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(54) Title: DEVICE, SYSTEM, AND METHOD OF PROTECTING BRAND NAMES AND DOMAIN NAMES

(57) Abstract: A computerized method of protecting a brand name of a brand owner, includes: (a) crawling a global communication network to identify and collect data about web-sites that possibly abuse the brand name; (b) for each web-site that possibly abuses the brand name, analyzing whether or not the web-site abuses the brand name by analyzing at least one of: (i) content of the web-site; and (ii) data about an owner of the web-site. The method further includes: for each web-site that possibly abuses the brand name, (A) generating an investment score indicating an estimated level of investment that was invested in development of the web-site; and (B) generating a damage score indicating a level of damage that the web-site is estimated to produce to the brand name.

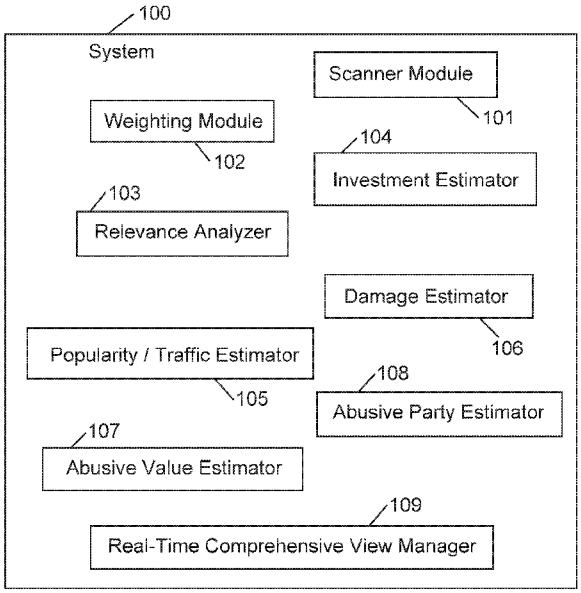

Fig. 1

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DEVICE, SYSTEM, AND METHOD OF PROTECTING BRAND NAMES AND DOMAIN NAMES

CROSS-REFERENCE TO RELATED APPLICATIONS

[001] This application claims priority and benefit from United States provisional patent application number 61/810,742 filed on April 11, 2013, which is hereby incorporated by reference in its entirety.

FIELD OF THE INVENTION

[002] The present invention relates to the field of brand names and domain names.

BACKGROUND

[003] Millions of users utilize the Internet every day, in order to read or otherwise consume web content. For example, a user may utilize a personal computer, a laptop computer, a smartphone or a tablet, typically running a browser, in order to read online news, watch online videos, interact with other users through social networks, play online games, or the like.

[004] Many companies and business entities invest large amounts of money in order to produce and maintain high-quality websites. Such websites may allow users to find information about products and services, to read news about products and services, to perform online purchases of products and services, or the like.

SUMMARY

[005] The present invention may comprise, for example, devices, systems, and methods for protecting brand names and domain names.

[006] The present invention may include a computerized or automated method of protecting a brand name of a brand owner. The method may comprise: (a) crawling a global communication network to identify and collect data about web-sites that possibly abuse the brand name; (b) for each web-site that possibly abuses the brand name, analyzing whether or not the web-site abuses the brand name by analyzing at least one of: (i) content of said web-site; and (ii) data about an owner of said web-site.

[007] The method may comprise: for each web-site that possibly abuses the brand name, generating an investment score indicating an estimated level of investment that was invested in development of said website .

[008] The method may comprise: for each web-site that possibly abuses the brand name, generating a damage score indicating a level of damage that said web-site is estimated to produce to said brand name.

[009] The method may comprise: for each domain that possibly abuses the web-site, generating a popularity score indicating a level of popularity of said web-site among users of the global communication network.

[0010] The method may comprise: for each domain that possibly abuses the brand name, generating a relevance score indicating a level of relevance of said domain to said brand.

[0011] The method may comprise: for each web-site that possibly abuses the brand name, generating an aggregated risk score based on, at least, one or more of: said investment score, said popularity score, said damage score, and said relevance score.

[0012] The method may comprise: identifying a common pattern among multiple web-sites that are determined, by the computerized method, to be abusing the brand name.

[0013] In some embodiments, identifying the common pattern among the multiple web-sites is performed based on at least one of: identifying common domain ownership for said multiple web-sites; identifying common domain registrar for said multiple web-sites; identifying common DNS server for said multiple web-sites; identifying common Internet Protocol (IP) address for said multiple web-sites; identifying common content for said multiple web-sites; identifying common website use type for said multiple domains; identifying that multiple Internet Protocol (IP) addresses of said multiple web-sites belong to a same country; identifying that said multiple web-sites have a same country code Top-Level Domain (ccTLD); identifying that WHOIS records of said multiple web-sites share at least one same contact detail.

[0014] The method may comprise: identifying a batch of multiple web-sites, that are owned by different entities and are determined by the computerized method to be abusing the brand name; automatically generating drafts of cease-and-desist notifications directed to said entities; upon approval of the brand owner, sending out said cease-and-desist notifications to said entities.

[0015] The method may comprise: for a particular web-site that is determined by the computerized method to be abusing the brand name: automatically analyzing at least (i) content of said web-site, and (ii) domain registration data of said web-site; based on

said analyzing, automatically presenting to the brand owner at least one option selected from: (a) to automatically send a cease-and-desist notification to an owner of said particular web-site, (b) to automatically start a negotiation process for purchasing said particular web-site, (c) to automatically send a take-down notice to a hosting service of said web-site.

[0016] The method may comprise: generating a list of multiple web-sites that are determined by the computerized method to be abusing said brand name; presenting to the brand owner said list of multiple web-sites.

[0017] The method may comprise: sub-grouping web-sites in said list, based on Top-Level Domain (TLD) of said web-sites.

[0018] The method may comprise: sub-grouping web-sites in said list, based on country code Top-Level Domain (ccTLD) of said web-sites.

[0019] The method may comprise: sub-grouping domains in said list, based on a level of aggregated risk to the brand name.

[0020] The method may comprise: based on keywords entered by the brand owner, analyzing crawled data and identifying web-sites that abuse the brand name; wherein the keywords entered by the brand owner are used for generating a relevance score for each one of said web-sites.

[0021] The method may comprise: based on names of one or more competitors, that are entered by the brand owner, analyzing crawled data and identifying web-sites that abuse the brand name.

[0022] The method may comprise: based on a use type of a possibly-abusing web-site, analyzing crawled data and determining whether or not the possibly-abusing web-site abuses the brand name.

[0023] The method may comprise: determining that a possibly-abusing web-site is used for domain parking; based on said determining, generating a determination whether or not the possibly-abusing domain abuses the brand name.

[0024] The method may comprise: determining that a possibly-abusing web-site is used for pay-per-click advertisements; based on said determining, generating a determination that the possibly-abusing web-site abuses the brand name.

[0025] The method may comprise: determining that a possibly-abusing web-site is used for redirecting Internet traffic to a website associated with a competitor of the brand owner; based on said determining, generating a determination that the possibly-abusing web-site abuses the brand name.

[0026] The method may comprise: determining that a possibly-abusing web-site is used for electronic commerce of counterfeit merchandise; based on said determining, generating a determination that the possibly-abusing web-site abuses the brand name.

[0027] The method may comprise: generating a determination that a possibly-abusing web-site abuses the brand name, based on an analysis that takes into account at least one of: (i) a current content of said possibly-abusing web-site; (ii) a past content of said possibly-abusing web-site, which is different from said current content.

[0028] The method may comprise: generating a determination that a possibly-abusing web-site abuses the brand name, based on an analysis that takes into account at least one of: (i) a current type of use of said possibly-abusing web-site; (ii) a past type of use of said possibly-abusing web-site, which is different from said current type of use.

[0029] The method may comprise: determining that a possibly-abusing web-site appears in a pre-defined white-list of web-sites that are authorized by the brand owner to mention the brand name; based on said determining, generating a determination that the possibly-abusing web-site does not abuse the brand name.

[0030] The method may comprise: determining that a possibly-abusing web-site is owned by an authorized affiliate of the brand owner; based on said determining, and based on other estimated risk factors associated with said web-site, generating a determination whether or not the possibly-abusing web-site is abusing the brand name.

[0031] The method may comprise: determining that a possibly-abusing web-site is owned by an authorized affiliate of the brand owner, based on a unique code portion that is found embedded within a source code served from said web-site, wherein the unique code portion is unique per authorized affiliate of the brand owner.

[0032] The method may comprise: determining that a possibly-abusing web-site is owned by an authorized affiliate of the brand owner, based on a unique code portion that is found embedded within a source code served from said web-site, wherein the unique code portion is unique per website of authorized affiliate of the brand owner.

[0033] The method may comprise: determining that a web-site that abuses the brand name, performs at least one of: (a) sells counterfeit merchandise; (b) directs users to a website of a competitor of the brand owner; in response to said determining, increasing the damage score for said web-site.

[0034] The method may comprise: analyzing at least one of: (i) content of a list of domains that are owned by the brand owner, (ii) Internet traffic to said list of domains that are owned by the brand owner; based on the analyzing, identifying a particular domain on said list, that

is under-monetized; generating a notification to the brand owner to perform self-monetization of said particular domain.

[0035] The method may comprise: collecting domain registration data for a batch of domains that are owned by the brand owner; analyzing the domain registration data for said batch of domains, to determine at least one domain having registration details that are incorrect; generating a notification to the brand owner, indicating that said at least one domain has registration details that require correction.

[0036] The method may comprise: automatically correcting domain registration data, for the at least one domain that has incorrect domain registration details, based on a default profile of registration data pre-defined by said brand owner.

[0037] The method may comprise: collecting domain registration data for a batch of domains that are owned by the brand owner; analyzing the domain registration data for said batch of domains, to determine upcoming expiration dates of said domains; based on the analyzing, generating notifications to the brand owner with regard to domain renewals, grouped into (i) a first group of urgent domain renewals, and (ii) a second group of non-urgent domain renewals.

[0038] The method may comprise: performing a domain availability analysis that takes into account at least one of: (i) the brand name; (ii) one or more user-provided keywords that are related to the brand name; (iii) one or more system-generated keywords that are related to the brand name; (iv) one or more countries-of-interest; (v) one or more global Top-Level Domains (gTLDs) of interest; based on the domain availability analysis, performing a domain opportunity analysis to determine a particular domain name that is (A) available for registration, and (B) is relevant to the brand name; generating a notification that proposes to the brand owner to register said particular domain.

[0039] The method may comprise: based on the domain opportunity analysis, performing generating a list of multiple domains that are (a) available for registration, and (b) are relevant to the brand name; ranking said list of multiple domains by using a prioritizing algorithm that takes into account at least one of: (A) system-generated keywords; (B) user-provided keywords; (C) countries-of-interest; (D) global TLD of interest; (E) semantic analysis of the brand name; (F) common typos; (G) common linguistic mutations.

[0040] The method may comprise: generating a mutation of said brand name by introducing a typographical error to said brand name; generating a candidate domain by adding a Top Level Domain (TLD) suffix to the mutation of the brand name; based on domain registrar data, checking whether the candidate domain is registered to an entity other than the brand

owner; if the candidate domain is registered to an entity other than the brand owner, then, (i) analyzing a use of a website served from said candidate domain, and (ii) based on the analyzing, determining whether the candidate domain is abusing the brand name.

[0041] The method may comprise: generating a mutation of one or more keywords that are related to said brand name, by introducing a typographical error to said one or more keywords; generating a candidate domain by adding a Top Level Domain (TLD) suffix to the mutation, wherein the candidate domain comprises said brand name and said mutation of one or more keywords; based on domain registrar data, checking whether the candidate domain is registered to an entity other than the brand owner; if the candidate domain is registered to an entity other than the brand owner, then, (i) analyzing a use of a website served from said candidate domain, and (ii) based on the analyzing, determining whether the candidate domain is abusing the brand name.

[0042] The method may comprise: determining one or more keywords, that are related to the brand name; performing a search engine query that comprises said one or more keywords; selecting a web-site that appears in search results of said search engine query; analyzing at least one of: (i) content of said web-site, (ii) Internet traffic to said web-site, to determine whether or not said website abuses the brand name.

[0043] The method may comprise: determining one or more keywords, that are related to the brand name; performing a search engine query that comprises said one or more keywords; selecting a web-site that appears in search results of said search engine query; obtaining through a domain registry data about an owner of said web-site; if said web-site is owned by an entity other than the brand owner, then, analyzing content of said web-site to determine whether or not said web-site abuses the brand name.

[0044] The method may comprise: generating a cost effectiveness score for Search Engine Optimization (SEO) operations performed for a website of the brand owner, by: (a) at a first time point, determining a first ranking of said website in search results of a particular search engine; (b) at a second time point, determining a second ranking of said website in search results of a particular search engine; (c) obtaining a user indication of monetary investment in SEO performed between the first time point and the second time point; (d) generating the cost effectiveness score by taking into account, at least, the change between the first ranking and the second ranking, and said monetary investment in SEO.

[0045] The method may comprise: generating a cost effectiveness score for digital marketing operations performed for a website of the brand owner, by: (a) at a first time point, determining a first ranking of said website in search results of a particular search engine; (b)

at a second time point, determining a second ranking of said website in search results of a particular search engine; (c) obtaining a user indication of monetary investment in digital marketing performed between the first time point and the second time point; (d) generating the cost effectiveness score by taking into account, at least, a change between the first ranking and the second ranking, and said monetary investment in digital marketing.

[0046] The method may comprise: generating a cost effectiveness score for Search Engine Optimization (SEO) operations performed for a website of the brand owner, by: (a) at a first time point, determining a first ranking of said website in search results of a particular search engine; (b) at a second time point, determining a second ranking of said website in search results of a particular search engine; (c) generating the cost effectiveness score by taking into account, at least, change between (i) the first ranking at the first time-point, and (ii) the second ranking at the second time point.

[0047] The method may comprise: generating a cost effectiveness score for digital marketing operations performed for a website of the brand owner, by: (a) at a first time point, determining a first ranking of said website in search results of a particular search engine; (b) at a second time point, determining a second ranking of said website in search results of a particular search engine; (c) generating the cost effectiveness score by taking into account, at least, change between (i) the first ranking at the first time-point, and (ii) the second ranking at the second time point.

[0048] In some embodiments, the brand name comprises (or is) a name of a person.

[0049] In some embodiments, the analyzing further takes into account at least one of: keywords used in the content of said web-site, Internet traffic data for said web-site, Search Engine Optimization (SEO) data of said web-site, structure of said web-site, programming technologies used by said web-site.

[0050] In some embodiments, generating the investment score is based on an analysis that takes into account at least one of: level of sophistication of one or more programming technologies used by said web-site; whether one or more programming technologies used by said web-site are recent or outdated; an amount of content contained in said web-site; a number of web-pages contained in said web-site; whether or not said web-site is compliant with World Wide Web Consortium (W3C) requirements; whether or not said web-site is compliant with Search Engine Optimization (SEO) standards.

[0051] The method may comprise: identifying a common pattern for multiple cross-brand abusing websites.

[0052] The method may comprise: detecting a first website which abuses a first brand name of a first brand owner; detecting a second website which abuses a second, different, brand name, of a second, different, owner; detecting one or more common characteristics that are common the first and second websites.

[0053] The method may comprise: sending a notification about detection of the multiple cross-brand abusing websites, to at least one of the first brand owner and the second brand owner.

[0054] The method may comprise: sending a notification about detection of the multiple cross-brand abusing websites, to at least one of the first brand owner and the second brand owner; enabling a cooperative action to be taken by the first and second brand owner.

[0055] The method may comprise: determining that a certain website is abusing the brand name; searching in a secondary marketplace for domains and/or websites, whether said certain website is offered for sale; if said certain website is offered for sale, through said secondary marketplace, then enabling to the brand owner to purchase said certain website through an automated system that interfaces with said secondary marketplace.

[0056] The method may comprise: determining that a batch of multiple websites are abusing the brand name; searching in a secondary marketplace for domains and/or websites, which ones of said multiple websites are offered for sale; generating a list of said multiple websites that are abusing the brand name, and indicating on said list one or more of the websites that are offered for sale on the secondary marketplace.

[0057] The method may comprise: scanning an entire registry of a Top-Level Domain (TLD) for websites that abuse any one of a group of brand names; generating a risk score for each one of said websites; based on the risk score, generating a ranked list of said websites.

[0058] The method may comprise: scanning an entire registry of a Top-Level Domain (TLD) for websites that are non-compliant with one or more rules that apply to said TLD registry; generating a non-compliance score for each one of said websites; based on the non-compliance score, generating a ranked list of said websites.

[0059] The method may comprise: determining that a certain website is possibly abusing the brand name; capturing and storing a screenshot of said website, together with a time-and-date stamp.

[0060] The present invention may provide other and/or additional benefits or advantages.

BRIEF DESCRIPTION OF THE DRAWINGS

[0061] For simplicity and clarity of illustration, elements shown in the figures have not necessarily been drawn to scale. For example, the dimensions of some of the elements may be exaggerated relative to other elements for clarity of presentation. Furthermore, reference numerals may be repeated among the figures to indicate corresponding or analogous elements. The figures are listed below.

[0062] Fig. 1 is a schematic block diagram illustration of a system, in accordance with some demonstrative embodiments of the present invention;

[0063] Fig. 2 is a schematic block diagram illustration of a system, in accordance with some other demonstrative embodiments of the present invention;

[0064] Fig. 3 is a schematic illustration of a user interface and screen, generated and displayed by the Evaluation Module, in accordance with some demonstrative embodiments of the present invention;

[0065] Fig. 4 is a schematic illustration of an on-screen dashboard, which may be generated and displayed in accordance with some demonstrative embodiments of the present invention;

[0066] Fig. 5 is a schematic illustration of a Brand Risks interface, which may be generated and displayed in accordance with some demonstrative embodiments of the present invention;

[0067] Fig. 6 is a schematic illustration of Brand Opportunities interface, which may be generated and displayed in accordance with some demonstrative embodiments of the present invention;

[0068] Fig. 7 is a schematic illustration of Management Module interface, which may be generated and displayed in accordance with some demonstrative embodiments of the present invention;

[0069] Fig. 8 is a schematic illustration of Management Module sub-section interface, which may be generated and displayed in accordance with some demonstrative embodiments of the present invention;

[0070] Fig. 9 is a schematic block diagram illustration of another system, in accordance with some demonstrative embodiments of the present invention; and

[0071] Fig. 10 is a schematic block diagram illustration of another system, in accordance with some demonstrative embodiments of the present invention.

