US 20140089166A1

(19) **United States**

(12) **Patent Application Publication**

Padawer

(10) **Pub. No.: US 2014/0089166 A1**

(43) **Pub. Date: Mar. 27, 2014**

(54) **CREDIT REPAIR BY ANALYSIS OF TRADE LINE PROPERTIES**

(71) Applicant: **Progrexion IP, Inc.**, North Salt Lake, UT (US)

(72) Inventor: **Justin Randall Padawer**, Bountiful, UT (US)

(73) Assignee: **Progrexion IP, Inc.**, North Salt Lake, UT (US)

(21) Appl. No.: **13/626,785**

(22) Filed: **Sep. 25, 2012**

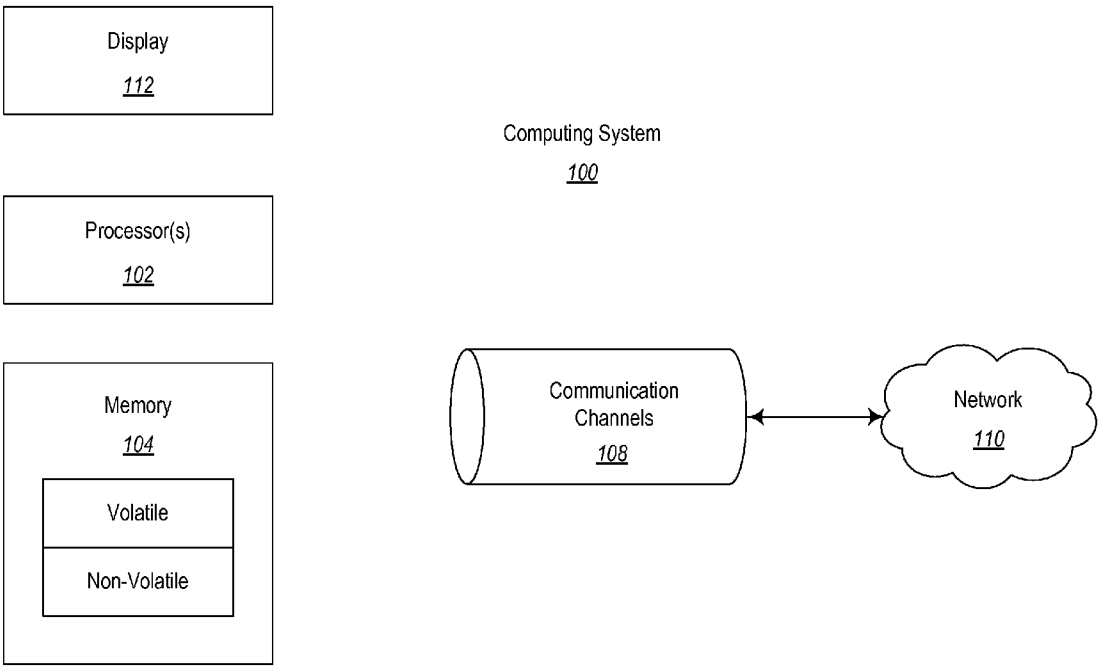
Publication Classification

(51) **Int. Cl.**
G06Q 40/02 (2012.01)

(52) **U.S. Cl.**
USPC **705/38**

(57) **ABSTRACT**

A method for taking appropriate action on a credit report for an individual based on analysis of properties of at least some of the trade lines of the credit report. Upon accessing the credit report, each of at least some of the trade lines in the credit report are processed by 1) identifying one or more properties of the subject trade line, 2) performing one or more removal success rate estimations for similar trade lines having at least one like property compared to the subject trade line, and 3) calculating at least one removability index (e.g., an item removal difficulty index or an item removal speed index) for the subject trade line based on the removal success estimation(s). The calculated removability indices are then aggregated for multiple trade lines, and the course of action for the credit report as a whole is determined based on the removability indices.



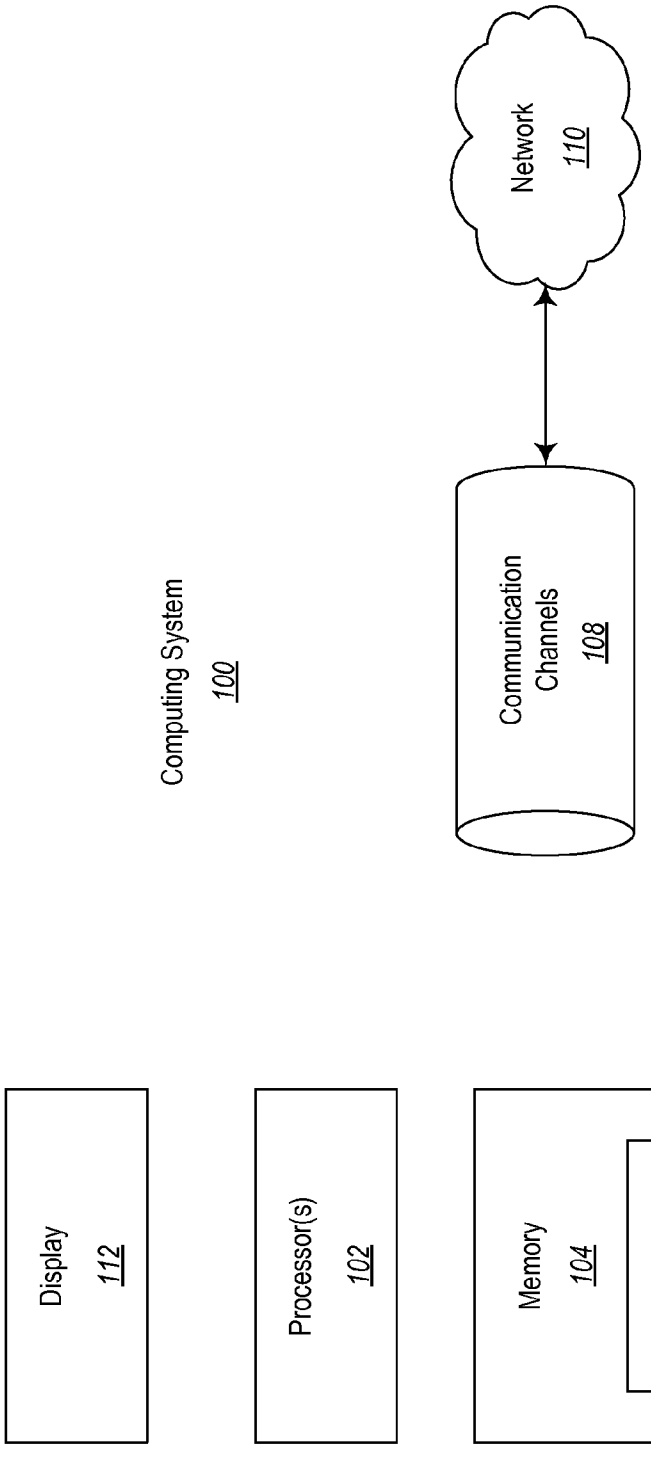

Network
110
Communication Channels
108
Computing System
100
Display
112
Processor(s)
102
Memory
104
Volatile
Non-Volatile

