a plurality of ratings from the online community of users for each reference user opinion, the plurality of ratings rating each reference user opinion on a low to high scale such that at least a first reference user opinion is rated higher relative to a second reference user opinion, and storing the plurality of ratings including ratings for the first reference user opinion and second reference user opinion;
receiving by the computer server, a user submission of a subsequent claim or dispute between two or more parties seeking resolution of the subsequent claim;
determining by the computer server, whether the subsequent claim and the initial claim are similar by comparing elements of the subsequent claim and that of the initial claim; and
upon determining that the subsequent claim and the initial claim are similar, recommending by the computer server, the first reference user opinion rendered for the initial claim as a resolution for the subsequent claim based on the higher rating of the first reference user opinion relative to that of the second reference user opinion.

8. The computer program product of claim 7 further comprising:

storing for each reference user opinion, a semantic tree structure having tree elements for at least a category or subject matter of each reference user opinion, a key word within the initial or subsequent claim, the rule on which the reference user opinion is based, the resolution of the reference user opinion and the rating of the reference user opinion.

9. The computer program product of claim 6 further comprising:

providing for each of the initial and subsequent claim a semantic tree structure having at least one keyword as a tree element.

10. The computer program product of claim 8 wherein the elements of the subsequent claim and the initial claim that are compared are semantic tree structures of the subsequent claim and the initial claim, wherein the subsequent claim and the initial claim are similar if key word similarities exist between the semantic tree structure of the subsequent claim and that of the initial claim.

11. The computer program product of claim 7 wherein the tree elements include a semantic tree structure having tree elements for at least a category or subject matter of each reference user opinion, a key word within the initial or subsequent claim, the rule on which the reference user opinion is based, the resolution of the reference user opinion and the rating of the reference user opinion.

12. The computer program product of claim 6 further comprising basing a rule, reference user opinion and rating are on geographical location.

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