DETAILED DESCRIPTION OF THE PRESENT INVENTION

[0072] In the following detailed description, numerous specific details are set forth in order to provide a thorough understanding of some embodiments. However, it may be understood

by persons of ordinary skill in the art that some embodiments may be practiced without these specific details. In other instances, well-known methods, procedures, components, units and/or circuits have not been described in detail so as not to obscure the discussion.

[0073] Applicants have realized that scanning the Internet reveals a growing problem for organizations active online – from small companies to large enterprises – most of them suffer from dozens to hundreds (or even thousands) of websites that infringe their trademark and abuse their brand, or sell counterfeits of the brand owner's products, or otherwise imitate the "original" or legitimate website, or otherwise defraud users to think that an imitation website is "affiliated with" the legitimate or original website or brand owner.

[0074] For example, a major income source on the Internet is to lure visitors to websites that pay for each "click" on Pay-Per-Click ads or listings and other similar methods. As a result, unethical parties are motivated to use illegitimate or illegal activities in order to attract more visitors. One of the main avenues for these attacks is by utilizing domain names, usually domain names that may be confused with brand names or with trademarks or service marks, because of vulnerabilities in the domain name and DNS system.

[0075] Some brand abuse websites do not necessarily use domain name that include the brand name, but rather, they may abuse the brand or infringe the trademark in their content and/or their activity (such as redirecting to competitors, or selling counterfeit products, etc.)

[0076] Furthermore, the Internet provides numerous opportunities and means to all who wish to harm companies or organizations such as hackers, former employees, disgruntled employees, competitors, cyber-squatters and also criminals and/or terrorist organizations. All of the above may be motivated by a desire to damage the organization, gain economical profit or accomplish other monetary or ideological goals. Applicants have realized that in most cases there is a direct economic damage and brand equity damage to the company who legally owns the brand.

[0077] Applicants have realized that the risks that organizations face may include, for example: (a) Websites or webpages that abuse the brand and/or infringe the trademark; (b) The usage of a company's brand to attract users to other websites, sometimes to competitors websites, and by that "stealing" user traffic from the legitimate brand websites; (c) Websites that sell counterfeit products or fake products, and websites used for "grey" market sales (unauthorized sales of products); (d) Websites that abuse the brand and sell competing products or services; (e) Trademark infringement and brand abuse through phonetic imitation and typos (typographical errors) of domain names (many times used for "parked domains" websites that contain Pay Per Click (PPC) advertisements or other types of online

advertisements and are intended to exploit the brand by attracting user traffic); (f) Fraudulent websites used for counterfeiting and corporate impersonation (including but not limited to Phishing and Pharming websites, spoofed blogs, etc.); (g) Slander and distribution of offensive information or damaging information or dis-information or negative information over the Internet. These brand protection problems that organizations face are accompanied by domain name portfolio management problems and other digital brand management problems.

[0078] There are hundreds of Top Level Domain extensions (TLDs). Some have second Level Domains (SLDs) that are used as extensions (for example ".co.uk", ".kids.us", etc.). Overall there are today hundreds of TLDs and SLDs active on the Internet worldwide. Soon, hundreds of new generic TLDs (gTLDs) will be added to the Internet root zone as part of an initiative of the Internet Corporation for Assigned Names and Numbers (ICANN). Many of these TLDs will be Internationalized TLDs (IDNs), which are TLDs in language scripts different than Latin (for example Chinese, Japanese, Hebrew, Arabic, etc.).

[0079] Every TLD is managed by a different registry and is registered in a different database. Many of the registries use different technologies, different registration protocols, different procedures and/or different registration rules and restrictions.

[0080] Companies and organizations around the world have digital assets which are a combination of accumulated brands, trademarks, mergers and acquisitions of companies, international branches, IT systems, web-based systems and more. Some of the basic parts of those digital assets are the domain names owned by those organizations. Medium size and large organizations may have dozens, hundreds, thousands and even tens of thousands of domain names. The value of these domain names can reach millions of dollars, and loss of revenues due to a malfunction or an attack on the activity of these domain names can also reach millions of dollars.

[0081] Applicants have realized that domain portfolio and brand management problems include, for example: (a) control and monitoring problem; (b) evaluation problem; (c) technical procedures; (d) damage as a result of malfunctions; (e) structural absence of organizational control; (f) security problems; (g) organizational responsibility problem; (h) absence of ERP integration; (i) loss of revenue and/or profit, due to loss of Internet traffic, counterfeit sales, fraud, and/or brand dilution.

[0082] Control and monitoring problem – small size, medium size and large companies spend from thousands of dollars to millions of dollars for the registration and the maintenance of their domain names portfolio. These assets must be managed. The existing management

capabilities are limited. Domain names affect critical processes and therefore there is a need for adequate tools to manage them. Furthermore, there are no adequate monitoring solutions that help assessing whether these domain portfolio expenses are effective.

[0083] **Evaluation problem:** it is important for organizations to know or to estimate the value of the domain names that they own, and the relative contribution of the websites active on those domain names to their brand(s). Currently there are no adequate tools that provide effective and reliable solutions to evaluate these digital assets and their contribution. There are no systems that can analyze these assets and their value, and there are no tools that define measures for these evaluations.

[0084] **Numerous technical procedures:** organizations are forced to manage their digital assets and domain names in a non-effective method due to the fact that they are required to have relationships with hundreds (and soon thousands) of registries and registrars. As explained above, each registry may have different procedures and rules and protocols, a fact that creates a significant administrative problem and overhead for organizations.

[0085] **Damages as a result of malfunctions:** the absence of adequate and effective control and monitoring tools may result in a non-renewal of domain names because of oversight or technical errors, causing website failures, shutdown of mail servers, and/or the loss of domain names. Such errors may create significant financial damages to organizations, and in some cases the losses may be irreparable.

[0086] **Structural absence of organizational control:** the management of domain names is done through registrars and registries, which are parties external to the organization that owns the domain names, and not through one of the organization's departments. This creates a structural weakness since the registrars and registries will always be outside of the organization's control. This is a technical weakness as well as a security weakness.

[0087] **Security problems:** the security risks for domain names are in constant growth. These risks include domain name hijacking through fraud or modification in the registries or registrars, website closure through unauthorized modifications of domain settings, "pharming" attacks used for frauds, impersonation performed through gaining control over a domain name, industrial espionage, malware distribution, and more. These security problems are many times a result of the lack of control of the domain names portfolio. These problems can result in significant damages, direct losses, potential revenue losses, and malfunctions of critical systems of the organization.

[0088] **Organizational responsibility problem:** there are at least three different departments in the organization that may be involved with different aspects of the digital brand

management (including brand protection and domain name portfolio management): The Information Technologies (IT) department which is usually responsible of the technical aspects of the domain registrations and the websites operation, the marketing department which is responsible for the branding aspects and the brand equity, and the legal department which is responsible for protecting the organization's trademarks and brands. Often, other executives in the organization may be involved, for example, C-level executives, finance or accounting department, or the like. The fact that there is more than one party in the organization responsible for brand management may create lack of control, inefficiency, redundancy, overlaps, contradicting decisions, and possible malfunctions. Moreover brand management usually lacks a metrics based strategy.

[0089] **Absence of ERP integration:** there are no domain management and/or brand protection tools which may be integrated with the existing organizational management systems, such as ERP systems, and therefore the coordination between the different departments is deficient and/or partial.

[0090] The present invention comprises devices, systems, and methods which may be used in order to solve, reduce, prevent, eliminate and/or mitigate some or all of the problems that the Applicants have realized to exist.

[0091] The term "Protected Brand" as used herein may include, for example, a brand name and/or a domain name and/or a website name and/or a trade-mark and/or a service-mark, which is owned by a legal owner, who seeks to protect and/or defend such brand from third-parties who may attempt to damage and/or abused such brand, directly or indirectly. The term "Protected Brand" may include, for example, a name of a company (e.g., "Samsung"), a name of a product (e.g., "Galaxy Note"), a name of a service, a slogan, a name of a person (e.g., a famous person, a "celebrity", a living person, a deceased person), or the like. It is noted that Protected Brand may or may not be protected by a trade-mark and/or service-mark, which may be registered and/or not-registered; however, a Protected Brand need not necessarily already be protected as trade-mark or service mark. Furthermore, a Protected Brand may include a potential or candidate name or brand, that an organization is considering to adopt as a brand, and which the organization would like to check (e.g., in advance) whether it is already being exploited by third parties.

[0092] The term "Brand Owner" as used herein may include, for example, the legitimate and/or legal owner of a Protected Brand; or a person or entity who has the legal right to own and/or use the Protected Brand. If the Protected Brand is, for example, a name of a person,

then the Brand Owner may be that person himself or herself; or may be entity related to that person (e.g., Ms. Yoko Ono Lennon is the owner of the trademarked brand "John Lennon").

[0093] The term "Original Website" as used herein may include, for example, the legitimate website that is owned and/or operated by the Brand Owner in relation to the Protected Brand, or in relation to multiple such Protected Brands.

[0094] The terms "Abusive Assets" or "Abusive Domains" or "Abusive Websites" as used herein may include, for example, one or more websites or domains or web-pages, that are not owned and/or not controlled by the Brand Owner, and which abuse or exploit (directly or indirectly) the Protected Brand (or mutations thereof, or other versions thereof), without the approval or consent of the Brand Owner; for example, in the domain name, in the content shown, or by other means.

[0095] The term "Abusive Party" as used herein may include, for example, a person or entity who owns, operates and/or controls an Abusive Asset.

[0096] In a demonstrative example for the utilization of these terms, the company "Apple Inc." of Cupertino, California may be the Brand Owner, for Protected Brands such as, for example, "iPhone", "iPad", "iPod", "iMac", "iOS", and may operate the Original Website on the domain "apple.com"; whereas, a person named John Smith of Miami, Florida may be an Abusive Party who owns and operates an Abusive Website on the domain "buy-cheap-iphone-here.com" (or on the website "buy-cheap-cellphones-here.com" while abusing the brand(s) within the content of such website).

[0097] Reference is made to Fig. 1, which is a schematic block-diagram illustration of a system 100, in accordance with some demonstrative embodiments of the present invention. System 100 may comprise, for example, the following modules or components, which may be implemented using suitable hardware and/or software units: a scanner module 101, a weighting module 102, a relevance analyzer module 103, an abusive investment estimator 104, a popularity / traffic estimator 105, a damage estimator 106, an abusive value estimator 107, an abusive party estimator 108, and a real-time comprehensive view manager 109.

[0098] Scanner module 101 may be an automatic and robotic tool able to scan the Internet and measure various parameters that are important for an organization (e.g., Brand Owner) in order to manage its digital brands, and provides updated data and metrics for the protection of such Protected Brands.

[0099] Weighting module 102 may weight different parameters and statistical information in order to provide the Brand Owner with the priorities of the risk websites or webpages, that the Brand Owner should enforce its intellectual property rights on, as well as with the

priorities of the available domain names that the Brand Owner should register in order to further protect its Protected Brand.

[00100] Relevance analyzer module 103 may analyze multiple parameters to create an analysis of the relevance (relative to the Protected Brand) of the risk(s) from Abusive Websites based on their domain name and/or content.

[00101] Abusive investment estimator 104 may estimate or measure the level of investment made by Abusive Parties that registered domain names and/or operate Abusive Websites that use or abuse (directly or indirectly) the Protected Brand.

[00102] Popularity/traffic estimator 105 may estimate the popularity level and/or the traffic and/or the level of usage (e.g., browsing, searching, online transaction, or otherwise interacting) of an Abusive Website relative to a Protected Brand. It is noted that the popularity / traffic estimator 105 may be responsible for other functionalities, for example, estimating the popularity of a Top-Level Domain (TLD) for the purposes of opportunity analysis (e.g., for deciding which domain names to suggest to the brand owner to register, and in which TLDs).

[00103] Damage estimator 106 may estimate the actual and/or potential damage that an Abusive Website created so far, and/or is expected or estimated to create, to the Brand Owner.

[00104] Abusive value estimator 107 may integrate different metrics and estimate the value of an Abusive Website to the Abusive Party that operates it; for example, by utilizing data from the relevance analyzer module 103, the abusive investment estimator 104, and/or the popularity/traffic estimator 105.

[00105] Abusive pattern estimator 108 may estimate or recognize patterns of trademark infringements and/or brand exploiting websites and domain names and Abusive Websites, in order to better find the parties that perform the infringement or exploitation or abuse, or information that can lead to identifying or reaching these parties.

[00106] Real-time comprehensive view manager 109 may generate and display to the Brand Owner a full real-time view of the all the online brand management aspects. Including the risks, the opportunities (available domain names valuable for the Protected Brand), evaluation of current portfolio of websites and domain portfolio management, and/or other features as described herein.

[00107] In a demonstrative implementation, a **five-step method** may be used. It is clarified that other number and/or sequence of operations may be used, for estimating risk and/or opportunities.

[00108] **The first step** may include, for example, creating a database using scanning engines and automatic tools for information collection. The system may comprise scanning engines and crawlers, and automatic tools for information collection that use initial information about the brand that is entered to the system. The scanning tools may include, for example, scanning of domain name registries, scanning of "whois" data servers, scanning DNS servers, "robot" modules that scan online data, tools for collecting statistical information, tools to extract data from different providers of information and data about websites, tools to extract information from search engines and indexes or indices, crawlers that scan and collect the content of websites, tools to collect different Internet ratings, tools that collect information from search engines and/or from ranking sites, and/or other suitable modules. All the information collected is stored in a central database that serves all the modules of the system. Alternatively, distributed architecture may be used, or other suitable architectures may be used.

[00109] **The second step** may include, for example, processing the data collected in the database. The system may utilize automation of data collection and analysis processes that are currently performed manually. The data collected through the brand monitoring processes and the domain portfolio management module is analyzed in order to create an ongoing real-time analysis. The following are two examples for the systems processing of the data:

[00110] (a) Processing information collected regarding an existing website: when a domain name suspected to be infringing the brand rights is found as taken, the system will collect in step 1 the information that is posted on the website (the content, titles, tags, graphics, etc.). In the data processing phase the data will be categorized and sorted so that the website will be categorized for example as a Pay-Per-Click advertising website (or "Parked domain") or as a content website. The new categories and sorting will be saved in the central database of the system.

[00111] (b) Processing information about a domain name that the client owns: in phase 1 the system may collect the information regarding each domain name. In the processing phase, for a domain name known as owned by the client, the system may check whether the different contacts of each domain are similar to the default contacts that the client defined. Incompatibilities will be marked in the database and classifications will be attached to domains in which the contacts are not updated.

[00112] **The third step** may include, for example, data analysis using unique algorithms. Different analysis may be performed for the data collected or processed, in order

to create different indexes and measures for the different modules and sections of the system – the risk analysis (and within that the pattern recognition section), the opportunities, the optimizations – and within that section the evaluations and monetization, the domain management module and the Brand Check module.

[00113] **The fourth step** may include, for example, presenting the results and data to the user (user interface). This step may include extraction of the data and the different results and analysis performed to a user interface that includes a dashboard, different tables, graphs, pie charts, scores and rankings, and options to perform active actions (such as teaching the system by changing scores, Cease and Desist actions, domain registration related actions, etc.). Optionally, color coding may be used, for example, showing in red items that require immediate attention, and/or showing in green items that appear to be correct and not harming, or the like.

[00114] **The fifth step** may include, for example, performing automatic actions based on the user's decision. For example, the system may utilize tools and/or modules that create automatic and bulk actions or batch actions that the client chose to perform in the system; such as sending bulk batches of Cease and Desist notifications, one-click bulk registrations of all the domains in a certain priority of a new brand the user decided to launch (and used the brand check section for it), etc.

[00115] A demonstrative implementation may utilize an algorithm or module having four sub-modules or sub-units, which may be referred to as RPID (relevance, popularity, investment, damage). For example, Relevance Algorithm or module examines or analyses the strength of the domain name and/or the content of the website to the brand; Popularity Algorithm or module examines or analyses the popularity of the website on the Internet; Investment Algorithm or module examines or analyses the level of investment in the website, its development and promotion on the Internet. Damage Algorithm or module examines or analyses the potential loss and damage created to the brand and to the brand owner as a result of the existence of website abusing the brand or as a result of not registering a domain name. Additionally, a scoring algorithm or module weights the different factors and different scores of the above four RPID algorithms or modules, in order to generate a final score for each website and/or domain name.

[00116] Reference is made to Fig. 2, which is a schematic block-diagram implementation of a system 200 in accordance with some demonstrative embodiments of the invention. For example, in some embodiments, the system may utilize one or more information services or data collection modules, which may obtain or provide information

based on the requests of the algorithms and the system's operational services, and based on the information from the user collected by the system. The information collected is transferred for processing and analysis by the algorithms or modules, and the results are then presented accordingly in the GUI. The following are some tools or modules which may operate as internal and/or external information services of the system

[00117] A "whois" module 201 collects all the relevant information about a domain name. For example, on whose name it is registered, registration date, expiration date, DNS servers, etc. This component connects to numerous servers that provide this information in order to provide the information in real-time. This component is developed so it can collect the data for all TLDs, namely, the hundreds existing and all those that will be delegated and operated in the future.

[00118] A Search Engine Gate 202 provides a central and unified access to search engines and popular websites (such as Google, Bing, Yahoo!, Baidu, Yandex, Twitter, Facebook, LinkedIn, CrunchBase, etc.) through an API. The component may collect the information based on location (search results may vary when a user connects to a search engine from different countries).

[00119] A Pattern Recognition module 203 may operate based on information collected through other services (such as the WHOIS content, web crawler, IP finder, etc.), to identify and/or classify patterns among infringing websites in order to recognize repeating infringements methods.

[00120] A Web Crawler 204 extracts HTML information from links provided to it; and also collects additional domains for the system by creating a "spider" network from the pages it receives.