Figure 1

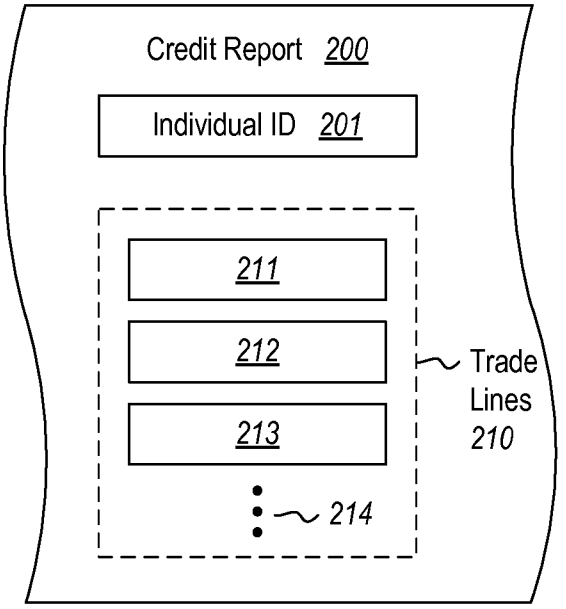

Credit Report 200
Individual ID 201
211
212
213
214
Trade Lines 210

Figure 2

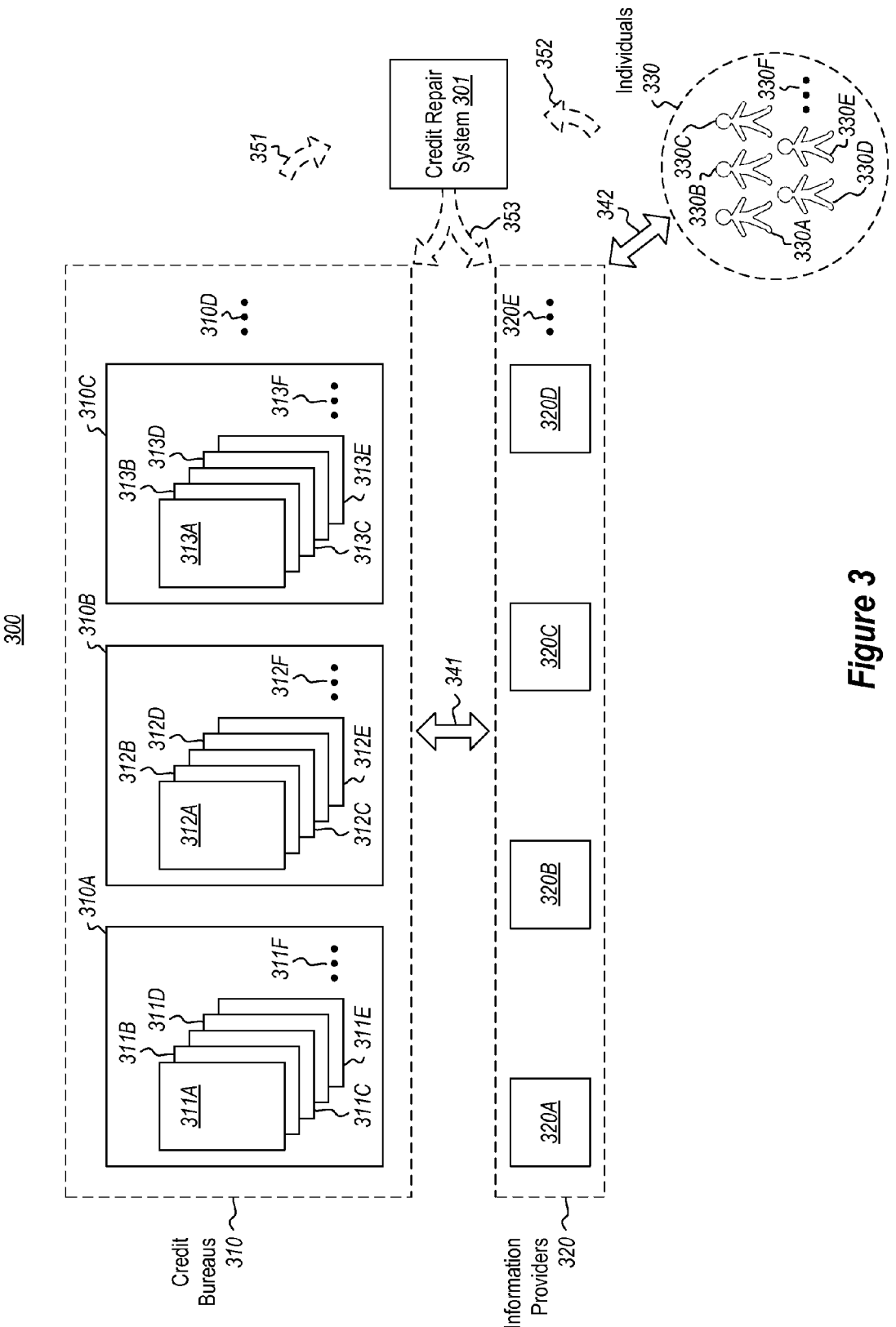

300
Credit Bureaus 310
Information Providers 320
310A
310B
310C
310D
311A
311B
311C
311D
311E
311F
312A
312B
312C
312D
312E
312F
313A
313B
313C
313D
313E
313F
320A
320B
320C
320D
320E
341
342
351
352
353
Credit Repair System 301
Individuals 330
330A
330B
330C
330D
330E
330F

Figure 3

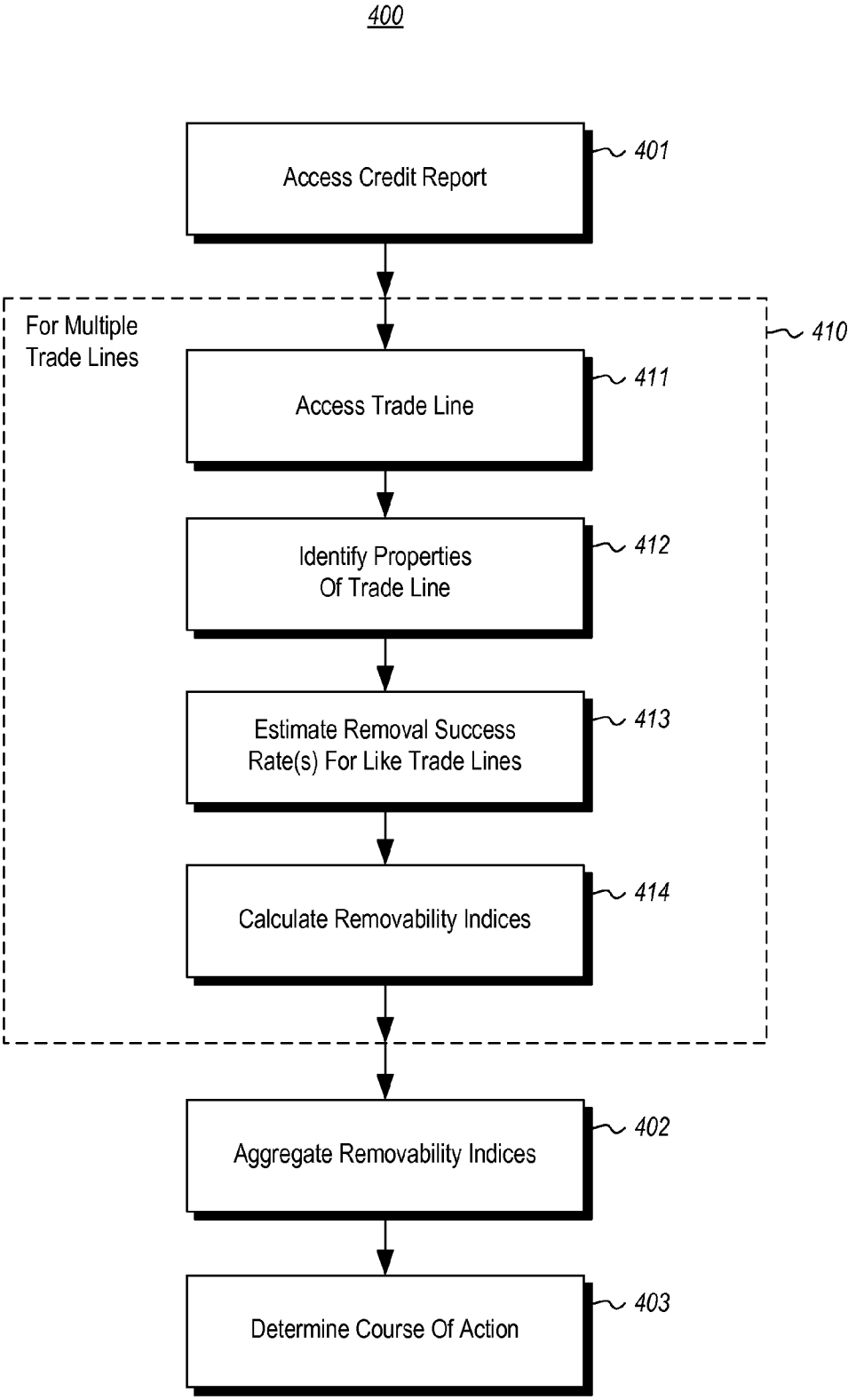

400
Access Credit Report
401
For Multiple Trade Lines
410
Access Trade Line
411
Identify Properties Of Trade Line
412
Estimate Removal Success Rate(s) For Like Trade Lines
413
Calculate Removability Indices
414
Aggregate Removability Indices
402
Determine Course Of Action
403

Figure 4

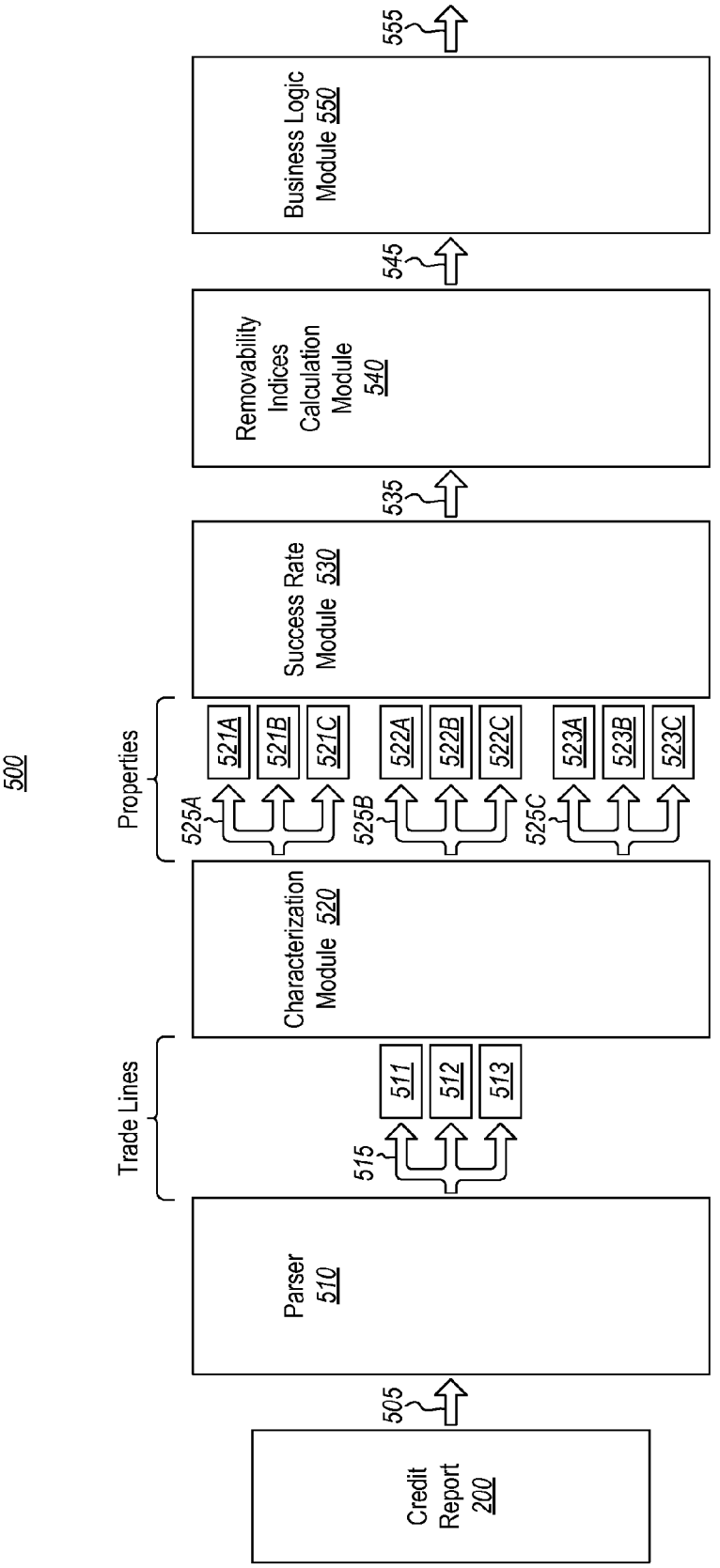

500
Credit Report 200
505
Parser 510
Trade Lines
515
511
512
513
Characterization Module 520
Properties
525A
525B
525C
521A
521B
521C
522A
522B
522C
523A
523B
523C
Success Rate Module 530
535
Removability Indices Calculation Module 540
545
Business Logic Module 550
555

Figure 5

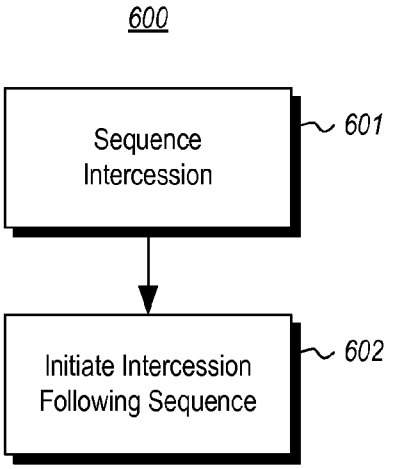


Figure 6

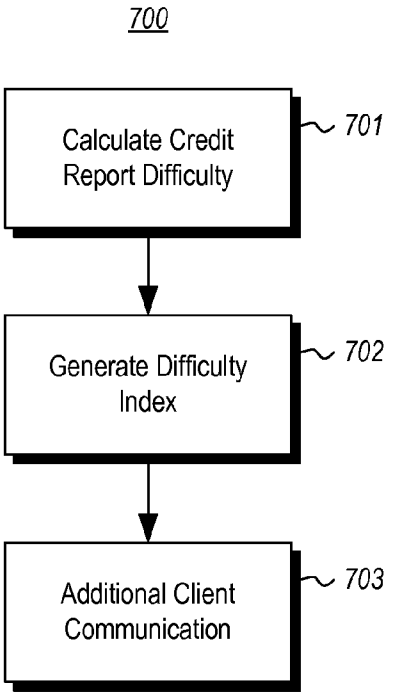


Figure 7

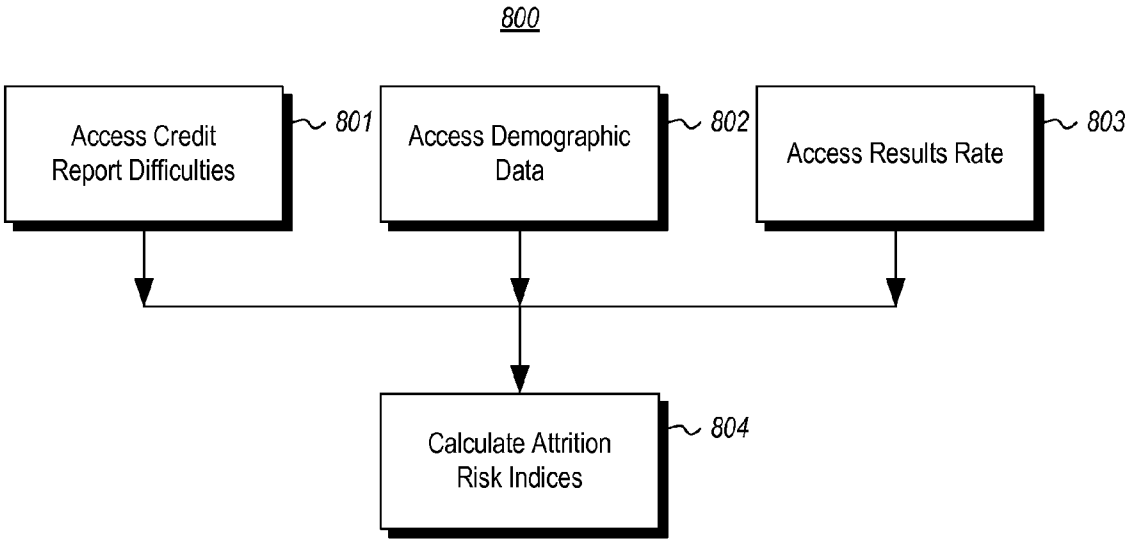

800
Access Credit Report Difficulties
801
Access Demographic Data
802
Access Results Rate
803
Calculate Attrition Risk Indices
804

Figure 8

CREDIT REPAIR BY ANALYSIS OF TRADE LINE PROPERTIES

BACKGROUND

[0001] A credit bureau (also called a Consumer Reporting Agency or CRA) is a company that collects information from various sources about individuals, and aggregates such information into a credit report. Currently, there are three major credit bureaus in the United States including EQUIFAX®, TRANSUNION® and EXPERIAN™.