[00121] A Social Networks Collector 205 automatically collects information from social networks. The service uses different interfaces to social networks (such as LinkedIn, CrunchBase, Facebook, etc.) and/or other social or crowd-based websites (e.g., micro-blogging, Twitter), searches for information and pages relevant to the brand (for example pages that use the brand in their page name, posts that mention the brand, etc.) and collects the information.

[00122] A Rank Collector 206 automatically collects information about websites from third party information providers such as Alexa, MOZ, Compete, Google, etc. This information may be used for example for calculations of the Popularity Algorithm.

[00123] An HTML Classifier 207 recognizes and classifies the content that is collected from websites. It defines the level of investment in the pages, Search Engine Optimization

compatibility, which type of website it is (e.g., Parking, sales, content, etc.). The algorithm may use the service to define the investment indexes and the damage for each website.

[00124] A Notification and Messaging module 208 allows sending of system and non-system notifications. The service allows sending a system notification when it arrives as an update, or a system error message, and general notifications that will be sent as email or SMS to an addressee (for example, a Cease and Desist notification). The service allows customization and personal management for each user.

[00125] A Workflow Task Manager 209 allows managing authorization processes for the performance of different actions in the system, according to the rules defined by the user. The component allows creating tasks in the system. The tasks can be allocated to a specific user, and the status of the task can be monitored. This service may also enable integration and communication with ERP software products and/or providers.

[00126] A Monetization module 210 allows monetizing traffic of Internet users to domain names that are owned by the user organization (the brand owner). For example, this component allows automatic creation of a landing page for a domain name that will provide basic information about the brand, transfer the Internet user to the main website of the organization, or advertise the brand in a different way. The service allows the landing pages to be customized, and to practically create small websites for each un-monetized domain name.

[00127] System 200 may further comprise, or may be associated with or may utilize, one or more Internal Operational Services 220; which may collect information from the user and from the system's back-office, provide the information to the systems internal information services and to the algorithms or modules, and present the collected information in the GUI. Additionally, they may provide administrative and management services to the users for all the modules of the system. The following are some of the tools or modules which may be internal operational services of the system:

[00128] A Risk and Opportunities Analysis (ROA) module 221 may perform Risks and Opportunities Analysis. The service gets the input of the brand name, relevant brand key words, the website of the brand owner, etc. The service activates the algorithms over the data inserted to it and based on the information it collects from the different system information services. The service may calculate the RPID score(s) and/or the individual scores that together make the RPID score, optionally utilizing an RPID score generator 247.

[00129] An Algorithm Tuner module 222 allows the user to perform changes to the score of each website/domain the algorithms ranked. After the changes are performed, the algorithm may learn from the changes and may run again based on the new information.

[00130] A Task Manager 223 allows to allocate tasks to different users in the system and to perform a consultation with other users in the system. The service allows to updated progress of tasks, to add comments and notes by users, archive tasks, etc. This service also enables an integration and communication with ERP software products and/or providers.

[00131] An Admin Manager module 224 may handle configuration of different settings in the system which are specific for each organization. These settings may include, for example: (a) User Management and roles, a component that may provide a set of definitions of users and permissions; connects between users, organizations and brands; defines which actions are allowed for each user, and to which information the user will or will not be exposed; (b) Billing module, defining account details, credit cards, payment methods, or the like; (c) Brand Section, allows adding brands to the system; (d) Definitions for updates and system notifications.

[00132] An Alerts and Diagnostics module 225 samples and monitors the operation of all the system components. It collects updates, errors or other systematic problems that may occur. All the components of the system may report about their normal operation and errors on an on-going basis.

[00133] A Brand Check Module 230 may allow an organization to evaluate the level of usage of a brand it intends to launch. The module also recommends which available domains are most relevant for registration. In case the user finds that the overall level of the usage of the brand is low enough and there are enough opportunities for domain registration – the user can choose and register the relevant portfolio of names in a quick ("one click") process.

[00134] The Brand Check module 230 may include, or may utilize, multiple sub-modules or processes, for example:

[00135] A data entry module 231 may allow or may handle data entry by the user of a potential new brand. For example, the user enters a brand name or several brands intended to be launched; the user adds relevant key-words; the user defines the relevant countries or geographical regions of activity; the user defines the industry category (if exists); and optionally, the user provides competitors names. It is clarified that the data entry module 231 may operate in conjunction with other functionalities of the system; for example, to allow the user to enter data in order to request a search and/or identification of brand-abusing websites, in order to determine risks and/or opportunities, or the like.

[00136] A data processing / analysis module 232 runs an ROA process, similar to a process that would be used if this brand was already owned by the user. The system looks for opportunities (domain names with high relevance available for registration), and it looks for potential risks – including searching for existing domain names with high relevance to the checked brand, looking for websites that use the brand in their content, collecting data from search engines, data providers etc. The system may also scan Trademark databases (e.g., operated by government entities, such as the United States Patent and Trademark Office, or by trademark registrar(s) in other countries; or privately-owned trademark records) to find whether the new brand the user is interested in is already registered as a trademark, or is identical or similar to an existing trademark or a pending trademark application.

[00137] An Advisory Report module 232 may generate a report, similar to the report provided in the Risks Module and the Opportunities module(s). The report allows the user to see potential "risks" for the new brand, i.e. websites already using the brand, and to evaluate different opportunities of available domain names for registration. The report may provide in addition the following analysis:

[00138] (a) High relevance domain names usage: a general view in percentages of how many domain names with high relevance are taken and how many are available for registration.

[00139] (b) Generic level of the brand: a score provided by an algorithm that analyzes how generic is the word used as the brand, based on the distance of the brand from dictionary words.

[00140] (c) The level of search for the brand in search engines.

[00141] (d) A general analysis of the taken (registered) domain names; for example, how many are with an active website, what type of active website (for example whether it is a Parked domain, e-commerce website, blog, etc.), how many are registered but not active.

[00142] (e) Country and language based prioritization; an analysis that generates and shows the level of usage of the brand in different countries (based on the ccTLDs and location of servers) and/or different languages (based on the languages used in the websites).

[00143] (f) If trademark databases search was chosen, a report of whether the brand is registered as a trademark (or has a pending trademark application); and if it is – details about the trademark registrations or applications.

[00144] A rapid registration module 233 may allow rapid registration of domain(s) by the user. For example, the module allows the user to mark preferred variations of the brand (different strings), preferred countries and preferred gTLDs or gTLD types (i.e. based on

industry type). The user may then register all the relevant chosen domain names in a rapid process or in "bulk".

[00145] The Monetization Module 210 may help the organization using the system to quickly find out about domain names that it owns that are not used and therefore are not monetized, and to easily define and launch landing pages or small websites on these domain names in order to monetize them, and make use of potential Internet users traffic to these domain names, and of potential contribution to the overall SEO activity of the organization. The module includes the following components:

[00146] (a) A service that checks all the domain names in the portfolio of the organization and finds whether or not they resolve to an active website.

[00147] (b) A presentation in the GUI of all the un-monetized domains with the following classification: (i) Domains used for redirection (to another domain name with an active website); (ii) Domains that are entirely inactive (e.g., domains that resolve to a 404 error page or other "website not found" error page, for example).

[00148] (c) Score analysis of the un-monetized domains from the evaluations module that allows the user to decide which domains are more important and should be monetized first.

[00149] (d) A platform for the creation of landing pages for each domain name that includes the capability to create landing pages to part or all of the un-monetized domain names in a rapid process: (i) A tool that allows to create a template for a landing page, including managing graphic components, the capability for the organization's own design or templates provided by the system, Content management tool, etc. (ii) Capability to create default content and specific structures that will be allocated for landing pages of a specific brand, and/or landing pages of domain names in a specific TLD. (iii) Activating and uploading the websites to the Internet in a rapid process to allow rapid and convenient launching of such mini-websites or landing pages.

[00150] (e) Localization capability, including local SEO and/or local translations. For example, performing different SEO operations dedicated for the local language (for example, multilingual capability to edit titles, tags, etc.). Additionally or alternatively, the module may provide multilingual translation(s); for example, automatically sending content for translation to translation providers (that may be selected; and which may be human and/or automated, or a service utilizing both automated translation and manual translation or review); and automatically uploading of the translated landing pages after translation is provided by a translator, through a dedicated interface to the system or an API.

[00151] An ERP Interface Module 241 may perform integration of the system with ERP software products, to allow creation of a decision making process for brand protection and domain management, the allocation of relevant tasks, and the management of the relevant budget. The module may include the following capabilities: (a) Complete integration with ERP software; (b) Creation of internal organization decision making process for Brand Protection decisions, Domain portfolio management, and Budget; (c) Adding the capability to perform different activities such as domain registration, domain renewal, sending Cease and Desist notifications, etc. to the ERP software; (d) Permission based access to the system, and other access control measures; (e) Allocation of tasks to different functions in the organization and monitoring of execution of tasks as well as task progress; (f) After authorization of a budget related action, for example, the appropriate internal unit of the organization is debited in the budget; the details of the domain name(s) are automatically updated based on the unit defaults (DNS servers, contacts); and other technical details (such as mail server and hosting records for each domain) are automatically updated based on the unit; (g) customization and permissions management by an administrative party or manager.

[00152] Optionally, a suspected domains locator module 245 may operate in conjunction with RPID score generator 247, and may utilize a **multi-step method** for locating domain names that contain a brand name in their string. It is clarified that a "Domain Name Label" is the part of a domain name which is not an extension. For example, in the domain "example.com", the string "example" (which is the second level of the domain name) is the domain name label; in the domain "example.co.uk", the string "example" (which is the third level of the domain name) is the domain name label.

[00153] **The first step** may include, for example, obtaining Public Zone files. The system automatically and/or periodically downloads the domain name zone files of the TLDs registries that make them available for download. The list of domain names that exist in each zone file is entered (e.g., imported) into a database of "existing domain names".

[00154] **The second step** may include, for example, creation of unique potential domain strings based on the public zone files. The list of existing domain names is sorted and the domain name label of each domain is separated from the extension, to create a list of potential domain strings. For example, the domain "example.com", in which the domain is registered in the second level, will be separated to a domain label "example" and an extension ".com"; the domain name "example.co.uk", in which the domain is registered in the third level, will be separated to a domain string "example" and an extension ".co.uk". Then the list of potential domain strings is sorted. In case identical strings exist, then dilution of

duplicates may be performed such that only one of duplicate identical strings will be left in the database, so that the list will only contain unique strings without identical duplicates.

[00155] **The third step** may include, for example, crawling the web to expand the list of existing domain names. Optionally, in some embodiments of the present invention, a Web crawler of the system uses the list of existing domain names in the following way: In order to scan each domain name in the list of existing domain names, the crawler turns to each domain name and downloads the content of the homepage. The crawler scans the content and searches for links (URLs). When a link is found, the system separates the domain name from any sub domain or folders contained in the URL. For example, if the following link is found, http://www.example.com/example_folder/example_file.htm, then the system extracts the domain "example.com" from the URL. The system then checks whether the domain exists in the "existing domain names list". If the domain name does not exist, then it is added to the list. The crawler then turns to the each URL found, downloads the page and looks for URLs in that page, in a recursive or iterative manner, and so on. The scan process is performed cyclically, so that when the crawler finishes processing all the domain names in the existing domain names list, it goes back to the beginning of the list and searches through the list again, in a recursive or iterative manner. The system optionally performs multiple scans of web-sites simultaneously through multiple servers.

[00156] **The fourth step** may include, diluting the list by removing websites that are known to be (or, are presumed to be) non-infringing due to their general reputation of being a legitimate general-interest website; based on a "white-list" of legitimate sites, or based on other criteria. For example, if the brand being protected is "Disney", then the search engine(s) may include results such as an article on "CNN.com" about the Walt Disney Company, and this result may be diluted based on the reputation of "CNN.com" as a legitimate website which may be mentioning the brand as "fair use". In contrast, the search engine(s) may also find a website such as "BuyMickeyMousePants.com" which may not be on such white-list of approved or generally-legitimate websites, and may thus be kept on such list without being diluted.

[00157] **The fifth step** may include, for example, scanning the lists for domains that contain a brand name or its variation. The system uses a String Relevance Algorithm that provides a list of relevant strings which are variations of a brand name and searches the list of Existing Domain Names, and the list of Domains from Search Engines for domains in which the Domain Name Label contains or is similar to the string. Each domain name found is marked as a "Suspected Domain Name".

[00158] **The sixth step** may include, for example, storing the information collected in a database. In case a domain name that existed in previous search does not exist anymore, the information collected about that domain name is moved to a history database. The history database can be used in future queries of root domain name servers of TLDs that do not publish their zone files, for analysis, statistics, or the like.

[00159] Optionally, an automated cease-and-desist engine 250 may handle ceased-and-desist notifications and follow-ups. Based on previously found Risk Websites, i.e. websites, webpages or domain names that potentially infringe or abuse a brand, the user which represents the brand is able to react to these infringements, by automatically or semi-automatically sending Cease and Desist notifications to the registrant of each such Risk Website or other parties and/or contacts listed as connected to that website (such as the hosting provider, domain registrar, etc.).

[00160] When the user browses the list of risks in the system, he/she is able to mark one, several or all of the listed Risk Websites. The user may then choose an action call "send Cease and Desist notifications" to parties or owners or operators or other entities that are associated with the selected or marked websites.

[00161] The user is directed to a page that presents the chosen Risk Websites, with their Risk Score and other details (such as registrant, date of registration, a thumbnail of the "Print Screen" or screenshot of the page which may be obtained and captured by a web crawler of the system, etc.).

[00162] For example, there are different Responsible Parties that are relevant to operating a website. These parties may include, but are not limited to: the registrant of the domain name (the holder), the administrative contact of the domain name, the technical contact of the domain name, the billing contact of the domain name, the registrar of the domain name, the registry of the domain name, and the hosting provider or ISP (Internet Service Provider) of the website.

[00163] The system may store pre-defined wordings or templates of Cease and Desist notifications for each of the Responsible Parties mentioned above. The user may compose his own Cease and Desist wordings, use the existing ones, or edit the existing ones to match his needs or to adjust to a particular case. The notification may be sent through email, and/or through regular printed mail. The user may chose the type of Responsible Parties to which he/she wants the notifications sent (i.e. Registrants, hosting providers, etc.).

[00164] The user may either browse each notification to be sent one by one for each of the Risk Websites; or may choose to automatically send the notifications in bulk to all the

Responsible Parties of the types chosen. The system automatically extracts the previously stored information regarding the Responsible Parties collected for each of the Risk Websites.

[00165] If the user chose to automatically send the notifications in bulk to all the Responsible Parties of certain types, the system will automatically add the email address (in case the user chose to send email notifications) or the name and physical address (in case the user chose to send regular printed mail notifications), to the pre-defined wording relevant to each type of responsible party, and will send by email (or print for sending by mail) a dedicated notification for each chosen Responsible Party of each Risk Website. All the emails sent from the system can be stored in a database, and retrieved at any time by the user.

[00166] For example, if the user chose to automatically send Cease and Desist email notifications to all registrants and hosting providers of the chosen Risk Websites, the system will automatically extract the email address of each registrant for each of the Risk Websites and will send an email with the wording pre-defined for registrants to each of them separately and automatically, and simultaneously extract the email address of each hosting provider for each of the Risk Websites and will send an email with the wording pre-defined for hosting providers to each of them separately and automatically. Optionally, the user may command the system to automatically send a batch of the emails in a gradual manner, and not at the same time; in order to create a gradual effect or a cascading effect, such that the Registrant receives an email notification on a certain time/date, the ISP receives the email on another time/date (e.g., one day or one hour later), the Administrative Contact receives the email on yet another time/date (e.g., two days or two hours later), or the like. In other embodiments, the user may command the system to automatically send a batch of email immediately, in order to create a "shock and awe" effect towards multiple recipients who receive notification at substantially the same time (e.g., within a few seconds or a few minutes from each other). If the user chooses, he can browse each of the emails and separately before sending, edit each one, and manually authorize the sending of each one.

[00167] Optionally, the cease-and-desist engine 250 may comprise a response monitoring module 251, for automatic monitoring of replies or responses. The user defines the email address that will be presented as the Sender of the Cease and Desist notifications, and/or a "reply-to" email address for such outgoing notifications. The user can allow the system to monitor the email box of the Sender (or, to monitor the "reply-to" email address of the sent notifications) for replies coming from parties to which the Cease and Desist notifications were sent. The system automatically scans the emails received in that mailbox and searches for emails received from email addresses to which Cease and Desist

notifications were sent. If such an email is found it will be stored in the database and connected to the email sent to that party. Optionally, the system may be configured to distinguish between an automated response email (e.g., an email from an ISP saying "We acknowledge receipt of your email") and particular non-automated response emails; and the system may indicate with a flag or other indication if the response appears to be automated or non-automated. The user may browse sent notifications with their attached replies. The system may present a table with summaries of number of notifications sent and received replies – for each Risk Website, and a total for all; optionally showing also the date(s) in which notification was sent and/or responses were received.

[00168] Optionally, the cease-and-desist engine 250 may comprise a follow-up module 252, which may enable one or more follow-up options for Cease and Desist notifications sent to Responsible Parties. For example, follow-ups can be sent automatically or manually by the system to all parties to which previous notifications were sent. The user can decide on the timing of the follow-up (i.e. a week after the initial notification, a month, etc.), and the type of Responsible Parties to which follow-ups will be sent. The user may select between a bulk wave of follow-up emails, or a gradual or cascaded session of follow-up emails over the course of time. Similarly to notifications, there may be pre-defined wordings of Cease and Desist follow-ups for each of the Responsible Parties mentioned above. The user may compose his own Cease and Desist follow-up wordings, use the existing ones or edit the existing ones to match his needs. The follow-up notification may be sent through email, and/or through regular printed mail. The user may choose the type of Responsible Parties to which he/she wants the follow-up notifications sent (i.e. Registrants, hosting providers, etc.).

[00169] The user may browse each notification to be sent one by one for each of the Risk Websites, or may choose to automatically send notifications is bulk to all Responsible Parties of the types chosen. The system automatically extracts the previously stored information regarding the Responsible Parties collected for each of the Risk Websites. If the user chose to automatically send the follow-up notifications in bulk to all the Responsible Parties of certain types, the system may automatically add the email address (in case the user chose to send email notifications) or the name and physical address (in case the user chose to send regular printed mail follow-up notifications), to the pre-defined wording relevant to each type of responsible party, and will send by email (or print for sending by mail) a dedicated follow-up notification for each chosen Responsible Party of each Risk Website. All the emails sent from the system can be stored in a database, and retrieved at any time by the user.

[00170] If the system found that a Risk Website was shut-down (i.e. the domain name was deleted and/or the website does not resolve anymore, and therefore no content is available on the Risk Website) or if the website's content has significantly changed (e.g., to the extent that it has a lower level of relevance or no relevance to the Protected Brand), then the system may automatically delete the specific Risk Website from the list of Risk Website for follow-ups; and the system may inform the user that a positive result occurred and that a brand-infringing domain/website was shut down or decrease in its risk score. The system may create, update and maintain a list of Successful Results that resulted from the operations of the system, including the date(s) in which the successful result was detected, optionally storing also a screen-shot or other data capture that attests to the positive result. Optionally, a successful result may be automatically followed-up by the system, after a few days and/or after a few weeks or months, to verify that the shut-down or decrease in risk score was not only temporary or misleading, or did not result from a momentary technical problem of the risk website.

[00171] The user may define that if the user allowed monitoring of replies, and a reply to a Cease and Desist notification for a specific Risk Website was received, then the system deletes or removes the specific Risk Website from the list of Risk Website for follow-ups, or otherwise marks the Risk Website as a website that does not require further follow-up for a certain period of time (e.g., one month, or one year).

[00172] Optionally, system 200 may comprise a Negotiation Module 255 for automatic Recommendation of Negotiation for buying Risk Domain Names based on historical data. As an alternative to legal activity such as Cease and Desist notifications, dispute resolution processes (DRPs) and lawsuits, the system may automatically recommend to the brand owner to use professional services of negotiation to purchase the domain names that hold websites that infringe the brand or trademark. The system automatically recommends the user which domain names have a higher probability of being purchased easily, and optionally also the price ranges (e.g., when the goal is to use negotiation when expected buy-out price is lower than a prospective cost of a legal action).

[00173] A Negotiation Recommendation Algorithm of the system uses statistical and historical data to analyze the probability and price ranges of a domain name being bought in negotiations. The algorithm compares the data of the specific domain, to collected statistics about other domain names that were sold in the secondary market (e.g., of the same Registrant, or of affiliated entities, or of domain names that have a similar string within them). The statistics are based both on historical data of the system, and on external data

about secondary market of domain names received from outsource data providers such as domain name marketplace websites (for example afternic.com, sedo.com, etc.) if available.

[00174] The information that is being assessed, analyzed and compared by the Negotiation Recommendation Algorithm include but is not limited to the following data: the domain string characteristics (length, generic level of the string, use of popular keywords in the string, etc.), the TLD (whether it is a popular one like ".com", or a string that is relevant to the type of activity and target industry of the brand, etc.), place or rank in search engines results, the results and data of the Popularity Algorithm (including data about level of traffic, number of incoming links, etc.), the results and data of the Investment Algorithm (including data of rankings from different SEO assessment websites such as MOZ, analysis of the content of the website, etc.).

[00175] In some implementations, system 200 may provide the user with unique information, indicating that a risky website, or an abusing website, or an infringing website, is available for purchase in a "secondary market" of domains and/or websites, or through a domain exchange marketplace, or through an auction or a "click-to-buy" domain marketplace. For example, the system may present to the user a list of ten brand-abusing websites; and may indicate or mark or highlight, that three of those ten brand-abusing websites are available for purchase even though they are already registered to third parties. The system may present the requested price for each such "taken" brand-abusing website that the system identifies as available for purchase in the secondary market. The system may allow a one-click operation of the user (e.g., the brand owner or brand manager), to purchase the "taken" brand-abusing websites that the system identified as available for acquisition in the secondary market of domains and/or websites. For this purpose, the system may check, for each brand-abusing domain or website, whether or not it is offered for sale by its owner through a secondary marketplace that allows domain owners and/or website owners to sell, or to offer for sale, their domains and/or websites. This unique feature may allow the brand owner to immediately and effectively dispose of particular "risks" or "threats" to his/her protected brand, by immediately authorizing and/or commanding a secondary-market purchase of such domains and/or websites. Optionally, the system may be linked to pre-stored payment information (e.g., a corporate account of the brand owner; or credit card information), to allow immediate processing of such purchase instructions.

[00176] System 200 may further comprise an Evaluation Module 260, which may also be referred to as "Websites and Domain Portfolio Evaluation Module". The evaluation module may provide the organization with an overall view of its web-sites and domain

portfolio and their relative value. The system module presents the owned domain names prioritized by the value they contribute to the brand. It enables the user to see which domains/websites provide the most value and which hardly contribute value.

[00177] An Evaluation Score is calculated by an Evaluation Algorithm based on scores of three major Algorithms: The Relevance Algorithm, The Investment Algorithm, and an Evaluation Popularity Algorithm. In addition to the information collected for the measures used in the Popularity Algorithm, the system may collect information and data regarding each website including, but not limited to: (a) Direct Traffic data (either provided by outside data resources that evaluate traffic – such as Alexa and MOZ, and/or by statistical module installed on the servers of the client to collect such data, and/or by services such as Google Analytics that provide search data or analytics data regarding a specific website or webpage); (b) DNS requests data, collected using a DNS data collector of the system that is installed on the DNS servers on which the domain name is defined. The above measures are incorporated into the Popularity Algorithm and are used to create the Evaluation Popularity Algorithm.

[00178] The Evaluation Algorithm (and/or other algorithms or modules of the system) may be a learning algorithm. The user can change the level of importance of the web-site, based on his/her own perception. As a result the system will incorporate the user preference into the algorithm for future analysis of results. The evaluation module may allow the user to evaluate the relative values of his domain name and websites. As a result the user can decide to drop (e.g., delete or not renew) domain names that are in a low value, and therefore have small contribution to the online activity of the company. Other algorithms and/or modules of the system may be implemented as learning algorithms, which may gradually learn from feedback of the user, which risks are more important to the user, which opportunities are more attractive to the user, which parameters or metrics the user is more interested in, or other decisions or preferences that may be learned by using machine-learning algorithms.

[00179] System 200 may optionally comprise a Digital Marketing / SEO Effectiveness Estimator 265, which may assess the effectiveness and benefit of Search Engine Optimization (SEO) and/or digital marketing (or online marketing) campaigns over time, and optionally in relation to budgets or costs spent for such efforts or campaigns (cost effectiveness).

[00180] For example, an SEO Score may be calculated based on multiple metrics, including traffic data, position of the website in different search results of different queries on different Search Engine Websites, number of incoming links, fitness to Search Engine Optimization (SEO) requirements, link closeness to trusted websites such as government websites that measure, content analysis, fitness of titles and tags, incoming links, link

closeness to trusted websites such as government websites, rankings from different analysis websites (e.g., Alexa and MOZ) that measure the website, traffic and ad conversion data for the website, data from advertising systems (such as Google AdWords) and similar systems of other ad, data from search engine websites analytic systems (such as Google Analytics), etc.

[00181] The factors measured and collected for the analysis of the SEO score may be updated on an ongoing basis based on the different changes of SEO requirements, the different changes in search engines algorithms that affect SEO, and other relevant sources of information that affect SEO and digital marketing.

[00182] Consequently, when the SEO Score is measured at time-point T1, and then measured at a later time-point T2, the difference in SEO scores over that time period (between T1 and T2) provides a measurement or an indirect assessment of the SEO activity and/or digital marketing activity of the client for the specific website measured over that time period. If the SEO activity is stopped or modified, different metrics measured as part of the SEO score will be affected and changed, and the score may decrease or increase (if the modification improved the measurements). As a result, the client may monitor and assess the effectiveness of its SEO providers or internal SEO team, and of its digital marketing activity.

[00183] Optionally, the system may store data indicating how much money was invested or spent in SEO efforts in each week or month; and the system may automatically generate and show a graph (or other suitable representation) indicating the money spent, super-imposed over the SEO score. The system may automatically deduce that the more money spent (or, a constant amount spent) caused maintaining or increasing of the SEO score; or in contrast, the system may alert the user that even though money was spent on SEO (or even, the SEO budget increased), the SEO score decreased and the user may need to take action (e.g., replace a SEO provider).

[00184] As discussed above, the RPID algorithm determines a general risk score based on scores of several (e.g., four) sub-algorithms that are used for the analysis of each potential risk website: relevance, popularity, investment, and damage.

[00185] The RPID algorithm ranks and attributes scores to each domain. Its success relies largely on the pool of domains that are potentially risky domains, domains that can infringe on a brand. In order to locate such domains, various mechanisms may be used. Typos or spelling errors are created from the brand name and potential registered domains are identified. Search of the brand within the Zone files and using NsLookup (where the zone files are not identified) are another source. Searches using search engines is another method. The system may formulate a query which may potentially locate infringing domains. A naive

approach would be to simply search for the brand name. Usually the main problem with such an approach is ambiguity, as a brand name that has multiple meanings would yield an unsuccessful query. When checking through the Internet, practically any word may have multiple meanings. The system uses more refined queries that employ specific configuration and integrate external tools.

[00186] The Relevance estimator may take into account, for example, domain relevance, content relevance, and graphic relevance.

[00187] A Domain Relevance sub-module may determine a score for the domain name based on the closeness or proximity of the Domain Label to the brand, and based on the use of relevant keywords in the string that are either statistically popular or relevant to the brand. The algorithm analyzes variations of the brand (such as typographical errors, typo-based errors, spelling errors, and/or keyword use). Statistical data regarding the popularity of these variations on the Internet (i.e. their statistical frequency in the list of Existing Domain Names) may be used as part of the algorithm.

[00188] A Content Relevance sub-module may be based on collection of webpages that were extracted by the crawlers as a set of documents. A set of queries structured specifically for each brand based on the brand, the relevant keywords for the brand, and the keyword's LSI (latent semantic indexing), are processed on the collection of documents. The queries provide a score that reflects the relevance of the content to the brand and its keywords. These queries reflect the Brand Name prominence, the keywords prominence and the Overall Brand Relevant Words.

[00189] In order to create a set of keywords which are characteristic to a given brand, the system may use multiple sources of reliable text which are then formulated into a keyword query. These sources may include Google search and other search engines, LinkedIn company information, CrunchBase company information, brand company owned domains, user input keywords, and other sources. The aggregation of such keywords into a query is done by using a collaborative filtering approach.

[00190] Standard algorithms for text analysis often rely on some specific assumptions about the set of documents; for example, that the length of documents is within some rescannable range. However, analysis of documents from the Internet shows that such assumptions are incorrect. For example, length of a webpage can be as short as a single sentence and as long as many volumes. Therefore the system may employ algorithms (e.g., cosine distance matric between a document and a set of keywords), with special adaptation to the structure of webpages.

[00191] A Graphics Relevance sub-module may operate using similar framework as above; such that a graphical composition query (that measures the colors, logo structure, etc.) may be processed over the collection of webpages in order to provide a similarity score between the brand owner's graphical composition and the measured webpages.

[00192] The Popularity estimator module generates a popularity score based on rankings of different measures such as web-metrics, external tools that provide traffic data, usage statistics, links structure (number of incoming links, internal links, external, etc.), position or ranking of the website in different search results of different queries (such as a query that includes only the brand, a query that includes the brand with one more relevant keyword, a query that includes the brand with different combinations of relevant keywords, a query of major relevant search terms that does not include the brand, etc.) on different Search Engine Websites (such as Google, Yahoo, Bing, etc.), social media popularity of the website and/or webpage (such as the number of "likes" or followers, comments and other "buzz" measures on Facebook and/or Google+ for the page, etc.) and any other data that can provide information about the usage and popularity of the website.

[00193] The various sources of information are integrated to get an estimation of the traffic to websites. The popularity score of a website is derived from its traffic and traffic of other websites. A normalization function is used before the popularity score is computed. The normalization function may take into account desired distribution of popularity scores, desired stability of popularity scores, the distribution of traffic volumes to various websites in the internet, and the instability of actual traffic to websites on the Internet.

[00194] The Investment level estimator generates a score based on fitness of the website to Search Engine Optimization (SEO) requirements, usage statistics (measures for the interaction of the user with the website – for example, on average a website that has a high investment level may be more engaging to a user than a website with a low level of investment), analysis of the HTML tags structure and the technologies used to construct the website (whether these are technologies that require larger investment of resources, etc.), historical records related to the domain name and its owners (for example a domain that is registered by the same owner for a long time implies a higher level of investment since the domain owner has paid an annual fee for a long time to keep owning the domain), appraisal values (such as from domain secondary market websites, appraisal providers, etc.), visual analysis of the website, etc.

[00195] The importance of individual components of investment may be assessed manually, and may also be evaluated based on their prevalence in the Internet, e.g., high

occurrence of a feature in the Internet may suggest that it is easy to implement it and it should not contribute much to investment score.

[00196] The Damage estimator generates a score that reflects the damage level that can be created to the brand owner from the website. A certain website may have a high Relevance score, a high Popularity score and a high Investment score, yet it might not be a website that is infringing the trademark and/or harmful for the brand. For example a website of a non-for-profit organization of people that have a certain disease that promotes or discusses a certain medicine for the disease may not be seen as harmful for the brand. Therefore the damage algorithm is intended to provide a score that will analyze whether the website is damaging or not.

[00197] The analysis may include negative words usage, use of spelling mistakes in the domain name, redirection to advertisements or websites of competitors, type of usage (such as a "parking" site), level of usage of banner ads or other types of online advertisements, usage for improper business or risky business (such as gambling, pornography, sale of alcohol or tobacco or pharmaceutical drugs, etc.), link closeness to trusted websites such as government websites (i.e. how many steps of clicking on links should be made from a trusted website until you reach the measured website), usage of the website for online commerce of products other than the brand owner's products, existence of mail servers for the website (i.e. existence of an MX record in the DNS records of the domain name) which may increase the probability of SPAM or fraudulent emails sent from the website (such as Phishing emails), etc. The algorithm may aggregate information from multiple sources, such as MX-record, Whois data, web metrics, etc. in order to predict or estimate the functionality and/or damage of a website.

[00198] Machine Learning: The above features or scores (R,P,I,D) may define the "measurements" which the system employs to rank and score risks. The final score associated with a domain a function of these four scores all, e.g. may be a weighted sum of these features, for example:

$$Score = \sum_{i \in \{R,P,I,D\}} W_i \cdot S_i$$

[00199] The weights W_i may be defined by expert knowledge (e.g., manually). The specifics of this function may be adapted to any specific user, based on its interactions with the UI of the system. Some actions of the user indicate its dissatisfaction from the current

scoring function; user interaction such as cease-and-desist or risk level adjustment, are human indications that may be used as a training set for a machine learning algorithm. The algorithm may take into account the functional form of the scoring function.

[00200] New gTLDs Recommendation: New generic TLDs recommendation may be modeled differently from the algorithms described above. Since there is very little reliable data regarding the new gTLDs, a different approach for ranking may be used. The system uses a general framework termed semantic relatedness for ranking the relevance of such gTLDs to a brand. The system may find the extent to which a brand is related to each gTLD linguistically.

[00201] Two main approaches may evaluate such a measure: (A) Information Theoretic Measures: Find the co-occurrence of both words in websites relative to the occurrence of each individual word. The assumption is that such a co-occurrence bears linguistic meaning and that search engines return such reliable counts (actually they do not; each search engine manipulates a query in various ways). The "Normalized Google Distance" is an approach for calculating such a measure. (B) Ontological Measures: Use an existing ontology to locate both words, and then employ graph distance as an estimate of semantic relatedness. The assumption is that such an ontology exists. The "Wikipedia distance" is an approach for calculating such a measure.

[00202] Since the above measures both have inherent drawbacks, a different approach may be used: (a) Instead of using the gTLD as a string, a meaningful word/expression(s) is used to formulate a query for a search engine. (b) Instead of using the counts of the query result, the links are analyzed. A "good" (efficient, accurate) query should return "good" (relevant, accurate, on-topic) links, along with related searches, images, news, or the like. The system uses a measure based on the above. For each link a measure of “goodness” or efficiency is defined, based on the mentioning of the brand in the snippet and URL, together with gTLD’s words. (c) Known properties of the gTLD and the brand (according to its configuration) are incorporated to get a score more adapted to the brand.

[00203] The system may use other approaches, that may rely on all three measures above and navigating around the drawbacks (using different search tactics, rich ontologies and a “goodness” or efficiency measure that incorporates the system's data provided by the user).

[00204] A system in accordance with the present invention may be implemented as a computerized platform or web-based service, or stand-alone software/hardware module(s), or as a “Software as a Service” (SaaS) dedicated to Digital Brand Protection and Online Brand

Management. Optionally, the system may be implemented in other manners, such as, a hardware and/or software product which may be purchased and then installed and operated autonomously by a brand-owner or a website-owner, with or without subscription service(s).

[00205] A demonstrative implementation of the system, for example: (a) Monitors the Internet for sites that potentially risk an organization's brand or infringe its trademarks; (b) Collects a large amount of information from many data sources regarding the site, and automatically prioritizes the risks based on highly sophisticated algorithms; (c) Monitors the organization's own sites using a similar method, collects data, and uses algorithms to evaluate the sites, in order to help the organization; (d) Better manage its portfolio of sites; (e) Evaluate effectiveness of SEO activities; (f) Better monetize its digital assets; (g) Allows automated and intelligent management of the organization's domain portfolio.

[00206] The system may, for example: (a) Scan and monitor the Internet for brand abuse – brand and trademark infringement; (b) locate websites that are allegedly risking and exploiting the brand and/or trade-mark or service-mark or trade-name; (c) Measure and collect data about multiple aspects of the suspected websites, including their relevance and closeness to the brand, their popularity, the estimated investment in their development, and the potential damage they can create; (d) Analyze and prioritize the different websites based on their potential risk to the organization; (e) Provide business intelligence for managing the brand online.

[00207] The system may provide automatic services for analysis, monitoring and control of digital brand names and domain names management. The system may use web crawlers and data collectors; may provide portfolio monitor and control; handle variety of technical procedures, help minimize damage caused by a problem, monitor security, enable allocation of organizational responsibility, discover trademark or service mark violations (or suspected violations) and forgery and assist in fighting against the violating parties.