[0002] The credit reports are relied upon by potential and current creditors of the individual, and other authorized entities, when determining whether to take appropriate action regarding the corresponding individual, such as whether to extend credit and under what terms, whether to lease a property, whether to extend an offer of employment, and so forth. Thus, negative items on an individual's credit report can adversely affect the opportunity available to that individual.

[0003] Often, a credit score is generated based on the credit report, which allows for a quick and rough approximation of the creditworthiness of the individual. One common credit score used in most applications for credit is called a FICO® SCORE®. FICO and FICO SCORE are registered trademarks of Fair Isaac Corporation. However, there are other scores less commonly used and generated by different algorithms using credit report items as input.

[0004] Credit repair services are offered by a number of organizations for the purpose of helping individuals improve their credit scores, thereby improving the opportunities available to the individual. For instance, the credit repair service may impact credit scoring by requesting that credit bureaus demonstrate that an individual's credit report trade lines have been reported fairly and accurately and can be fully substantiated by the associated information providers. For instance, by causing correspondence to be sent to the credit bureaus directly, in the form of an investigative inquiry or perhaps just a dispute regarding a questionable negative item, the credit bureaus may sometimes, but not always, remove that negative item from their credit reports when it is determined that the negative item is either based upon obviously false information, or cannot be readily and fully substantiated, or has not been fairly reported in accordance with applicable consumer protection statutes. Alternatively or in addition, by causing correspondence to be sent to a creditor, the creditor might likewise correspond with the credit bureaus causing the negative item to be removed from affected credit reports. As false, unsubstantiated, or unfairly reported negative items are removed or revised, the individual's credit scores tend to improve.

BRIEF SUMMARY

[0005] At least one embodiment described herein relates a computer-implemented method for taking appropriate action on a credit report for an individual using an analysis of properties of at least some of its constituent trade lines. Upon accessing the credit report, each of at least some of the trade lines in the credit report are processed by 1) identifying one or more properties of the trade line, 2) performing one or more removal success rate estimations for similar trade lines having at least one like property, and 3) calculating at least one removability index (e.g., an item removal difficulty index or an item removal speed index) for the trade line based on the removal success estimation(s). The calculated removability indices are then aggregated, and the course of action for the credit report as a whole is determined based on the removability indices.

[0006] For instance, as one example, the removability indices may be used in order to identify a sequence in which to intercede on the trade lines. Intercession might be accomplished by, for example, dispatching a letter to a creditor or a credit bureau regarding the trade line. The sequencing may also depend on the anticipated impact of having the trade line removed from the credit report.

[0007] The aggregated removability indices may be used to calculate a level of difficulty for improving the credit report, potentially leading to personalized communication with the client. If performed for multiple credit reports for an individual, and factoring in other data such as demographic data, and rate of improvement of credit score, a risk of attrition may be estimated for the individual.

[0008] This Summary is not intended to identify key features or essential features of the claimed subject matter, nor is it intended to be used as an aid in determining the scope of the claimed subject matter.

BRIEF DESCRIPTION OF THE DRAWINGS

[0009] In order to describe the manner in which the above-recited and other advantages and features can be obtained, a more particular description of various embodiments will be rendered by reference to the appended drawings. Understanding that these drawings depict only sample embodiments and are not therefore to be considered to be limiting of the scope of the invention, the embodiments will be described and explained with additional specificity and detail through the use of the accompanying drawings in which:

[0010] FIG. **1** illustrates a computing system in which some embodiments described herein may be employed;

[0011] FIG. **2** abstractly illustrates a credit report data structure which includes multiple trade line data structures representing credit report trade lines;

[0012] FIG. **3** illustrates a credit reporting environment in which credit reports are generated, including multiple credit bureaus, multiple information providers (such as creditors), multiple individuals, and a credit repair system;

[0013] FIG. **4** illustrates a flowchart of a method for determining appropriate action on a credit report using properties of constituent trade lines;

[0014] FIG. **5** illustrates a computer architecture that may be represented in memory of a computing system, such as the computing system of FIG. **1**, in order to perform the method of FIG. **4**;

[0015] FIG. **6** illustrates a flowchart of a method for performing a first course of action including the sequencing of intercession for the trade lines;

[0016] FIG. **7** illustrates a flowchart of a method for performing a second course of action including determining a difficulty of the credit report; and

[0017] FIG. **8** illustrates a flowchart of a method for performing a third course of action including determining an attrition risk for the client.

DETAILED DESCRIPTION

[0018] At least one embodiment described herein relates to a method, such as a computer-implemented method, for taking appropriate action on a credit report for an individual based on analysis of properties of at least some of the trade

lines of the credit report. Upon accessing the credit report, each of at least some of the trade lines in the credit report are processed by 1) identifying one or more properties of the subject trade line, 2) performing one or more removal success rate estimations for similar trade lines having at least one like property compared to the subject trade line, and 3) calculating at least one removability index (e.g., an item removal difficulty index or an item removal speed index) for the subject trade line based on the removal success estimation(s). The calculated removability indices are then aggregated for multiple trade lines, and the course of action for the credit report as a whole is determined based on the removability indices.

[0019] For instance, as one example, the removability indices may be used in order to identify a sequence in which to intercede on the trade lines. Intercession might be accomplished by, for example, dispatching a letter to a creditor or a credit bureau regarding the trade line. The sequencing may also depend on the anticipated impact of having the trade line removed from the credit report.

[0020] The aggregated removability indices may be used to calculate a level of difficulty for improving the credit report. If performed for multiple credit reports for an individual, and factoring in other data such as demographic data, and rate of improvement of credit score, a risk of attrition may be estimated for the individual.

[0021] First, some introductory discussion regarding computing systems will be described with respect to FIG. **1**. Then, a credit report and credit reporting environment will be described with respect to FIGS. **2** and **3**. Then, embodiments of the credit repair system and its operation, in accordance with the principles described herein, will be described with respect to FIGS. **4** through **8**.

[0022] Computing systems are now increasingly taking a wide variety of forms. Computing systems may, for example, be handheld devices, appliances, laptop computers, desktop computers, mainframes, distributed computing systems, or even devices that have not conventionally been considered a computing system. In this description and in the claims, the term "computing system" is defined broadly as including any device or system (or combination thereof) that includes at least one physical and tangible processor, and a physical and tangible memory capable of having thereon computer-executable instructions that may be executed by the processor. The memory may take any form and may depend on the nature and form of the computing system. A computing system may be distributed over a network environment and may include multiple constituent computing systems.

[0023] As illustrated in FIG. **1**, in its most basic configuration, a computing system **100** typically includes at least one processing unit **102** and memory **104**. The memory **104** may be physical system memory, which may be volatile, non-volatile, or some combination of the two. The term "memory" may also be used herein to refer to non-volatile mass storage such as physical storage media. If the computing system is distributed, the processing, memory and/or storage capability may be distributed as well. As used herein, the term "module" or "component" can refer to software objects or routines that execute on the computing system. The different components, modules, engines, and services described herein may be implemented as objects or processes that execute on the computing system (e.g., as separate threads).

[0024] In the description that follows, embodiments are described with reference to acts that are performed by one or more computing systems. If such acts are implemented in software, one or more processors of the associated computing system that performs the act direct the operation of the computing system in response to having executed computer-executable instructions. An example of such an operation involves the manipulation of data. The computer-executable instructions (and the manipulated data) may be stored in the memory **104** of the computing system **100**. Computing system **100** may also contain communication channels **108** that allow the computing system **100** to communicate with other message processors over, for example, network **110**. If interaction with the user is beneficial, the computing system **100** may also include a display **112** and potentially other input/output devices.