[00208] The portfolio management module is a module, to which the information regarding the domain names owned by the organization is fed. The system collects data from the web relevant to the organization's digital brands or non-digital brands (e.g., trademarks or brands used by the organization offline and/or online), provides an updated view of current status. The information is analyzed and prioritized, based on common knowledge built by the system experience; gathered from the use by all its users, by cross organizations prioritization and by learning the specific prioritization corrections done by the organization's employees.

[00209] The system improves the analysis and prioritization by learning from actions done by the users. It will first learn from the use by operator's employees and later it will be

available for use to other organizations. The collective wisdom collected through the use of the system will enhance and adapt the system constantly.

[00210] In some embodiments, the system may utilize a module and/or algorithm in order to detect, identify and/or determine cross-brand infringement. In a demonstrative example, the system may collect and analyze data, domain registration data, Internet traffic data, website content, and/or other data, and may detect that: (a) a first website, such as "Samsung-Phonez.co.uk" is abusing a first brand that belongs to a first brand owner; and also, (b) a second website, such as "Nokia-Phonez.co.uk", is abusing a second brand that belongs to a second brand owner. The cross-brand infringement detector module may seek for, and may identify, a pattern among the infringing websites; for example, (A) both of the abusing websites end with the suffix of "phonez" which is slang or misspelling of "phones"; and/or (B) both of the abusing websites contain a name of a brand or company that operates in the same field (e.g., cellular phones); and/or (C) both of the abusing websites are at the same TLD or gTLD or ccTLD, such as ending with ".co.uk" in the above example; and/or (D) both of the abusing websites share at least one common registration detail, or contact person, or ISP, or hosting company, or DNS record, or IP address, or other parameter which may be common to both of the abusing websites. The system may uniquely leverage such cross-brand infringement detection, in one or more ways. For example, the mere detection of such cross-brand pattern, may by itself be used as for further processing and/or analysis by the system; for example, to increase a risk score of each one of the abusing websites that belong to this pattern, or to change their status from "possibly abusing" to "certainly abusing". Additionally, the system may notify the brand owner (e.g., one of the multiple brand owners that are involved in the cross-brand infringement; or some of them, or all of them) about the detected cross-brand infringement, and may thus enable cooperation among such multiple brand-owners in their subsequent operations (e.g., legal steps, cease-and-desist notifications, DRP complaints, negotiation to purchase, taken-down notices, or the like). This may provide multiple benefits to the cooperating brand-owners, for example, reduction in costs for taking enforcement action; presenting a "unified" stand of multiple brand-owners against a common cross-brand infringer; and an improved ability to prove in a legal process that the abusing websites are indeed abusive in their nature as they infringe on multiple different brands and not only on a single brand. Other benefits may arise from this unique feature of the system.

[00211] Some embodiments may include a module for scanning an entire registry of domains (e.g., of an entire TLD registry, for example, ".com", or ".org", or ".net", or ".uk",

or ".de", or ".trade", or ".best", or ".pink") in order to detect multiple domains and/or websites in that registry, that (A) do not comply with rules that dictate which content is allowed or disallowed in such websites on that registry, and/or (B) abuse a brand name. In a first example, an entire list of domains and/or websites, of an entire registry, may be checked against a list of brand names (e.g., of mixed types, or of particular brand types, such as, fashion brands, computer brands, or the like), in order to detect brand infringement or abuse; and optionally, the RPID algorithm may be used, an RPID score(s) may be generated, for websites that are suspected to be abusing. In another example, the content of such websites on that registry, may be analyzed in accordance with the analysis methods that are described herein, in order to detect non-compliant website content (e.g., pornographic content, illegal gambling content) which may exist on websites of that registry. In both cases, the results of abusing websites or non-compliant websites, may be displayed as a prioritized list or a ranked list, for example, based on descending RPID scores, or based on other score(s) which may measure or estimate or indicate the severity of the brand abuse and/or the non-compliance. The list of websites may be accompanied by action items, as described herein, which the user may selectively initiate with regard to some or all of the websites on the ranked list.

[00212] Reference is made to Fig. 3, which is a schematic illustration of a user interface and screen 300 displayed by the Evaluation Module, in accordance with some demonstrative embodiments of the present invention. Toolbars 305-306 may allow the user to make selections or take actions or display portions of the data; buttons 307-310 may allow the user to take actions, for example, consult, sort by parameter, filter by parameter, start evaluation, or the like.

[00213] A brand selector interface 301 may allow the user to select a brand for evaluation and data presentation purposes, out of multiple brands that the user may define on the system. A level-based distribution box 302 may indicate the distribution of domains, that belong to that brand, at a certain evaluation level (e.g., "high" evaluation level, or "medium", or "low"); for example, indicating that at the "high" evaluation level, 26 domains are ".com", and 11 domains are ".co.uk", and 9 domains are ".net".

[00214] Similarly, a TLD-based distribution box 303 may indicate the distribution of TLDs related to this brand; for example, if the TLD ".com" is chosen, then the TLD-based distribution box 303 may show that out of all the ".com" domains of this brand, 37 domains have High evaluation level, 72 domains have Medium evaluation level, and 91 domains have Low evaluation level.

[00215] Furthermore, multiple domains or websites of the selected brand may be indicated on the screen; for example, a first website or domain 311 and a second website or domain 312; each one associated with a displayed score 321-322, and with specific RPID values 331-332 for each website (or, only RPI values without the Damage score if the items are owned by the brand owner). Optionally, a graph 350 with two respective graph lines 351-352 (or other suitable charting component) may demonstrate the score of each website as a function of time and relative to other websites' scores.

[00216] An aggregator data box 360 may indicate additional, aggregated data with regard to multiple domains that are related to this brand; for example, how many such domains have High (or Medium, or Low) evaluation level; how many are "new" and were not yet evaluated; how many are not monetized at all; or the like. The lists and items presented on the screen 300 may be sorted, filtered, and/or searched by using suitable interface components for sorting, filtering, and/or searching.

[00217] In the Evaluation module, multiple websites that are owned by the client are concurrently presented on the screen. A scroll down may reveal the next websites in the evaluation level the user views. The line for each evaluated website includes basic information, the score section and a graph showing the evaluation score of the website over time.

[00218] A switch allows the user to change the evaluation level of the specific website. The system is a learning system and this switch provides the user input to the system in order to teach the system. The algorithm of the system will learn from such a change in the evaluation level of a specific website and will be updated accordingly.

[00219] The score section includes a general score calculated based on each of the RPID algorithms, and the scores of each of the RPID algorithms. Actions can be taken either for each evaluated website separately, or for a group by selecting several evaluation lines and using a general "Actions" button. At the bottom part of the screen, a section showing a more detailed graph of evaluation scores over time is presented. When the user marks one of the evaluated websites, it is added to the graph. Several graphs of several websites can be presented at the same time. The evaluation levels may be presented by using different shades of green for each level, or by using other suitable color scheme. It is noted that with regard to domains or websites that are owned by the Brand Owner, the "damage" component or the damage score may be omitted or ignored or not-calculated; or, an "RPI" algorithm may be used instead of the "RPID" algorithm described above.

[00220] Reference is made to Fig. 4, which is a schematic illustration of an on-screen dashboard 400 which may be displayed in accordance with some demonstrative embodiments of the present invention. For example, Brand Risks may be divided to multiple levels, such as three options of High, Medium and Low. High is represented by the red color, Medium by orange and Low by yellow. Other colors or indicators may be used, and other number of levels may be used.

[00221] Opportunities (or Available Domains) may also be divided to multiple (e.g., three) levels of importance. The blue color is used to present opportunities, and levels are presented by different shades of blue, where dark blue represents the most important or highly important opportunities.

[00222] Evaluation data is presented in multiple (e.g., three) levels, High, Medium and Low. The green color is used to present opportunities, and levels are presented by different shades of green, where dark green represents the sites with the highest evaluation score.

[00223] The GUI may be adjusted to present the data by brand, and also by a business unit. For example, if a business unit has two brands, then a brand manager of each brand may watch the data for the brand he is responsible on; whereas the unit manager may watch the data of each brand separately, as well as an accumulative view of the data for both brands. The administrator on behalf of the client may define the organizational structure in the system, and managers in different levels, are able to watch the data of their different units in both single brand view, and accumulative view (unit view).

[00224] The main Dashboard allows the user to watch summary data for all (e.g., three) major sections of the system – for example, the Protection section that includes Risks and Opportunities, the Optimization section that includes the Evaluation and Monetization sections, and the Management section that includes domain, hosting and SSL management data. The numbers of new messages and of notifications may be presented, for example, in a red square over an icon representing notifications and an icon representing messages.

[00225] In a demonstrative implementation, for example, a brand selector box 401 may allow a user to select the brand for which data is displayed. The dashboard may include a Protect Pane 410, an Optimize Pane 420, and a Manage Pane 430.

[00226] In the Protect Pane 410, a brand risks box 411 may indicate websites or webpages posing high risk, medium risk and low risk; and an available domains box 412 may indicate most important available domains, quite important available domains, and least important available domains.

[00227] In the Optimize Pane 420, an evaluated domains chart 421 may indicate how many domains owned be the Brand Owner were evaluated (e.g., per day or per week); a sites evaluation box 422 may indicate how many domains achieved a high evaluation score, a medium evaluation score, and a low evaluation score; and a non-monetized domains indicator 423 may indicate how many domains are currently not monetized.

[00228] In the Manage Pane 430, an ownership box 431 may indicate the total number of domains owned by the organization; an Action Items box 432 may indicate one or more to-do items or action items that are due, with particular emphases on urgent or highly-important actions items and the number of domains associated with them (e.g., urgent renewals of domains; urgent renewals of SSL certificates; security actions; management actions; domains having incorrect settings).

[00229] Reference is made to Fig. 5, which is a schematic illustration of a Brand Risks interface 500 which may be displayed in accordance with some demonstrative embodiments of the present invention. For example, multiple risk websites or webpages may be concurrently presented on the screen. A scroll down will reveal the next risk websites or webpages in the risk level that the user views. The line for each risk website or webpage includes basic information, a scaled-down screenshot of the website or webpage, and the score section.

[00230] A switch allows the user to change the risk level of the specific website or webpage. The system is a learning system and this switch provides the user input to the system in order to teach the system how to adjust its algorithm. The algorithm of the system will learn from such a change in the risk level of a specific website and will be updated accordingly.

[00231] The three risk levels may be defined by colors, for example, red for high, orange for medium and yellow for low. The score section includes a risk score calculated based on each of the RPID algorithms, and the particular scores of each of the RPID components. If the website or webpage was recognized as being part of a group of websites or webpages with similar characteristics (Risk Patterns), then an icon indicating that it is a part of that group may be added in the line of that risk website or webpage. Actions can be taken either for each risk website or webpage separately, or for a group by selecting several risk lines and using a general "Actions" button which may apply to all the selected websites or webpages. Such actions may include, for example: “Mark as Mine”, or “Mark as Not a Risk”, or “Mark as an Affiliate”; as well as, for example, “send a cease-and-desist notification”, or “send a take-down notice”, or “file / initiate a dispute resolution program /

DRP", or "initiate a negotiation to purchase", or "Flag this website for additional review or handling" (e.g., to appear in a sub-list of sub-group of Flagged Websites). Other suitable actions may be available.

[00232] When a user clicks on one of the risk websites or webpages presented, the user may be redirected to a Risk Details Page. The page may include, for example, the following elements or data-items: The RPID scores of the website; a thumbnail screenshot of the website; WHOIS data; DNS records; GEO information such as the IP address, the country it is originated from; the ISP hosting the website; etc. It may include details regarding the enforcement actions that were taken in regards to the specific website or webpage, including Cease and Desist notification, DRP complaint filings, negotiation, take down requests, etc. It may additionally include details about the content analysis, including the brand prominence in the text of the website or webpage, examples for the usage of the brand in the website or webpage, keyword analysis, including top keywords relevant to the brand that were found in the text of the website, traffic and statistics information, SEO measured data, parameters defining the structure of the usage of the website or webpage, whether or not a logo of the brand was found on it, whether or not the design of the website (of particular website components, such as buttons or toolbar) is similar to the designs used by the brand, or the like. In addition, a downloadable full-size screenshot of the website or webpage, date-stamped and time-stamped according to the date-and-time it was captured or scanned and IP stamped according to the IP address of the website or webpage at the time of scanning, and a downloadable WHOIS details page date-stamped and time-stamped according to the time it was scanned, will be available. These date-stamped time-stamped records may be used as evidence in a legal process or in court in case the brand decides to take action against any of the parties related to the operation of the website or webpage.

[00233] Reference is made to Fig. 6, which is a schematic illustration of Brand Opportunities interface 600 which may be displayed in accordance with some demonstrative embodiments of the present invention. For example, multiple available domains are concurrently presented on the screen. A scroll down will reveal the next domain names in the opportunities level the user views. The line for each domain includes basic information and the opportunity score section.

[00234] A switch allows the user to change the opportunities level of the specific domain name. The system is a learning system, and this switch provides the user input to the system in order to teach the system. The algorithm of the system will learn from such a change in the opportunities level of a specific domain name and will be updated accordingly.

[00235] The score section includes a general score calculated based multiple algorithms, and the separate scores of each one of those algorithms. Actions can be taken either for each evaluated domain name separately, or for a group by selecting several opportunities lines and using a general "Actions" button. Actions can be, for example, register the domain, add the domain to a shopping cart for purchasing, keep the domain in a "wish list", etc. The opportunities levels are presented by using different shades of blue for each level, or by using other suitable color scheme.

[00236] Reference is made to Fig. 7, which is a schematic illustration of Management Module interface 700 which may be displayed in accordance with some demonstrative embodiments of the present invention. The GUI of the management section is intended to present important information for the management of the client's domain name portfolio, hosting, SSL certificates, etc.

[00237] The main page of the management module allows quick access to data and groups of required action based on urgency level, based on how close the deadline to act is (e.g., action must be taken right now, or today, or this week, or this month, etc.), based on the estimated budget involved in each action, and/or other classifications or criteria.

[00238] The system can prioritize (or de-prioritize) different actions based on the evaluation score of the website – for example, the user can define that when a website with a high evaluation score is up for renewal then it will either be automatically renewed or marked as urgent (even if it is in the low level of priority such as the 90 days prior to expiration date level presented in the screenshot). Other actions can be prioritized (or de-prioritized) in a similar way – for example the use of a security solution such as namelock or namewatch is prioritized based on the evaluation score. For example, websites with a high evaluation score are presented in the security section as "required", websites with a medium evaluation score are presented as "recommended", etc.

[00239] Reference is made to Fig. 8, which is a schematic illustration of Management Module sub-section interface 800 which may be displayed in accordance with some demonstrative embodiments of the present invention. For example, moving from a line in the main page of the management module is performed by clicking the arrow on the right hand side of a specific line – such as "Renewal", "Security", "Registration". The central part of the page is swiped out to the left and the detailed section swipes in simultaneously from the right. The line with the data that was presented in the main page of the management section, is presented as a headline in the top of the detailed section, and the detailed information is

presented under it. Clicking the arrow in the headline will swipe the central part back to the main page.

[00240] The time left to take actions (such as renewals) is presented in the number of days, and a circle of 30 dots around. Based on the number of days left, an equal number of dots will be colored. For example if there are 21 days left for renewal – 21 dots will have color, and the 9 left will seem as colorless. Other suitable methods may be used to indicate the urgency or non-urgency of tasks, or to indicate the remaining time frame until each deadline.

[00241] The following definitions and terms may be used, in the discussion herein, in conjunction with some demonstrative embodiments of the present invention.

[00242] The Domain Name System (DNS) is a hierarchical distributed naming system for computers, services, or any resource connected to the Internet. It associates information with domain names assigned to each of the participating entities; and it translates domain names meaningful to humans into the numerical identifiers associated with networking equipment for the purpose of locating and addressing these devices worldwide.

[00243] A domain name is a name for an Internet Protocol (IP) address of a website. Since IP addresses consist of a combination of numbers, domain names are a way for people to remember where a website can be found without having to memorize combinations of numbers and periods. Some embodiments may distinguish between two parts of the domain name, for example "www.example.com", which are the Label and the TLD (Top Level Domain).

[00244] Label is the name which the domain name owner chooses, which ends with a "." (a period). In the above mentioned example, the label is the word "example".

[00245] TLD is the suffix that follows the label separated from it by the "." (the period) and associates it with a zone of the world. In the above mentioned example, the TLD is "com".

[00246] The original top level domain names are known as "generic" TLDs (gTLDs). The ".com" is the most desired because most major corporations adopted it early on, and it became the best known and most relevant. However, if a ".com" name has already been registered, the alternative is to use another gTLD such as ".net" or ".biz".

[00247] The following are some examples of the current available gTLDs: ".com" for commercial; ".net" for network-oriented entities (in the past) or for other entities (at present); ".org" for non-profit organizations; ".int" for international treaties or entities; ".biz" for business entities; ".info" for general usage; ".mobi" for mobile websites; ".tel" for directory

of organization's phone numbers; ".jobs" for job recruitment websites; ".musem" for museums; ".travel" for the travel industry; ".pro" for professionals such as lawyers and doctors; ".xxx" for adult-oriented websites or pornographic websites; ".edu" for universities; ".gov" for government branches; ".mil" for military. Additionally, each country may have its own ccTLD or country code TLD.

[00248] Domain hijacking is when someone illegally or fraudulently takes your domain away from you. Usually it is accomplished by falsifying a transfer authorization. It can also be done by somebody temporarily changing critical records of your domain such as the managing DNS server records, the A record, or the like.

[00249] Domain name speculation is the practice of identifying and registering or acquiring Internet domain names with the intent of selling them later for a profit. The main targets of domain name speculation are generic words which can be valuable for type-in traffic and for the dominant position they would have in any field due to their descriptive nature. Hence generic words, their combinations as well as phrases such as insurance, travel, shoes, credit cards, and others are attractive targets of domain speculation in any top-level domain. The speculative characteristics of domain names may be linked to news reports or current events. However, the effective period during which such opportunities exist may be limited. Quick turnaround in the resale of domains is called domain flipping.

[00250] The Extensible Provisioning Protocol (EPP) is a flexible protocol designed for allocating objects within registries over the Internet. The motivation for the creation of EPP was to create a robust and flexible protocol that could provide communication between domain name registries and domain name registrars. These transactions are required whenever a domain name is registered or renewed. The EPP protocol is based on XML - a structured, text-based format. The underlying network transport is not fixed, although the only currently specified method is over TCP. The protocol has been designed with the flexibility to allow it to use other transports such as BEEP, SMTP, or SOAP. Not all registries use EPP, and those that do, perform different changes for their own registry, eliminating the standardization of the protocol,

[00251] Domainer is someone who registers/buys domain names in order to generate revenues either from traffic of users that are exposed to advertisements (usually Pay Per Click ads, or other types of online ads) or by selling them for a profit. Usually, until these domain names are sold, they are used for advertisements, and are called "Parked Domain Names".

[00252] NameLock is a product or feature of the system in which the settings of the domain cannot be changed on-line, including the DNS servers, the DNS records, and all the

domain owner data. A suitable way to prevent a domain from being hijacked is to use the NameLock or other suitable locking mechanism or non-modification mechanism.

[00253] Registrar-Lock status of a domain exists when a domain is locked, a domain transfer cannot even be started by another registrar. A domain in registrar-lock status means that the registrar for that domain has locked the domain to prevent any unauthorized domain transfers. Usually the actual registrant has a setting in his account that allows him to lock and unlock his domain at will, for example, through an online interface or control panel.

[00254] Parking a domain (otherwise known as domain parking) means pointing a domain name to a placeholder web page which tells visitors that this domain has already been taken. Most people use this feature to provide a temporary page for visitors to see while they decide what to do with their domain. Usually the registrar may provide that page and may use a domain parking system that will exhibit PPC (Pay Per Click) ads (or other ads) on the page. In the case of "Parked domains" the systems and structure of the pages are similar, and these are cases in which “domainers” and others are looking to benefit from the traffic generated to different domain names.

[00255] Domain forwarding occurs when a domain name is automatically redirecting a visitor to another website (can be done using HTML or a script to do the redirection, or through the DNS records of the domain name itself). When a domain is set to forwarding a visitor to another page, the domain's name does not stay in the web browser's URL bar. Instead, the new page's URL is displayed, unless a "Framing" script or page is used.

[00256] WHOIS (pronounced as the phrase “who is”) is a query and response protocol that is widely used for querying databases that store the registered users or assignees of an Internet resource, such as a domain name, an IP address block, or an autonomous system, but is also used for a wider range of other information. The protocol stores and delivers database content in a human-readable format.

[00257] A DNS server or a name server is a server that returns an IP address when given a domain name. This IP address is the domain's location on the Internet.

[00258] NameWatch is a product or feature of the system that periodically scans the domain settings by contacting the relevant Registry's database and the authoritative DNS server, looking for any change in the domain setting. Once a change is found an alert is given. Since sometimes the DNS servers or the registries are not accessible for a short period of time, there are false alarms from time to time. For any change in the setting the customer is contacted to find out if he did the change.

[00259] Risk analysis has been discussed above, and may include, among other operations and features, a thorough analysis of all digital brand risks associated with an organization's brands, products and trademarks / service-marks (registered and/or pending) in all relevant countries, including a detailed audit report of its domain name portfolio. In the risk analysis the system may analyze the current and potential risk from domain names not owned by the organization in regard to a specific brand name; and may determine the current and/or potential damage to the brand earnings or to the brand value. This analysis may be done for a group of websites related to the brand name.

[00260] Opportunity Analysis determines what may be the potential value of a domain name (that is not owned by the organization) to the brand.

[00261] Risk & Opportunity Analysis (ROA) is performed when a new brand is launched or transferred to the system, and updated periodically automatically.

[00262] Domain Portfolio Administrator (DPA) is the role dealing with all the administrative procedures resulting from the legal and brand manager decisions, e.g., registrar domain name transfer, registrant domain name transfer, domain name registration, DNS settings, or the like.

[00263] In the context of Brand Monitoring, some embodiments may perform: (a) recognition, by using domain data collection (e.g., from IDNs) and semantic content scanning (e.g., including multi-lingual content); (b) analysis, including data mining, pattern recognition, and prioritization; (c) active handling, by automatic responses and/or follow-up actions, and continued monitoring of activity.

[00264] The advanced data analysis and correlation capabilities may include: Automatic prioritization of risks and violations based on algorithm; Algorithm for sorting capabilities to locate patterns of violations or infringements or suspected infringements (locate leading cyber-squatters according to different data available); Aggregation of data (e.g., locating all domains violating the brand in the site, in order to ask Google or Yahoo! or Bing or other search engines, to delete or hide the violating domains from their search results). Other operations may be performed as part of the Risk Analysis, as described herein.

[00265] The multilingual content analysis may enable: locating of Phishing or Pharming attacks; Locating brand violation within violating websites; Locating slander sites; Locating sites that monetize using the brand (through ads, direct sale, or the like).

[00266] The automatic or "one-click" actions according to the analysis may include: Automatic alerts of high-risk violations; Automatic "Cease and Desist" notifications to the

domain registrants and to other involved parties; Automatic requests to ISPs and hosting companies to disable violating sites; Monitoring of replies, and automatic follow-ups on requests, all controlled in an easy to use management system; Automation and control of domain transfers (of those that will surrender); Full compatibility for IDNs and different languages.

[00267] The system may allow the user to see the information for the whole portfolio or just a specific brand or a group of related brands or to a specific country/zone or a group of countries. In short any filtering of the information. The ROA may be performed on a specific brand.

[00268] The system monitors: (a) Domain names that are related to the brand, such as, names in which the brand name and/or relevant keywords appear, including "typos", spelling errors, typographical errors, and/or other linguistic mutations; (b) websites, which mention the brand name or related keywords in their content with the intention to sell relevant products and/or services, sell counterfeits, commit fraud, or otherwise abuse the brand.

[00269] Complete Brand Management and protection may include: (a) Monitoring and fighting web-sites that abuse the brand and/or infringe the trademark; (b) Building the domain portfolio wisely in order to prevent others from stealing revenues (or from monetizing on a brand owned by another entity) and to prevent dilution of the brand or trademark / service-mark; (c) creating the strategy for domain name portfolio management, including prioritizing domain registration of available names, abandoning domain names which do not contribute to the brand, prioritizing for which domain names to activate security solutions, or the like.

[00270] Accordingly, in a demonstrative system, a brand protection platform may include: (a) a portfolio / brand overview presentation module (for all the domains relevant to the brand being protected); (b) a risk analysis module (for violating domains and/or violating websites); (c) a digital presence / online presence strengthening module (for identifying available domains having opportunity potential); and in conjunction with the above decision-support modules, ROA process, setting and monitoring, and also supporting a new brand launch based on collected data analysis.

[00271] In some embodiments, the main focus of Brand Monitoring is on Taken (already registered; currently registered) domain names and websites. The taken domain names are divided into: affiliates; not active; active websites which may be involved in one or more of the following: (a) redirection to other websites; (b) Competing use; (c) Selling counterfeit merchandise; (d) Containing slander or libel or defamation, or misrepresentations

or inaccurate information; (e) Fraud, phishing, pharming; (f) Legitimate (or legal) unrelated use (g) Parked domains that contain ads (such as PPC ads) of different products and services including competing products and services.

[00272] Before the system monitors the brand, it may collect data relevant to the brand and analyze it. This process may be called Risk and Opportunities Analysis (ROA). The research of data will produce the following results: (a) A List of all taken domains and their current usage characteristics (i.e. active websites, brand exploiting websites, fraud, PPC parking, redirection to other websites, etc.); (b) the content analysis of each website and the level of its relevance to the brand (c) A table with the investment index and an investment analysis for each of the taken domains; (d) A List of the company owned domains and their current usage (i.e. redirect to one of the company's active websites, inactive, redirects to a PPC parking page, etc.); (e) A list of the company owned domains that have inaccurate contact data; (e) A list of the company owned domains that do not have updated DNS servers' definitions; (f) A table with the Search Trend Index for the main brands in different countries; (g) Print-screen (screenshots or screen-captures) examples of Taken domains, in full size and/or in scaled-down version or thumbnail. Other suitable operations may be performed as part of the Risk Analysis, the Opportunities Analysis, or the Risks and Opportunities Analysis.

[00273] Based on the results found in the research, a thorough analysis may be automatically conducted by the system in order to conclude the following: (a) Availability Distributions of researched domains, according to different perspectives: general perspective, priority domain names, and high-risked domains; This analysis allows evaluating what part of the optional registrations with the company's brands is owned by the company, taken by others or available, across the different perspectives. (b) Domain portfolio utilization - the Distribution of the usage of the company's domain portfolio. This analysis provides a view of the level of utilization of the company's current domain portfolio according to the web marketing strategy of the company. (c) Brand exploitation by others - the Distribution of the usage of taken domains and other websites that contain content that abuses the brand. This analysis provides an understanding of the level of exploitation or utilization of the company's brands by third parties. (d) Company exposure in different countries - analysis of the level of exposure of the company across different countries according to the search trends and the current owned domains. (e) Brand security risks - a summarizing analysis of the company's exposure to the different Digital Brand Security risks based on the research results.

[00274] The system may distinguish between the following domain names lists: Owned; Available; Taken. Each list is analyzed, prioritized using a different scoring function, monitored separately; and relevant information is presented.

[00275] For example, the Owned domain names info may include: current usage (domain portfolio utilization); currently unused – recommended for self-monetization; current security measure used; indication of having inaccurate contact data (domain contacts accuracy); indication of not having updated DNS servers' definitions (DNS accuracy). The Owned domain name analysis results based on evaluation algorithms may assist in making the following decisions: (a) Domain names at risk – need increased security measure; (b) Relative contribution to brand – help in decision how to better utilize and which to abandon.

[00276] The Taken domain names info (they are constantly or continuously or periodically monitored for change of use) may include: current usage characteristics; investment index; which of them violates trademark either in the domain or in the content. The Taken domain names analysis results based on evaluation algorithms may help make the following decisions: (a) Domain names to take legal actions against; (b) Domain names to purchase.

[00277] The Available domain names analysis results based on evaluation algorithms may help make the following decisions: Which available domains to register.

[00278] The ROA may be used to establish the company's Domain Portfolio Management Strategy: (a) Registration strategy - according to availability and brand priorities – creating a list of domains to be registered; (b) Acquisition strategy - according to the current usage and investment index of taken domains and brand priorities - creating a list of domain names to negotiate for buyout; (c) Deletion strategy – in cases of abundant brands, or unnecessary domain registration – creating a list of names that can be deleted from the current portfolio or can be abandoned (e.g., passively, by allowing a domain registration to expire without renewal).

[00279] Brand data collection may include collection of the data that may be required in order to perform the risk analysis process regarding a specific brand: (a) Brand name, associated trademarks and slogans; (b) Countries of activity (e.g., countries in which the company has local branches and/or local subsidiaries, or local affiliates, or customers, or intended markets where the company intends to establish local presence or perform marketing activities; or countries in which this brand is marketed; for each country, related local variations of the brands and their priorities; as well as countries in which customers are looking for the brand in spite the fact that the company has no presence there); (c) Domain

names related to the specific brand (for example, the following may be required for domain names which are not managed by the system operator: A currently known list of the company's domain names; a list of the company's main active websites; the DNS servers' details that should be used by the company for its active websites; list of domain names used for email accounts; the expected contact details for the company's domains, including (if applicable) the details of subsidiaries and country branches; (d) Keywords relevant for the brand, for example keywords that are search-terms used in search –engines in which the brand advertises itself; (e) Competitors' websites list.

[00280] In the research scope definition stage, based on the data collected, an initial analysis will be performed by the system in order to determine the scope for the planned research, including: brand-related domain names; brand-related websites.

[00281] In identifying brand-related domain names, the following may be taken into account: (a) Naming variations – listing different variations of the names to be examined, including major misspellings, typos, word swaps, use of hyphens; (b) Researched TLDs – defining the relevant Top Level Domains to be used in the analysis. A function will define which TLDs should be research based on the list of countries provided by the customer, and based on rules defined in the system (for example, gTLDs that should be researched).; (c) The system may propose a set of additional TLDs to be searched, based on a process that finds relevant countries for the brand that were not defined by the user (e.g., utilizing Google trends) or rather ; (d) Additional TLDs – the system will have a set of rules and will use tools in order to offer relevant TLDs that the user may miss; (e) The ROA may be done on full list researched TLDs (the system may define all TLDs as relevant for analysis) for all name variations.

[00282] In identifying brand-related websites, the following may be taken into account: (a) Violating / infringing and competing websites - a search is also done to find relevant web-sites in which the domain name does NOT contain the brand or a variation of the brand; (b) Analysis of Search Trends for main brands; (c) Analyzing search trends of the main brands as search terms in different languages and countries, in order to evaluate the level of interest in these brands and in order to find possible infringing websites.

[00283] The search for relevant websites may be done once every T days. The search will be based on the brand name, the relevant keywords and the other data provided by the user to the system. The system will use an algorithm to filter the resulting list of websites in order to prioritize the risk level of the websites. The relevant web-sites will be presented to the user, and the user will be able to provide its own input on the level of the risk.

[00284] The system may know which domain names are owned by the organization. If the system manages the organization's domain portfolio it has this information, otherwise the user will provide the list and system may check it by verifying that the registrant is actually the organization.

[00285] With regard to domain names operated by affiliates, not owned by the organization, but have the brand as part of the name: The user will be able to mark for each website whether it belongs to a known affiliate and if so – may have an option to mark one of the following options: (a) The affiliate has permission to use brand related domain names and/or brand related content; (b) The company wants to take over the domain names – mark the preferred action, i.e. let the system operator take care of a transfer process. The brand manager and/or other users who may act on behalf of the Brand Owner (e.g., legal advisor, legal department, IT manager, marketing manager, Intellectual Property (IP) manager, project manager, CFO, or the like) may make similar decisions. For example, the legal department looks for trademark violation and trademark violation preventive actions, while the brand manager looks to better utilize the web for the company interests (e.g., protect from, or stop, or prevent trademark violation, trademark abuse, or traffic stealing with or without questionable trademark violation).

[00286] The system may build its own "domain name database", in order to build and constantly update the system's own database of domain names that are relevant to the brand being protected. The system will have a database of worldwide registered domains, which will be used to find whether a domain name or a variation of it is registered. The database will provide searching with partial name, e.g., search the database to find whether a domain name containing the brand name "Yahoo" exists, e.g. "12YahooABC.com" and of variations and typos e.g. "Yaho.com". There are public databases which contain lists of registered domain names for specific TLDs; but those databases do not provide the required search capabilities of searching within the domain name.

[00287] The system may constantly update this database with every domain name the crawler encounters while searching the net. The system may initiate intentional crawler scans for this purpose. The system may use recursive or iterative crawling. The system may employ learning algorithm to better prioritize the lists. The learning may be from all organizations that belong to the same sector (For example, retail is not the same as non-retail; sales differ from service). The system may fine-tune the leaning based on the interaction done by employees from the same company. In the Taken domain name list, the system may distinguish between violating and non-violating domain names.

[00288] In order to fight the "violating" domain names, websites and webpages, the system may look for patterns among violating domain names, websites and webpages. The system tracks the "violating" domain names, websites and webpages for change in activity, analyzing the change. Once an action is performed regarding a taken domain name websites and webpages, it would be monitored by the system more frequently.

[00289] Examples of automatic or semi-automatic actions that the system may initiate or take are: (a) Send "Cease and Desist notifications to the registrants; (b) Automatic requests to ISPs and hosting companies to disable (shut down, take offline) violating domains, websites and webpages; (c) Generate legal material, generate evidence showing or demonstrating the violations or infringements.

[00290] The system presents the user with a prioritized list of available domains. The user decides out of this list which domains he wants to register. He may register part of the list because of budget limitations, and the rest he may add to a prioritized wish-list of domain names to buy. The system may track the available domain names which the user did not buy, and may notify the user once someone else has bought it and it is in use.

[00291] The system may enable one or more processes, which may be initiated and/or performed by a brand manager, an operator of the system, a legal consultant, an automatic or semi-automatic computerized module, or a combination thereof. Such processes (or "use cases") may include, for example:

[00292] (a) Set-up / Update brand ROA scope; the user provides the brand name and relevant keywords and relevant countries and/or TLDs, competitors data, sectors of activity, a list of domain names owned by the organization, etc.; the user may at any time add or change the data; once the ROA set-up is done or updated, the system activates the ROA process.

[00293] (b) New brand launch: The system may help the user assess the current status of a new brand name that the organization intends or considers to launch; the system may create an ROA for the intended brand; once the ROA is available the system may support the user in making brand decisions; possibly providing the ROA in parts (e.g., immediate results, intermediate results, and final results) as results are gradually accumulated.

[00294] (c) Perform ROA: The system may collect relevant data, process the data and organize it in order to provide detailed reports, presentations and alerts and assist in making decisions regarding websites, webpages and domain names.

[00295] (d) Monitor the ROA and update it on a continuous basis.

[00296] (e) Make ROA-based decisions; assist the user in making decisions based on ROA results, for example, (1) Which available domain names to register, (2) Against which

websites or webpages to activate legal actions, (3) Which taken domain names to purchase and what budget to allocate, (4) Which owned domain names to increase security measures, (5) Which owned domain names to self-monetize and which to abandon.

[00297] (f) Consult with another team-member regarding different issues or actions needed.

[00298] (g) Approve or provide opinion: allow any employee, even those who are not direct users of the system, to receive a request to approve or consult a decision, and provide the approval or consultation in an efficient manner (e.g., presenting to such employee an approve/reject interface for quick decision).

[00299] (h) Retrieve approval / consultation documentation, for previous events.

[00300] (i) Start domain negotiation; the user may allocate budget and activate the negotiation process done by the system.

[00301] (j) Handle the purchase negotiations; once the customer gave the order and allocated the budget, the system may start the negotiation and document the actions taken and current status of negotiations; the system may send reminders, updates and reports to the user.

[00302] (k) Create / update landing page template; create landing page for a specific brand, from several possible pages provided by the system; this page may be used for self-monetization.

[00303] (l) Translate landing page; once a landing page was generated in one language, the system may translate it and generate landing pages in other languages.