[0025] Embodiments described herein may comprise or utilize a special purpose or general-purpose computer including computer hardware, such as, for example, one or more processors and system memory, as discussed in greater detail below. Embodiments described herein also include physical and other computer-readable media for carrying or storing computer-executable instructions and/or data structures. Such computer-readable media can be any available media that can be accessed by a general purpose or special purpose computer system. Computer-readable media that store computer-executable instructions are physical storage media. Computer-readable media that carry computer-executable instructions are transmission media. Thus, by way of example, and not limitation, embodiments of the invention can comprise at least two distinctly different kinds of computer-readable media: computer storage media and transmission media.

[0026] Computer storage media includes RAM, ROM, EEPROM, CD-ROM or other optical disk storage, magnetic disk storage or other magnetic storage devices, or any other medium which can be used to store desired program code means in the form of computer-executable instructions or data structures and which can be accessed by a general purpose or special purpose computer.

[0027] A "network" is defined as one or more data links that enable the transport of electronic data between computer systems and/or modules and/or other electronic devices. When information is transferred or provided over a network or another communications connection (either hardwired, wireless, or a combination of hardwired or wireless) to a computer, the computer properly views the connection as a transmission medium. Transmissions media can include a network and/or data links which can be used to carry or desired program code means in the form of computer-executable instructions or data structures and which can be accessed by a general purpose or special purpose computer. Combinations of the above should also be included within the scope of computer-readable media.

[0028] Further, upon reaching various computer system components, program code means in the form of computer-executable instructions or data structures can be transferred automatically from transmission media to computer storage media (or vice versa). For example, computer-executable instructions or data structures received over a network or data link can be buffered in RAM within a network interface module (e.g., a "NIC"), and then eventually transferred to computer system RAM and/or to less volatile computer storage media at a computer system. Thus, it should be understood that computer storage media can be included in computer system components that also (or even primarily) utilize transmission media.

[0029] Computer-executable instructions comprise, for example, instructions and data which, when executed at a processor, cause a general purpose computer, special purpose computer, or special purpose processing device to perform a certain function or group of functions. The computer executable instructions may be, for example, binaries, intermediate format instructions such as assembly language, or even source code. Although the subject matter has been described in language specific to structural features and/or methodological acts, it is to be understood that the subject matter defined in the appended claims is not necessarily limited to the described features or acts described above. Rather, the described features and acts are disclosed as example forms of implementing the claims.

[0030] Those skilled in the art will appreciate that the invention may be practiced in network computing environments with many types of computer system configurations, including, personal computers, desktop computers, laptop computers, message processors, hand-held devices, multiprocessor systems, microprocessor-based or programmable consumer electronics, network PCs, minicomputers, mainframe computers, mobile telephones, PDAs, pagers, routers, switches, and the like. The invention may also be practiced in distributed system environments where local and remote computer systems, which are linked (either by hardwired data links, wireless data links, or by a combination of hardwired and wireless data links) through a network, both perform tasks. In a distributed system environment, program modules may be located in both local and remote memory storage devices.

[0031] Having described a computing system **100** that may implement features of the embodiments described herein, the principles of the novel computer-assisted credit repair techniques will be now be described.

[0032] FIG. **2** abstractly represents a credit report **200** that includes a number of trade lines **210** (of which trade lines **211**, **212** and **213** are abstractly illustrated) relevant to the creditworthiness of an individual identified in the credit report with an individual identifier **201**. The credit report **200** will be referred to herein as a "credit report for an individual" or a "credit report for the individual". The ellipses **214** represent that there may be any number of trade lines **210** in the credit report **200**, and will depend on how much information has been provided by creditors and other information providers regarding the individual. A "trade line" is defined herein as any credit report entry. Typically, a trade line will correspond to a credit account attributed to the individual, and may include supplemental information such as, for example, the creditor identifier, the balance, and the status.

[0033] FIG. **3** illustrates a credit reporting environment **300** in which credit reports are generated. The environment **300** includes credit bureaus **310**, information providers **320**, individuals **330**, and a credit repair system **301**. The credit bureaus **310** include three credit bureaus **310**A, **310**B and **310**C, although the ellipses **310**D represent flexibility in the number of credit bureaus in the environment. In the United States, there are three primary credit bureaus including EQUIFAX®, TRANSUNION® and EXPERIAN™. However, the principles described herein are not limited to the credit bureaus that operate in a particular region of the world, nor are they limited to currently existing credit bureaus.

[0034] The credit bureaus **310** each maintain a credit report for each of the individuals **330**. For instance, individuals **330** are illustrated as including five individuals **330**A through **330**E. Accordingly, the credit bureau **310**A maintains credit reports **311**A through **311**E corresponding to respective individuals **330**A through **330**E, the credit bureau **310**B maintains credit reports **312**A through **312**E corresponding to respective individuals **330**A through **330**E, and the credit bureau **310**C maintains credit reports **313**A through **313**E corresponding to respective individuals **330**A through **330**E. The ellipses **330**F represent that there may be any number of individuals about whom the credit bureaus maintain a credit report. This flexibility is represented by ellipses **311**F, **312**F and **313**F. Typically, a credit bureau will maintain a credit report regarding each of many millions of individuals. Each credit report is abstractly represented by an instance of the credit report **200** illustrated in FIG. **2**.

[0035] The environment **200** also includes information providers **320**. There are four information providers **320**A through **320**D illustrated, although the ellipses **320**E represent flexibility in this number. Furthermore, for any given individual, the information providers may be different. Information providers are most typically current or prospective creditors of the individual about whom they are providing information. However, other information providers (such as courts or government agencies) might provide information for the credit report.

[0036] Information providers might also consume credit reports corresponding to an individual to whom they may extend credit, lease a property, or extend offers of employment. The potential bi-directional nature of such communication is represented by bi-directional arrow **341**. The direct or indirect interaction between the individuals **330** and the information providers **320** that results in the information providers **320** obtaining reportable information regarding the individuals **330** is represented by bi-directional arrow **342**. Accordingly, through interaction **341** and **342**, credit reports may be generated by credit bureaus **310**.

[0037] The operation of the credit repair system **301** will now be described with respect to FIGS. **4** through **8**. FIG. **4** illustrates a flowchart of a method **400** for determining appropriate action on a credit report using properties of constituent trade lines. In some embodiments, the method **400** may be performed by, for example, the computing system **100** of FIG. **1** implemented in the credit repair system **301** of FIG. **3**, although not required.

[0038] The method **400** begins by accessing a credit report for an individual (act **401**). For instance, referring to FIG. **3**, the credit repair system **301** accesses a credit report (e.g., credit report **311**A) associated with an individual (e.g., individual **330**A). This act might involve accessing the credit report for the individual from multiple credit bureaus. For instance, the credit repair system **301** might access all three credit reports **311**A, **312**A and **313**A from respective credit bureaus associated with a single individual **330**A.

[0039] The accessing of the credit report may be performed by requesting the corresponding credit report from the credit bureau. In response, as represented by arrow **351** in FIG. **3**, the credit bureau responds by dispatching the credit report to the credit repair system **301** as represented by arrow **351** in FIG. **3**. For instance, the credit report might be a physical or electronic copy of the credit report. In some embodiments, the credit bureau and the credit repair system may cooperatively interact to exchange data representative of the credit report in which the data is structured accordance with some negotiated schema. For instance, the credit bureau may provide an eXtensible Markup Language (XML) file representing the

credit report to the credit repair system **301**. As a side note, communications involved in establishing the credit report are represented by solid-lined arrows (e.g., arrows **341** and **342**) in FIG. **3**. However, communications involved in repairing credit are represented by dotted-lined arrows (e.g., arrows **351**, **352** and **353**) in FIG. **3**.