[00304] (m) Monitor legal actions; monitor responses to the sent-out notifications and domain status, provide automatic follow-ups on requests, and monitor domain transfer on those who surrender.

[00305] (n) Detect patterns among violating websites or webpages; find common patterns among websites or webpages either violating brand trademark or causing damage to the brand in any other way.

[00306] (o) Discover about-to-be-available domains; the system checks daily to find domains related to the brand that are about to become available; such domains may be prioritized and displayed to the user to enable him register them before a cyber-squatter does so.

[00307] (p) backorder of Taken domains; and subsequently, backordered domains may be registered automatically by the system to the benefit of the brand owner.

[00308] In a demonstrative implementation, the system may perform Set-up / Update of Brand ROA Scope. The system may define the required data for the ROA process,

including sector, brand name, language, variation list, relevant countries, main company web-sites and competitors. The process may be relevant for existing brands, for new brands, and/or for brands that the organization intends or considers to launch or to adopt.

[00309] For example, User chooses to set-up brand ROA. The system requests: sector, brand name, related key-words / phrases, relevant languages, countries or regions of activity, other relevant main company web-sites; as well as competitor names, their brand names and their main websites. In case the brand name is built from more than one word, the user may provide the brand name parts. In case the domain names are not registered in the system, the system requests the list of owned domain names related to this brand. The user provides the data he/she has. The system may suggest brand/sector relevant keywords / phrases / tags using an algorithm and Internet based resources. The system may present the combined list of keywords / phrases. The user may edit the list adding from the list of suggestions and he/she may delete keywords he/she entered before.

[00310] Then, the system generates a list of brand name variation; and a list of keywords to be used in the search of violating web-sites. The system generates the list of TLDs to be used in the analysis, based on countries entered by the user and defined rules (such as TLDs that should be searched, association between country and TLDs, etc.). The system may define all TLDs to be searched. The system associates which name variations will be searched for each TLD. The system may presents a summary of the ROA set-up data. The system may estimate the time it will take before the ROA will be ready. The user chooses to start ROA, and in response, the system starts the "perform ROA" process.

[00311] Success criteria for this process include, for example, storing of the following data: Sector, brand name and its structure (in case it consists of more than one word); Search keywords used to search for violating web-sites; Brand main web-sites; Languages; Countries of activity; other relevant countries; Competitors, their brand names and associated main web-sites; for each TLD in the list, which name variations to analyze (e.g., search all variation for all TLDs). The process of data collection may then start. The user may receive a time estimate for getting the ROA results. The list of variations is used to find domain names competing through the use of domain name with the brand; whereas, the list of keywords is used to find violating web-sites (e.g., especially relevant when the brand name is a generic dictionary word, such as "Gap").

[00312] The "Brand Check" process may help the user to launch a new brand for which the organization has no registered domain names yet. The system will help the user understand the current status of a brand (i.e. whether it is widely used or not), to find an

appropriate available variation of the brand if needed, so that the brand can be launch with enough associated available domain names, to avoid from future risk of brand exploiting by competitors or third parties, or from the need to purchase many domain names that are already taken and already use the considered brand. Once a name was chosen, the process continues with set/update brand ROA scope.

[00313] For example, the user chooses "New brand launch". The system requests the following details: Brand name or several possibilities; Sectors; Relevant keywords. The user enters details; the user may need help generating keywords, help in coming up with possible names. If the user was unable to decide on a brand or on relevant keywords, the system will generate a list of keywords based on search trends and dictionaries. The user chooses several optional brand names and related keywords he/she wants to check. The system provides the following relevant information regarding the provided brand names: Available/taken domains. The user decides about the brand name. The process continues with "Set-up/Update Brand ROA Scope". The list of brands may be prioritized. Based on the above or other parameters. The function will give priority to brands in which availability is higher, or if the domains are taken – to those that are used for ads and not active web-sites. Success criterion for this process may be: A brand name was chosen. Optionally, the user may be looking for a brand with available domain names and does not find any brand with enough available domains that he likes; the user may update optional brands, keywords, or the like so that the system will provide an update ranking, until he finds the suitable one.

[00314] The process of "Perform ROA" may collect all available required information regarding domain name variations and relevant websites; process the data, using algorithms; organize the analyzed data to be used for reports generation and decision support. The process may utilize crawlers, registries, registrars, and may have pre-conditions: (a) a list of relevant domain names or domain names that are owned by the brand was generated by the system; (b) a list of relevant keywords used to find competing websites that include the brand, was generated and approved by the user.

[00315] Once the data necessary to perform an ROA is set in the system the user will initiate the ROA process. The completeness of the data provided may affect the results of the analysis. The system should make this point very clear and support the users in the data collection and entry as much as possible. The system uses a set of crawlers to collect the required data from the web. It requires finding the relevant websites and domains, scanning all of their content, employing smart algorithms to analyze their content. Data collection tools may include: Scan of domain name registries / TLD root servers; Scan of WHOIS

databases; Scan of DNS servers (zone files); a vertical web crawler and direct queries in order to retrieve all required information available regarding the websites that are active under the domain names in the list of relevant domain names; a different web crawler with the generated keywords list to find violating websites or webpages that are not in the first list and most likely do not contain the brand name in their domain name; statistical data and other ranking data collected from third party providers

[00316] Following the previous steps of the analysis, the system may employ different technologies, tools and methods to perform the following research: (a) Domain names availability; (b) Taken domain analysis. In the Domain Names availability analysis, the process may conduct a search of the set of variation in the relevant TLDs to conclude which domains are registered and which are available for registration. For example, Registered Domains identification may include: (A) Collection of the complete WHOIS data of all registered domain names in the research; (B) Identifying which domains are owned by the company, and which are taken by other parties; even though the user provided the list of owned domain names, the system may verify again which domain names are owned by the company and discover mistakes in the initial data entry; (C) Within the domains owned by the company, perform: (1) Examination of the contacts specified in the WHOIS data and identifying domains names with old data or inaccurate data; (2) Scanning the WHOIS data to identify which domains do not have updated DNS servers' definitions; (3) Inspecting which domains are not in use and which are redirected incorrectly.

[00317] The analysis of Taken domains and other websites found in the web crawling process may include: (a) Collection (e.g., downloading) of the entire or partial website/webpage content; (b) Using the website/webpage content, identifying the usage characteristics of domain names with the company's brands that were taken by others – identifying whether they are used for active websites, brand exploiting websites, fraud, PPC parking, redirection to other websites, and optionally generating a Damage score or estimation based on these and/or other parameters; (c) generating Investment Index, by analysis of different Search Engine Optimization (SEO) factors, such as page rank, internal and external links, traffic ranks, etc., to evaluate the level of investment made by the current owners of each of the taken domains.

[00318] The analysis of Taken domain and other websites found in the web crawling may use the following information: (a) Web site content – used to identify the use of the website, whether it has slander content, whether it sells products or services of any type (related or unrelated to the brand); (b) Contacts information; (c) DNS server; (d) Whois

domain information: registrar, domain status, expiration date, and name servers, contact information for the owner of a domain name or IP, IP and IP location information, web server information, related domain availability, premium domain listings, DNS name servers, DNS records; (e) Analytics data: Page rank, traffic data, traffic rank, SEO index, number of indexed pages in search engines, number of back links, number of outgoing links, is it registered in leading indices, is it registered in social networks and tag websites, how long the domain is registered, until when is it registered, registrar source (black hat/white hat), which technology the website is built in (flash, html etc.), Alexa rank, subdomain information

[00319] Each domain name variation is scored with the relevant scoring function (depends on the list it belongs to). The lists are ordered by score. The data is organized so it will be ready to be used for reports and decision support.

[00320] The ROA will run periodically. Each time a new ROA is run, its results are compared with previous ROA .The changes may affect the score of domain names and the reports. The system may alert the user about "meaningful" changes. The system may advise the user about possible actions and enable immediate action.

[00321] The process may identify and/or react to, the following changes: (a) Change in a registrant; (b) Registrar transfer of a domain name; (c) A significant change of the website's homepage. For example, a change from a parked domain structure to a more "active" website structure – may be meaningful. Moreover, the system may give the user an option to closely monitor specific domains/websites than others; the system will monitor these domains for changes more frequently than the regular ROA monitoring. If an available name becomes taken, then display its current use. If a Taken domain becomes available, then display a list of these names, with analysis of value; the analysis may take into account data collected while the domain was taken. Optionally, the system may include in available names a notification that a particular domain was taken until a predefined time ago. For a domain that was in backorder, inform the user if the system was able to capture it, or in case it was deleted but taken by someone else. Monitor and inform about change of registrant of a taken domain name.

[00322] The process may monitor the change of use and content of a taken domain name, website or webpage: From unused to used for ads or website; From advertisement to website; Level of change in the relevance of the content to the brand. Each taken domain name, website or webpage may be characterized as follows: (a) Category of a taken domain name, website or webpage effect on the brand (some categories may co-exist) (e.g., Violating trademark; Competing use; Selling counterfeit merchandise; Containing slander; Fraud /

phishing site); (b) Category of uses of a taken domain name, website or webpage (e.g., Landing page; PPC page driving traffic to competitors; Active web-site).

[00323] Once the user marked the set of taken domain names, websites or webpages that interest him, the user may request a more frequent ROA update on those domain names, websites or webpages that interest him.

[00324] The process of "Make ROA based decisions" may support the user in making decisions regarding his portfolio, specific brand and its related domain names and start the relevant processes, i.e. registration, registrant transfer, domain name parameters update. A precondition may be that the ROA is done or updated. The process may support the user in making any of the following decisions, and provide automatic system recommendations for: Which available domain names to register; Which taken domain names, websites or webpages to start negotiate in order to buy; Which taken violating domain names, websites or webpages to start legal actions; Which domain names need better security measures; How to self-monetization of owned unused domain names (e.g., which landing page to use, or to which website to forward); Which owned domain names abandon (to cancel renewal).

[00325] The process may, for example: (a) Prioritize taken domains, websites or webpages by how much they risk the brand; (b) generate automatic alerts of high-risk violations; (c) prioritize the available domains by their potential risk or value; (d) display the use (current use and/or historical use) and investment index of each domain name – this helps predicting how easy it will be to purchase the domain; (e) provide necessary data and documentation regarding brand violation; (f) help decide against which domain names, websites or webpages to take legal action next, by finding groups of violating domain names, websites or webpages that show common behavior (e.g., with the process "fight violating websites"); (g) locate main cyber-squatters against whom additional investigation or legal actions should be taken; (h) Display information regarding available actions and other guiding information; (i) activate or trigger legal actions, such as a Cease and Desist notification, by presenting a standard letter or template, filled with the details of the relevant domain, website or webpage details and once approved sent to all relevant entities.

[00326] The process allows the brand manager to easily activate any required process once the decision was made. For example, once the brand manager decides to register a group of available domain names, he will go through the shortest process possible. The system may use the unit default parameter set. The brand manager may decide to go through the process and register the domain names. He may also decide to delegate the responsibility

to end the process to other users or team-members who may utilize the system or some of its functionalities.

[00327] In some embodiments, the system may include a module which may automatically act as a virtual brand manager, and may take one or more decisions based on pre-defined Rules or conditions that a real-life brand manager or administrator defined in advance. For example, a rule may be, "if the system estimates that a risk domain may be purchased at a price of under 240 USD, then automatically proceed to send out a purchase offer at the estimated purchase price".

[00328] The "Consult" process may allow the brand manager (or other suitable person) to consult with another employee or team-member, regarding any issue that may or may not result in an activity managed by the system. The user may consult other employees using the system. A flow of consultation may not necessarily lead to a specific decision; for example, prioritizing a list of names, evaluating a specific name, or the like. The user may consult another person, which may or may not be a user of the system. The system may create an e-mail message, and allow easy addition of information displayed on the screen, as a report or as a picture. The message will contain a link to page that enables him to enter a simple multi-choice answer and text. The system will send the message. The system will track when a response was provided and alert the user about it. It may send reminders if the user chooses to. The consultation flow is documented and can be retrieved upon request.

[00329] The consultation request may be done using a template. The user writes what he wants to consult about; Chooses whom he wants to consult; Adds / points to relevant information; and add the option to Approve or Provide opinion. The process may allow any employee, even those who are not users of the system, to receive a request to approve or consult a decision and provide the approval or consultation in a simple manner. The recipient may get the request by mail. The message will contain all required information. The message will contain a link to a limited access to the system, where the employee will sign his approval or provide some text. The signature or the text will be stored in the system and the system will follow the business flow and generate the required alert.

[00330] The process may allow to retrieve decision approval and consultation documentation; to retrieve the documentation of decision approval and all relevant consultation; for example, sorted by dates and including all remarks entered. The user may retrieve by type of decision and/or time span and/or involved personal/organizational role and/or brand and/or domain name.

[00331] The system may use a process to start domain purchase negotiation; to allocate budget to buy a taken domain, and to start negotiation (automatically or semi-automatically or manually). The user decides to buy a taken domain name; the user may allocate budget, or may request to start negotiation without allocating budget. The actual negotiation is done by a user, a employee of the system operator or by an automated module. The system may document the dates of action and current status; the system can send reminders, updates and reports to the user, automated or generated by the employee of the system operator .

[00332] The system may create landing page template, for specific brand in specific language or for specific country. The landing page may be based on several pages provided by the system with limited ability to change. The user will place details relevant to the organization in the relevant placeholders, e.g. brand name, description, contact details, etc.

[00333] The system may translate a landing page; once a landing page was generated in one language, the system (e.g., with automated or semi-automated translation module) may translate it and generate landing pages in other languages.

[00334] The system may monitor legal actions; monitor reply to send notification and domain status, provide automatic follow-ups on requests, and monitor domain transfer on those who surrender; supporting multiple languages.

[00335] A process may detect patterns among violating websites or violating domains; may find common patterns among websites and domain names either violating the brand or trademark, or causing damage to the brand in any other way. This may typically be performed after ROA is performed or updated. For example, based on the data collected in the ROA, the process may: Find domain names which have the same (or similar) contact details, or similar or recurring details in the WHOIS, or similar or same phone numbers, DNS servers, DNS records, IP addresses of websites and/or DNS servers. The process may examine: A records, MX records, c-name, SOA. The process may look for domains or website that have the same hosting service supplier located in the same hosting farm; the same registrar (e.g., typically a big cheap registrar); Close registration time; Similar website(s); Similar page structure with different content; Check which domain names are registered in the same ccTLD; check whether the owner of the violating domain names may use a proxy, i.e. disguise who really owns the domain names. The process may group together domain names with such similarities. In order to further identify suspicious hints, collect statistics regarding Countries, Registrars, Hosting supplies, and/or DNS servers.

[00336] The system may support Brand Administration (or management), by system administrator, brand manager, legal department, IP department, or other suitable user(s). The

brand administration module may enable, for example: (1) Allocate responsibility; Define/Update the organizational structure; Assign/update responsibility for a brand to a specific unit in the organization; Assign/update the responsible person in that unit. (2) Delegate brand responsibility; The unit's brand manager may delegate the responsibility for a set of brands that belong to the unit to another brand manager; the process is similar to the relevant part in the process of Allocate brand responsibility. (3) Transfer brand responsibility, from one unit to another. (4) Define / update unit default parameters; a unit has a set of default parameters set for all domain names that belong to the unit; there may be default parameters that are specific for a ccTLD; define this set of parameters, for example, Contact details, DNS server definition, DNS records. (5) Define Alert parameters; define for each alert the default receiver, actions required in case the alerts are not dealt with; alert will be published in the relevant places in the UI, and will also be sent by email, and according to the users definitions – by SMS or voice message. (6) Allocate budget to unit and/or brand. (7) Create business flow, or define flow of decisions / approvals; Define the business flow when dealing with trademark violations and brand violation or other threats to brand from various domains or websites. (8) Monitor business flow; monitor all defined business flow once activated; send the relevant user an alert to do his part on predefined time intervals.

[00337] The system may support Domain Administration (or management), by system administrator, brand manager, legal department, IP department, or other suitable user(s). The Domain management module may enable, for example: (1) Monitor / Update DNS server records, including: mail, forwarding, URL, website's IP; allow bulk update for multiple domains or all domains. (2) Monitor / Update one or more domain name parameters, such as, Contact details (administrative, technical, billing); DNS server definition; Password; or others; optionally allowing to change to the default set, or to allow change of parameters not according to the set of defaults, and optionally allowing bulk actions or batch actions on a batch or group of (selected) domains. (3) Add DNS server data collector; to each domain name that belong to the organization and use the system's DNS servers, this may be done automatically; for domains using the customer's own DNS servers, the system may allow to install the DNS server data collector. (4) Mask or hide domain details; Change the contact details so they do not reveal the actual owner of the domain; optionally use a domain proxy holder or owner. (5) Domain(s) registration; Activate registration of available domain; the system will use the default parameters stored for the unit; start the required procedure depending on the country the name belongs to. (6) Activate/Cancel Automatic domain renewal for a domain name; in some cases the system may be able to automatically renew the

domain; in other cases it may not be possible, so alerts may be sent to the user and may be shown show in the control panel of the system. (7) Generate and handle domain Renewal reminder; Remind the responsible person to renew the domain registration for which the automatic renew is set to "off"; remind the relevant users or managers. (8) Renew domain; manually start a domain name renewal procedure. (9) Automatic domain renewal; the system will start the procedure of domain name renewal. (10) Domain registrar transfer to the system's registrar (incoming transfer); the user starts the process of transferring the domain from another registrar to new registrar; the user may need to sign paper documents, which may be provided to him electronically. (11) Outgoing Transfer of domain names from the system, outwardly; the user is leaving the system (with regard to a particular domain); an alert to the customer account manager is sent; release domain names, and provide the required items according to procedures. (12) Domain registrant transfer; the user starts the process of changing the domain name owner; the user may need to sign paper documents. (13) Monitor administrative procedures; Monitor procedures regarding registration, renewal, registrar transfer of domain names, and change of domain name parameters; depending on the country paperwork may be required; ensure that all paperwork is done; remind the customer of actions they need to perform. (14) Handle administrative procedures; remind and provide assistance for administrative procedures that require manual work or input from users. (15) Create alerts regarding portfolio administrative procedures; generate alerts regarding portfolio administrative procedures according to pre-set definitions to relevant users at relevant times. (16) Monitor portfolio security; the system displays the list of owned domain names ordered according to their vulnerability; tagging them by: 'must do', 'advisable to do', and 'nice to have' features; the system displays the domain names security measures in action; the user may decide to activate/deactivate services, such as, Domain namelock, Domain namewatch. (17) Perform namewatch; periodically checking changes in parameters of the domain name for which namewatch has been activated, on the registry and the authoritative DNS servers. (18) View billing information; allow the customer to view charges using a variety of filters and views; including subscriptions, renewals, registrations, transfers, one-time payments, recurring payments, or the like.