[0040] In some cases, the credit bureau and the credit repair system **301** may not have such an integrated interface. Furthermore, in some cases the credit bureau may not provide even a physical copy of the credit report to the credit repair system **301**. In that case, the individual themselves may request the credit report from the credit bureau. Alternatively, the individual may provide authentication credentials to the credit repair system **301**, allowing the credit repair system **301** to access the credit report on the individual's behalf online. Both of these cases are represented by the arrow **352** in FIG. **3**.

[0041] FIG. **5** illustrates a computer architecture **500** that may be represented in memory of a computing system (such as in the memory **104** of the computing system **100** of FIG. **1**), in order to perform the method **400** of FIG. **4**. For instance, the computer architecture **500** may be present within a computing system in the credit repair service **301** of FIG. **3**. Referring FIG. **5**, the credit report **200** is received by the computer architecture as represented by arrow **505**.

[0042] The various modules **510**, **520**, **530**, **540** and **550** of FIG. **5** may be created in memory by having the computing system accesses computer-executable instructions from memory, and having the computing system executing those computer-executable instructions using one or more digital processors thereby causing the computer architecture **500** of FIG. **5** to be generated and to be operated as described herein. In this description, accessing items "from memory" and providing "to memory" is not to be interpreted as necessitating that "memory" be a single device or type of memory. The memory may be multiple devices, and multiple different types of memory at perhaps different levels of the memory hierarchy all the way from non-volatile storage (locally or remotely located) all the way up to processor registers. Thus, the term "memory" should be interpreted broadly in the description and in the claims.

[0043] Referring to FIG. **4**, the contents of dashed-lined box **410** are then performed for each of at least some of the trade lines within the one or more credit reports accessed in act **401**. If the credit report is provided in physical form, then a human being might type the trade lines from the credit report into a computing system. Referring to FIG. **5**, if the credit report is in electronic format, the parser component may parse the credit report (e.g., credit report **200**) to access multiple trade lines from the credit report **200**. The parser may further generate corresponding trade line data structures **511** through **513** corresponding to trade lines **211** through **213** of the credit report **200**. The number of trade lines extracted by the parser **510** is, however, flexible. The principles described herein do not require that all trade lines be parsed, though it is helpful to parse more.

[0044] If the credit report is an image file, the parser **510** may perform text recognition. If the credit report is in text format, the parser **510** may scan the text to find the boundaries of the trade lines. If the credit report is in a predetermined schema (e.g., in XML format), then the parser **510** may perform XML parsing.

[0045] The trade line data structures are "passed" from the parser to the characterization module **520** as represented by arrow **515**. In this description and in the claims, when a source module of a computer architecture "passes" a data structure to a target module, this means that the source module causes the target module to be able to access the data structure. For instance, one way to do this is to simply provide the data structure to memory at a location that may then be accessed by the target module. Such passing is represented by rightward-facing arrows in FIG. **5**.

[0046] Referring back to FIG. **4**, for each of at least some of the parsed trade lines, the trade line is then accessed (act **411**), and a set of one or more properties of the trade line are identified (act **412**). Examples of properties of trade lines include 1) whether the trade line is an installment (for an installment loan) or revolving (e.g., a revolving line of credit), 2) the severity type of the trade line, 3) a balance range of the trade line, 4) a utilization ratio range of the trade line and 5), a creditor identity for the trade line.

[0047] Examples of severity level values include 30 day, 60 day, 90 day, 120+ day, Charge-off, Collection, Incl in BK, Bankrupcy, Settlement, Repossession, Lien, Judgment, Garnishment, Foreclosure. Examples of balance range values include 0 to 250 dollars, 251 to 500 dollars, 501 to 750 dollars, 751 to 1000 dollars, 1001 to 2500 dollars, 2501 to 5000 dollars, and 5001 dollars and above. Examples of utilization ratio range values include 0 to 10 percent, 10.1 to 30 percent, 30.1 to 50 percent, 50.1 to 70 percent, 70.1 to 80 percent, 80.1 to 90 percent, and 90.1 to 100 percent. Examples of creditor identifier values are names of specific banks, utility companies, collection companies, retail stores, credit card providers, and so forth.

[0048] If the method **400** is performed by the computing system **100** in the credit repair system **301**, a trade line characterization module **520** identifies a set of one or more properties of the subject trade line (act **412**). For instance, the trade line characterization module **520** accesses the digital representation of the trade line **511**, identifies a set of one of more properties of the trade line using the accessed trade line digital representation **511**, and provides a digital representation **521**A, **521**B and **521**C of the set of one or more properties into memory as represented by arrow **525**A. Furthermore, the trade line characterization module **520** accesses the digital representation of the trade line **512**, identifies a set of one of more properties of the trade line using the accessed trade line digital representation **512**, and provides a digital representation **522**A, **522**B and **522**C of the set of one or more properties into memory as represented by arrow **525**B. Also, the trade line characterization module **520** accesses the digital representation of the trade line **513**, identifies a set of one of more properties of the trade line using the accessed trade line digital representation **513**, and provides a digital representation **523**A, **523**B and **523**C of the set of one or more properties into memory as represented by arrow **525**C.

[0049] Of course, while in this example each trade line is identified as having three properties, the trade line characterization module **520** may identify any number of properties from the corresponding trade line. For instance, the trade line characterization module **520** might identify 1) the severity level, 2) installment versus revolving, 3) balance range, and 4) creditor name.

[0050] Referring back to FIG. **4**, one or more removal success rate estimations are then made for like trade likes that have all or a subset of the one or more properties of the subject trade line. For instance, this estimation may be made based on historical success rates for trade lines having one of the prop-

erties of the subject trade line. Suppose, for example, that a particular trade line (also referred to as the "subject trade line") being evaluated has the following four property values:

[0051] 1) Severity Type: Collection

[0052] 2) Installment versus Revolving: Revolving

[0053] 3) Balance Level: 501 to 750 dollars

[0054] 4) Creditor: Fiction Bank, Inc.

[0055] In this case, the act **413** might involve calculating as few as one, and as many as four removal success rate estimations. The case of calculating four removal success rate estimations will first be described.

[0056] In the case of four removal success rate estimations, to calculate a first remove success rate estimation, the historical performance of the trade lines that also have the first property value "Collection" of the first property "Severity Type" is determined For instance, suppose that taking all the trade lines having this Severity Type of value Collections, there has been a success rate (referred to as SRA in equation 1 for Success Rate Actual) in response to a single intercession (e.g., the sending of a targeted letter to the creditor or credit agency) of 21%. This value may be compared to the average success rate (referred to as SRE in equation 1 for Success Rate Expected) for a single intercession for all trade lines of 20%. Thus, if a trade line is a Collection trade line, there is a slightly better chance than random of having an intercession be successful. In one embodiment, a removal success rate estimation might be defined by the following Equation 1, where RSRE is the removal success rate estimation.

$$RSRE=N*((SRE-SRA)/SRE) \quad (1)$$

[0057] Suppose that N is 1000 (but may be arbitrary), this would result in the first RSRE value (corresponding to "Collection" severity type) being 1000*((0.20−0.21)/0.2), which reduces to 1000*(−0.01/0.2), which equals −50. Thus $RSRE_1$ equals −50.

[0058] This same Equation 1 may be used again for the second removal success rate estimation ($RSRE_2$), which is determined by evaluating historical removal success rate estimate for all trade lines in which the installment versus revolving value matches that of the subject trade line being evaluated. In this case, that property value is Revolving. For instance, suppose that taking all the trade lines of a Revolving type, there has been a single intercession success rate of 12%. This value may be compared to the average single intercession success rate for all trade lines of 20%. Thus, if a trade line is a Revolving type, there is a much less chance than random of having an intercession be successful. Applying Equation 1 for $RSRE_2$ should then yield 1000*(0.2−0.12/0.2), which equals 400. Thus, we see that positive values for RSRE result in an estimation that these types of trade lines are less successful than average after a single intercession, whereas negative values for RSRE result in an estimation that these types of trade lines are more successful than average after a single intercession.

[0059] Equation 1 may be used again for the third removal success rate estimation ($RSRE_3$), which is determined by evaluating historical removal success rates for all trade lines in which the balance level value matches that of the trade line being evaluated (in this case, 501 to 750 dollars). For instance, suppose that taking all the trade lines of a balance level of 501 to 750 dollars, there has been a single intercession success rate of 25%. This value may be compared to the average single intercession success rate for all trade lines of 20%. Thus, if a trade line is a Revolving type, there is a greater chance than random of having an intercession be successful. Applying Equation 1 for $RSRE_3$ should then yield 1000*(0.2−0.25/0.2), which equals −250.

[0060] Equation 1 may finally be used for the last removal success rate estimation ($RSRE_4$), which is determined by evaluating historical removal success rates for all trade lines in which the creditor identifier value matches that of the trade line being evaluated (in this case, Fictional Bank., Inc.). Needless to say, "Fictional Bank, Inc." is not intended to refer to any specific bank, but is just a fabricated name used simply for the purpose of this description. For instance, suppose that taking all the trade lines for the Fictional Bank, Inc., there has been a single intercession success rate of 20%. This value may be compared to the average single intercession success rate for all trade lines of 20%. Thus, if a trade line corresponds to Fictional Bank, Inc., there is just as much of a chance of a successful intercession as random. Applying Equation 1 for $RSRE_4$ should then yield 1000*(0.2−0.20/0.2), which equals zero.

[0061] Thus, in this case, where a removal success rate estimate ($RSRE_1$, $RSRE_2$, $RSRE_3$ and $RSRE_4$) was calculated for each of the four properties of the subject trade line, there are likewise four removal success rate estimates. In another embodiment, there is but one removal success rate estimate. In yet other embodiments, there is some number of estimates between one and the number of properties in the subject property. This description will return to these alternative embodiments further below. But for now, this description will progress further through FIG. **4**.

[0062] Referring back to FIG. **4**, the credit report system then calculates at least one removability index for the trade line based on the at least one removal success estimation (act **414**). For instance, in the case of there being one removal success rate estimation RSRE for every property of the trade line, the following values were derived in the example:

[0063] $RSRE_1$=−50;

[0064] $RSRE_2$=400;

[0065] $RSRE_3$=−250; and

[0066] $RSRE_4$=0.

[0067] The calculation of the removability index might be obtained by using these four factors. For instance, the four RSRE values might be simply summed, which would lead to a removability index of positive 100 (e.g., −50+400−250+0). Of course, other more complex functions might also be used. The removability index might be referred to as an "item difficulty valence" or "IDV" herein.

[0068] In some embodiments, as an alternative or in addition to calculating the IDV, another removability index may be calculated. For instance, such might be referred to as an "item speed valence" or "ISV". In this case, different RSRE values might be calculated for each of the four properties based on an average speed in which like trade lines are resolved, when they are resolved. A similar calculation on these other RSRE values may be used to determine in ISV for the trade line. These removability indices are, however, just examples. Any removability index for a trade line that provides some clue as to the likelihood and/or speed in being able to remove the trade line from the credit report will suffice consistent with the broader principles described herein.

[0069] In this example, four RSRE values were used to calculate a single IDV value for a trade line. In an alternative embodiment, a single RSRE value might have been calculated. For instance, consider the same example in which there is a trade line for a revolving line of credit from Fiction Bank,

Inc. that was in collection, and having a balance in the range of 501 to 750 dollars. If the historical data was refined enough, there might be enough of a sample size to be able to determine historical success rates for exactly those types of trade lines that have all four properties being the same. For instance, if the overall success rate was 18.5 percent for exactly that type of trade line, Equation 1 might be applied to determine a single RSRE value ($RSRE_{1234}$) of 1000*((0.2−0.185)/0.2), which equals 75. In this case, the calculation of the IDV value (in act **414**) might be trivial, and just made equal to the RSRE value. An ISV value may be calculated in a similar way if there is sufficient historical speed data regarding trade lines of that exact type.

[0070] Accordingly, two examples have been described, a first in which four RSRE values were determined ($RSRE_1$, $RSRE_2$, $RSRE_3$ and $RSRE_4$) and the removability index calculated based on those four factors, and a second in which a single RSRE value was determined ($RSRE_{1234}$) and the removability index calculated based on that factor. However, in hybrid approaches, there might be only two RSRE values calculated, one based on one property (e.g., $RSRE_1$) and one based on a combination of the other properties (e.g., $RSRE_{234}$). All other permutations are contemplated to be within the scope of the principles described herein. Also, all manner of calculation of the RSRE values are also contemplated to be within the scope of the principles described herein.

[0071] In any case, if the calculation of the removability index is performed by a computing system **100** in the context of the credit repair system **301** of FIG. **3**, the calculation may be performed by, for example, the removability indices calculation module **540**, which receives the removal success estimations as represented by arrow **535**. For instance, the removability indices calculation module **540** may access the removal success estimations from memory, calculate the removability indices and digitally represent such as a removability index data structure, and provide the digital representation of the removability indices into memory as represented by arrow **545**.

[0072] The contents of box **410** may be performed for multiple trade lines as previously mentioned. Accordingly, one or more removability indices for each of multiple trade lines may be aggregated (act **402**). Then, a course of action may then be determined based on the calculated removability indices (act **403**). For instance, if performed by a computer system **100** in the credit repair system **301**, a business logic module **550** accesses the digital representations of the removability indices from memory as represented by arrow **545**, calculates an appropriate action based on this input, which the appropriate action represented by arrow **555**.

[0073] FIG. **6** illustrates a flowchart of a method **600** for accomplishing a first course of action. In this embodiment, the course of action is that a sequence of intercession of the trade lines is embarked upon. An example of an intercession with respect to trade line is the dispatching of a targeted letter regarding the trade line to the corresponding creditor or to the credit bureau. This dispatching is represented by the arrow **353** in FIG. **3**. First, the method **600** includes sequencing initiation of intercession associated with trade lines corresponding to the calculated removability indices at least in part based on the calculated removability indices (act **601**). Client preferences may be used to perform this sequencing, in addition to consulting the calculated removability indices. Easier intercessions that result in greater impact on credit score might, for example, be targeted for earlier action to that the client can experience more rapid early improvement in the credit score. Such may help the client realize the effectiveness of the credit repair service **301**.

[0074] Once the sequence is generated, intercession may be initiated according to the sequence (act **602**). For instance, when it is time to initiate intercession associated with a trade line, a physical letter relating to the trade line is mailed to a creditor associated with the trade line, or a credit bureau associated with the credit report. However, the principles described herein are not limited to any particular type of intercession mechanism. Other communication mechanisms such as in person, telephonic, or electronic may also be used to intercede for the client for a given trade line.

[0075] In the embodiments described above, the statistics associated with historical success rates were evaluated based on actual empirical success rates based on trade lines having similar properties to the subject trade line. However, the intercession methodology was left generic in this analysis. However, the statistical analysis may be further refined by evaluating historical success rates associated with different intercession methodology. For instance, one intercession methodology might be to send a letter of a first type to a creditor, whereas another methodology might be to send a letter of a second type to the creditor, and yet a third methodology might be to send a letter of a third type to the credit bureau. Refined estimates of success may thus be determined based not only on the historical success rates of like trade lines, but alternatively or addition, may be based upon different intercession methodologies. Thus, in addition to choosing a sequencing of intercession, the intercession methodology for each trade line may also be determined

[0076] FIG. **7** illustrates a flowchart of a method **700** corresponding to a second course of action. In this second course of action, a relative difficulty in improving the credit report is calculated based on the aggregated removability indices (act **701**). The method **700** generates an index of difficulty for the credit report (**702**). For instance, this difficulty index may be proportional to the sum of the removability indices of the various trade lines in the credit report. The method **700** then involves performing additional client communications based on the calculated difficulty in improving the credit report (act **703**). For instance, telephonic, electronic or postal communications may be dispatched to the client, particularly if the credit report is anticipated to be a difficult case for credit repair.

[0077] FIG. **8** illustrates a flowchart of a method **800** corresponding to a third course of action associated with estimating a risk of attrition of a client requesting improvement of a credit report of the individual. In this method **800**, a calculated difficulty in improving the credit report is accessed (act **801**). For instance, the difficulty index calculated in act **702** of method **700** may be accessed. As the credit repair service **301** may access various iterations of the credit report, the difficulty index associated with prior iterations of the credit report may also be accessed (also act **801**). Also, demographics of the client may be accessed (act **802**), in addition to a results rate in improving the credit report of the individual (act **803**). Based on these input factors, a risk of attribution associated with the client may be calculated (act **804**). Such calculation may, for example, be based on historical data regarding attrition of prior clients.

[0078] Accordingly, the principles described herein provide an advanced mechanism for evaluating credit repair

techniques. The present invention may be embodied in other specific forms without departing from its spirit or essential characteristics. The described embodiments are to be considered in all respects only as illustrative and not restrictive. The scope of the invention is, therefore, indicated by the appended claims rather than by the foregoing description. All changes which come within the meaning and range of equivalency of the claims are to be embraced within their scope.

1-20. (canceled)

21. A method for sequentially dispatching credit report intercession letter for a credit report, the method comprising:

accessing a credit report for an individual;

for each of at least some of the plurality of trade lines in the credit report, performing the following:

identifying a set of one or more properties of the trade line;

performing at least one removal success rate estimation for trade lines having all or a subset of the set of one or more properties; and

calculating at least one removability index for the trade line based on the at least one removal success estimation, wherein each of the removability index includes at least one of a removal difficulty index representing a relative estimated difficulty in removing the trade line, and a removal speed index representing a relative estimated speed in removing the trade line;

sequencing initiation of intercession associated with trade lines corresponding to the calculated removability indices at least in part based on the at least one calculated removability index; and

performing initiation of intercession in accordance with the sequence, wherein when it is time to initiate intercession associated with a trade line, a physical letter relating to the trade line is mailed to a creditor associated with the trade line, or a credit bureau associated with the credit report.

22. The method in accordance with claim **21**, wherein the set of one or more properties of the trade line comprises at least one of a severity type of the trade line, whether the trade line is installment or revolving, a balance range, a utilization ratio range, and a creditor identity.

23. A computer-implemented method comprising:

an act of a computing system accessing computer-executable instructions, and executing those computer-executable instructions using one or more digital processors thereby causing the following to be performed for each of at least some of a plurality of trade lines in a credit report:

an act of a trade line characterization module accessing a digital representation of the trade line, identifying a set of one or more properties of the trade line using the accessed digital representation of the trade line, and providing a digital representation of the set of one or more properties;

an act of a removal success rate module referencing the digital representation of the set of one or more properties to perform at least one removal success rate estimation for trade lines having all or a subset of the set of one or more properties, formulating a digital representation of each removal success rate estimation, and providing the digital representation of each of the at least one removal success rate estimation; and

an act of a removability index calculation module referencing the digital representation of the at least one removal success rate estimation to calculate at least one removability index for the trade line, formulating a digital representation of each calculated removability index, and providing the digital representation of each of the at least one removability index;

an act of a computing system accessing computer-executable instructions, and executing those computer-executable instructions using one or more digital processors thereby causing a business logic module to reference digital representations of removability indices corresponding to trade lines of the credit report to determine a course of action for the credit report of the individual based on the digital representation of the calculated removability indices.

24. The method in accordance with claim **23**, wherein the set of one or more properties of at least one of the trade lines having a digital representation accessed by the trade line characterization module comprises a severity type of the trade line.

25. The method in accordance with claim **23**, wherein the set of one or more properties of at least one of the trade lines having a digital representation accessed by the trade line characterization module comprises whether the trade line is installment or revolving.

26. The method in accordance with claim **23**, wherein the set of one or more properties of at least one of the trade lines having a digital representation accessed by the trade line characterization module comprises a balance range.

27. The method in accordance with claim **23**, wherein the set of one or more properties of at least one of the trade lines having a digital representation accessed by the trade line characterization module comprises a creditor identity.

28. The method in accordance with claim **23**, wherein at least one of the removal success rate estimations having a digital representation formed by the removal success rate module comprises:

a historical success rate for trade lines for trade lines having a first property of the set of one or more properties of the trade line.

29. The method in accordance with claim **28**, wherein historical success rate is a first historical success rate, the at least one of the removal success rate estimations having the digital representation formed by the removal success rate module further comprising:

a second historical success rate for trade lines having a second property of the set of one or more properties of the trade line.

30. The method in accordance with claim **28**, wherein historical success rate is a first historical success rate, the at least one of the removal success rate estimations having the digital representation formed by the removal success rate module further comprising:

a second historical success rate for trade lines having at least a second property and a third property of the set of one or more properties of the trade line.

31. The method in accordance with claim **23**, wherein the at least one removal success rate comprises a single historical success rate for trade lines having all of the set of one or more properties of the trade line.

32. The method in accordance with claim **23**, wherein the determined course of action includes sequencing initiation of intercession associated with trade lines corresponding to the

calculated removability indices at least in part based on the calculated removability indices.

33. The method in accordance with claim **32**, wherein the sequencing intercession is also performed at least based in part on client preference.

34. The method in accordance with claim **23**, wherein the determined course of action is calculating a relative difficulty in improving the credit report based on the aggregated plurality of removability indices.

35. The method in accordance with claim **34**, wherein the determined course of action is also estimating a risk of attrition of a client requesting improvement of a credit report of the individual, the estimated risk of attrition at least based on the calculated relative difficulty in improving the credit report, as well as calculated relative difficulty in improving previous instances of the credit report of the individual.

36. The method in accordance with claim **34**, further comprising performing additional client communications based on the calculated difficulty in improving the credit report.

37. The method in accordance with claim **23**, wherein the determined course of action is estimating a risk of attrition of a client requesting improvement of a credit report of the individual.

38. The method in accordance with claim **37**, wherein estimating the risk of attrition of the client is further based on demographic client demographics.

39. The method in accordance with claim **37**, wherein estimating the risk of attrition of the client is further based on a results rate in improving the credit report.

40. A computer program product comprising one or more computer-readable storage media having thereon computer-executable instructions that are structured such that, when executed by one or more physical processors of the computing system, cause the computing system to instantiate and/or operate the following:

a trade line characterization module configured to 1) access a digital representation of a trade line of at least some of a plurality of trade lines, and 2) identify a set of one or more properties of each accessed trade line using the accessed digital representation of the trade line;

a removal success rate module configured to 1) reference a digital representation of the set of one or more properties identified by the trade line characterization module, 2) perform at least one removal success rate estimation for trade lines having all or a subset of the set of one or more properties, and 3) formulate a digital representation of each removal success rate estimation; and

a removability index calculation module configured to 1) reference the digital representation of the at least one removal success rate estimation formulated by the removal success rate module, 2) calculate at least one removability index for the trade line based on the referenced at least one removal success rate estimation, and 3) formulate a digital representation of each calculated removability index; and

a business logic module configured to 1) reference digital representations of removability indices corresponding to trade lines of the credit report and formulated by the removability index calculation module, and 2) determine a course of action for the credit report of the individual based on the digital representation of the calculated removability indices provided by the removability index calculation module.

41. The computer program product in accordance with claim **40**, wherein the set of one or more properties of the trade line comprises a creditor identity.

42. The computer program product in accordance with claim **40**, wherein the at least one removal success rate estimation comprises:

a historical success rate for trade lines for trade lines having a first property of the set of one or more properties of the trade line.

43. The computer program product in accordance with claim **40**, wherein the at least one removability index comprises a removal difficulty index representing a relative estimated difficulty in removing the trade line.

44. The computer program product in accordance with claim **40**, wherein the at least one removability index also comprises a removal speed index representing a relative estimated speed in removing the trade line.

45. The computer program product in accordance with claim **40**, wherein the determined course of action includes sequencing initiation of intercession associated with trade lines corresponding to the calculated removability indices at least in part based on the calculated removability indices.

46. The method in accordance with claim **21**, wherein the at least one removability index comprises a removal difficulty index representing a relative estimated difficulty in removing the trade line.

47. The method in accordance with claim **21**, wherein the at least one removability index also comprises a removal speed index representing a relative estimated speed in removing the trade line.

48. The method in accordance with claim **21**, further comprising:

initiating intercession in accordance with the sequencing.

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