[00338] Some of the processes may require manual feedback or work, depending on the required procedures in a specific country. The user may initiate a process for one or more domain names; monitor the progress of process; get reminders' alerts and get reports. Some processes may act in bulk, on a group or batch of domains, which may be selected manually, or may be selected by filters or sorting (e.g., select all the domains of a certain gTLD, or a

certain ccTLD, or select all the domains that will expire in the next 90 days, or select all the domains that were purchased in the last 120 days).

[00339] Several procedures always require paperwork and depending on the country some other procedures require paper work; the system will support the required paperwork, including: (a) Store and provide the empty, partially filled forms; (b) Whenever possible fill for the user as many details as possible; (c) In case the system cannot fill the form, provide options (e.g., the system will appoint a user or a system operator employee to print the form, fill what he/she can, scan it and upload it to the system and then the system will alert the customer a form is awaiting for his signature and maybe some other missing fields he/she needs to fill; the customer will print the partially filled form, sign, scan and upload it to the system; or alternatively, the user will handle the form without help from the system administrator); (c) In any case the customer needs to print the form, sign, scan and upload; (d) The system will provide reminders until the procedure is done; (e) The system will keep the history of all actions done in the process and provide the ability to retrieve the history and the filled forms; (f) In some cases, a re-confirmation or re-approval may be required by one or more managers in the organization is required; this may be done using a predefined business flow.

[00340] The system may allocate brand responsibility; may allocate or update brand responsibility, of brand to unit, and the default responsible person in the unit; allows defining the responsible person for a specific brand. There may be one default parameters set per unit.

[00341] The system enables to define/update part of the organization hierarchy; this is relevant to the unit in charge of one or more brands including actions regarding domain names. The system allows defining: units in the organization; organizational roles; employees and their organizational role and responsibilities in the system; brand names; permissions; who is responsible for which brands. The organization may be divided into units; a unit is responsible for one or more brands. The user allocates responsibility for brands to brand managers. This brand manager should be defined in the organizational hierarchy. The admin may define the permissions allocated to brand managers.

[00342] The system may allow to Transfer brand responsibility, from one organizational unit to another or from one person in the same unit to another. The system may allow to Delegate brand responsibility, from a first brand manager to a second brand manager in the same unit. Optionally, an Organization hierarchy editor module may be used for the above processes; to handle, create or modify: hierarchy of units, organizational role,

organization employees (some of them may be system users, and some of them may not), brands and their association to units, permissions, person in charge of brand.

[00343] The system may allow to Define / Update unit default parameter set; to Define/Update the set of required default parameters for a unit. In ideal situation, each domain name under the unit responsibility will have the same set of parameters. Many organizations have registered the domain names on employees that no longer work for the organization and they are unable to track those people; the system prevents the organization from doing several actions, in order to avoid future problems, and the system allows to manage the domains in an orderly manner using default domain name parameters. It is advisable to have all domain names that belong to a specific unit have the same set of parameters. A particular ccTLD may have a default set of parameters that is different from the unit default set. The ownership of the domain should belong to the organization and not to an employee or the organization owners.

[00344] When registering a new domain name under a specific unit, the set of default parameters for that specific unit and TLD will be used. The user may change the parameters. When the organization starts using the system, the user defines the default parameters sets. Once a brand is added to the portfolio and the ROA is executed. An important outcome is marking domain names of which some or whole of the parameters differ from the default set.

[00345] Each unit which is responsible for domain names will have a set of default parameters. The default parameters include the following groups: (a) Contact details, registrant name (the owner), administrative contact, technical contact and billing contact; (b) DNS servers definition; (c) DNS records, A record, MX record, Cname, SOA, mail, URL forwarding, website's IP, etc.). In some implementations, the status default parameter is locked, and the user may not be allowed to change that.

[00346] The DNS records definition are not based on defaults most of the times; but there may be occasions when the user will want to use the DNS records definition of a main website or when the user registers a bulk of domain names. The user may choose to have for some of the domain names a different set of parameters. The user will mark each parameter the user intentionally wants to be different from the default set as such. Once the list of default parameters is set or updated, the system will update those domain name parameters that used the default. Before making the change all the changes will be displayed to the user. The user may decide not to apply the check of domain parameters for some or all domain names. Change of registrant may require signing forms, change in other contacts requires additional authentication either by providing a password of the domain, or by clicking an

authentication link in an email that is sent from the system after the change was performed. The system may have a "contacts book" in which each contact is defined. All uses of this contact point to the relevant entry (nic) in the contacts book. A change of any of the contact parameters will affect all references to that contact.

[00347] The system may define Alert Parameters; may define for each alert the default receiver, when to send another alert.

[00348] The system may allocate budget in any level of the hierarchy to lower levels; in some organization each user is able to define his budget, in other organizations managers in a specific level may allocate the budget to their subordinates. The system may allow it both ways, to allocate budget to one or more brand managers or legal personnel. The allocated budget is for a specific set of brands, based on the organizational hierarchy.

[00349] The system may create a business flow, or a chain of decisions and/or approval(s) necessary to make a specific action. The customer organization may define the required procedure in order to execute certain decisions and/or actions. The procedure involves the approval of an ordered list of organizational roles. The organizational roles need to be defined in the system, but the employee holding them may not need to be a registered user of the system. The system may support this procedure. It may be a chain of required digital signatures (approvals), or may involve consultation before decision is made. The system supports by providing the required procedure, alerting and reminding the employees about the waiting task and documenting the actual actions done. The organization may define any procedure for any actions done by the system.

[00350] The customer admin and/or the system admin may define a business flow. The consultation and approval flow is documented and can be retrieved upon request. Possible decisions include, for example: Domain names registration; Domain names renewal; Domain names abandoning (i.e. cancel renewal); Domain names purchasing including maximum amount to close deal; Budget allocated to buy a domain name; Change of prioritization of domain names and websites lists including: violating / owned / available domain names; "Cease and Desist" actions; DRP complaint filing; Other legal actions; New brand launch, whether to launch a specific brand based on the ROA the system provided; Decide on Self monetization of domain names.

[00351] The business flow may have a condition attached to it. In this case it will be activated only when the condition is true. Once a business flow is defined the relevant use-case will support that business flow. For example, if a business flow was defined that the registration of domain names needs the approval of the Unit Brand Manager, the activation of

domain name registration will include this approval. The system will support approvals by someone who is not a user of the system. The details of that person, including name and e-mail address, will be defined in the system using the organizational hierarchy. Once the person's details were entered this person can be part of any business flow. The approval request of non-user will be done in a similar way to consultation with someone which is not a user. Each user who makes or approves a decision can add a note to the decision. The process may utilize the organizational hierarchy. The user chooses: which decision, for which unit, optionally sets a condition and chooses the list of organizational roles. A condition maybe set for more than one business flow, or for more than one decision. The same business flow may be defined for several decisions. The process may be associated with a process to monitor a business flow, once activated; and send to the relevant user an alert to do his/her part at predefined time intervals or milestones.

[00352] The system may Monitor / Update DNS records of domains owned by the organization; including: mail, forwarding, URL, website's IP. Allow bulk update. The system may Monitor/Update domain name parameters, for example, check and update if required the definition of authoritative DNS servers and the admin, technical, billing contacts of one or bulk of domain names, usually in order to correct errors found in domain names' registration parameters. This may allow changing the domain names' contacts and the definition of the authoritative DNS servers to the unit default set – this is advisable and prevents many problems that might arise later, but a specific organization may decide to act differently.

[00353] For the above processes, for example, the system displays the current parameters, marks the errors and offers a change to defaults when available; the system enables the user to accept the defaults and prompts the user for manual actions when required; then, the system enables the user to edit the parameters or to leave them as they are and to mark them as correct. In this case they may not be checked any more against the default set and changes to the default set may not affect them.

[00354] The system may allow to add DNS Server Data-Collector. Part of evaluating a domain name is the traffic that this name generates. This can be done on domains owned by the organization by collecting statistics. The user may allow to install a statistics collector which may reside on the DNS server or on the web-server hosting the website. This may be done automatically as a result of a user action, to enable collecting statistics on traffic and/or DNS requests; and may allow to place statistics collectors as part of self-monetization.

[00355] The process of Mask Domain details may allow to change the contact details so they do not reveal the actual owner of the domain. The organization may wish to hide its connection to certain domain names. The domain may be registered under the proxy service provider details, which acts on behalf of the real owner as "proxy". This can be done in TLDs that allow it. The details that will be updated in the public WHOIS data are of proxy owner; while the real owner data is stored separately.

[00356] The process of Domain(s) registration may register available domain names. Preconditions may include: The default parameters for the unit are set; a decision has been made which available domain name to register; All required approvals have been signed. Special cases for this process may be, for example, Registration by trustee, and Registration of masked domain.

[00357] For example, the user searches for available domains, or the system presents the list of domain names to be registered that was previously decided and approved in the case an approval is required. If in the meantime some domain names are not available anymore (someone else has registered them) then this will be marked to the user. The user will mark which domain name need to be masked. The system will provide the defaults when available.

[00358] The user approves the default or creates new parameters, or chooses different parameters for: contacts from available contacts' lists; Authoritative DNS servers from available DNS servers; DNS records. The system presents information regarding the process. If form filling is required the system guides the user what the user needs to do. The system handles the billing, according to the agreement this customer has. The user decides whether to have automatic renewal. Success criteria for this process may include: The administrative process of domain registration has started; The user printed all required forms; The registration was billed to the customer; The status of the registration process is updated.

[00359] The system may Activate / Cancel automatic domain renewal, or may change the automatic renewal parameter. In case the domain owner wishes to abandon a domain name the user will make sure the automatic renewal is "off". In case the user wants to make sure the registration will be renewed the user will set automatic renewal to "on". In some cases the system will be able to automatically renew the domain. In other cases it is not possible, so alerts may be sent from the system to the user to deal with the required paperwork, or to the system operator employee so that from the customer point of view this will be done automatically.

[00360] The renewal reminder process may remind the responsible person to renew the domain registration for which the automatic renew is set to "off". The organization defines who gets the reminder alerts. Optionally, the process may make the renewal reminder message look as if it came from the organization administrator. The process may also allow manual renewal of domain registration for which the automatic renew is set to "off".

[00361] Automatic domain renewal may allow the system to execute domain name renewal where possible. This may not require any customer involvement. Where manual action is needed the system may send email reminders and control panel alerts to perform the renewal.

[00362] The system may support domain registrar transfer into the registrar operating the system of the present invention. Preconditions may include, that a decision was made which domain names owned by the organization and registered with another registrar to transfer to the target registrar.

[00363] The process of domain registrar transfer varies from one TLD to another; therefore what is required to start the process varies. The process is handled for each domain name separately. The information regarding what the user has to do for each set of domain names that has similar procedure is presented in a clear and concise way. The system may automate the process as much as possible. The necessary forms that need to be filled and or signed will be presented. The user will decide if he/she wants to deal with them now, if not the system will remind the user later about it. Another process may be triggered, to monitor the status of all administrative procedures and remind the users to do their tasks. The system will store the date of transfer and the ordering organizational role of the customer

[00364] The procedure may require from the customer one or more inputs, for example: Provide the user name and password with the current registrar; Sign forms; Handle it by himself/herself. The system may allow the user to read the instructions for the transfer; and to have tasks added and/or completed by the user.

[00365] The system may support Domain registrar transfer away from the current registrar, to release such domain to a different (external) registrar. A precondition may be, that the domain name is owned by the organization and registered with the registrar running the system of the present invention; and that a decision was made to move the domain name to another registrar.

[00366] Depending on the country there is a defined procedure regarding registrar transfer. The system will alert the system operator, who may first inquire to find out whether it is a decision made by the organization or another entity is trying to hijack the domain

name. If it is the organization decision, it may inquire about the reason. If he/she is convinced that the organization wants to move the domain name to another registrar, the system may unlock the domain to allow the registrar transfer. The process may also allow domain registrant transfer, to start the process of domain registrant transfer, i.e. changing the owner of the domain for which the organization is the current owner.

[00367] The system may allow to monitor portfolio administrative procedures, that are not immediate. Relevant procedures include domain registration, domain renewal, registrar transfer, domain purchase negotiations. The system may provide guidance for required steps, provide required forms, display transfer status and remind the customer and administrator of required actions.

[00368] There are several administrative procedures which may take hours, days or weeks to complete. The system provides the user easy access to see the status of ongoing procedures and generates alerts/reminders to the relevant user(s), who can modify the frequency of reminders. The alerts may include alerts to other employees / managers in the organization and/or to system administrator when the procedure is "stuck".

[00369] Such administrative procedures may include: Negotiation to purchase taken domain; Domain registration including registration under escrow; Transfers to the present registrar running the system; Domain renewal; Update of DNS definitions; Update of contacts update. The system may handle portfolio administrative procedures; and may remind and provide assistance for administrative procedures that require manual input or actions. The system may allow to create alerts regarding portfolio administrative procedures; and may send alerts regarding portfolio administrative procedures according to pre-set definitions to relevant users at relevant times.

[00370] The system may monitor portfolio security; and may display security status of owned domain names and decide which changes in protection measures are needed. Protection measures available may include, for example, Namelock and Namewatch. The decision regarding protection measures is based on the brand priorities, domain usage (i.e. active websites in contrary to redirections), and exploitation level by third parties. For domain names scanned under name secure, the system may display: number of domain names; number of DNS servers scanned; geographical zone(s); News regarding attacks; Explanation and tips to increase the security. The NameWatch module may check periodically that no changes were made in critical domain parameters, and may notify user(s) if such changes occurred.

[00371] The billing information module may allow the customer to view money spent using a variety of filters and views, including subscriptions and one time payments.

[00372] The system may comprise a Brand Optimization module, which may enable or perform: (a) Domain portfolio evaluation, to provide the organization with an overall view of its digital portfolio and its value; and (b) Self-monetization module to start making revenue out of owned unused or misused domain names, by putting them into use.

[00373] The Domain Portfolio Evaluation module may provide the organization with an overall view of its digital portfolio and its value. The system may display the owned domain names prioritized by the value they contribute to the brand. The system enables the user to see which domains provide the most value and which hardly contribute. The user may apply filtering to the data.

[00374] The Self-Monetization module allows to utilize owned unused domain names; and optionally to add statistics collector(s) to them. The preconditions may include: the list of owned unused or misused domain names exists. The system may display the list of unused domain names decreasing score. The user will decide for each domain how to best use it. The options are, for example, to set a landing page (choose an available template or create a new one and add the relevant parameters), or forward to an existing brand web-site.

[00375] Setting a landing page may require the user to enter the default landing page for the specific brand and language/country, or choose from predefined set of templates of landing pages. If no landing page is available, the user will get a message and can create one. The templates may have the following in place: Contact information; Product/service short description and benefits; "about us" page; Logo; optionally, pictures of the product. The user may choose to enter the template editor and edit the template or the data therein.

[00376] The system may alternately forward a domain to a target web-site; if the forward address is defined then it will be used. Otherwise, the user may be prompted to enter it and asked whether this should be the default.

[00377] The system may include a History Module, for keeping and tracking all data in a database to make advantage of history data. One implementation of this capability is keeping information about a risk website over time, so that a report that provides information about the evolvement of the website can be provided, including but not limited to the use of different keywords in the content of the website over time, the time-stamped screenshots of the homepage or other pages of the website over time, the time-stamped WHOIS data and changes in WHOIS over time, positions in search engines over time, number of external links over time, different scores time, etc. Information of website is also saved in a history

database in case the domain name was deleted (and therefore the website operation was terminated). Such information can be later used by the algorithms of the system, for example to determine whether that website has a higher opportunity score, since it was previously used. Such capabilities may be available in all modules of the system, such as risk module, opportunities module, evaluation module, monetization module, affiliates module, domain management module, or the like

[00378] . The system may utilize multiple algorithms and modules geared to support decision regarding: (a) Which taken domains, websites and webpages are violating the brand or the trademark; (b) Which violating domain names, websites and webpages to start legal actions against; (c) Which available domain names to register; (d) Which taken domain names to enter in purchase negotiations; (e) How to self-monetize unused owned domains; (f) Which owned domain names to abandon (i.e. they will not be renewed); (g) how to deal with trademark violating (or brand abusing) websites, webpages and domain names.

[00379] In an ROA setup module, for example: The user provides the brand names, keywords, slogans, logos, and other trademarks. The user provides the main websites used for those brands. Those websites and the websites pointed to from those websites may belong to the positive list. The system may help by suggesting relevant keywords or tags. The system generates the list of brand name variations (the list may not be presented to the user) that the use of them may be considered as brand name trademark violation.

[00380] In a module for finding potential violating domain names, websites and webpages and extracting their content, for example: The system maintains domain name database which is constantly updated (a different algorithm). The system will use the previously mentioned domain name DB and other ways to find all domains names, websites and webpages that are potentially violating the trademark and the brand. All domain names found in the generic TLDs will be searched in all other TLDs. Those websites may be presented to the user which might dismiss some of them and help the system learn the "trademark and brand violation rules". The system will use a vertical crawler to get the website content of the violating domain names, websites and webpages. Optionally, the system may obtain the keywords from the main website content. The system will use another web crawler that will use the brand name and keywords to search for websites (for example through queries to search engines) that potentially violate the brand name and trademark. The system will use a vertical crawler to get the website content of the potentially violating websites.

[00381] In a module for finding violating domain names, websites and webpages and prioritizing them, for example: (1) The pages extracted in the previous steps will go through the following classifications: Containing trademark violation and brand abuse including Containing slander, Selling counterfeit merchandise, Fraud/phishing site, Monetizing brand name; classification based on the Type of use. The system may distinguish between legitimate affiliates and violating domain names, websites and webpages. The system may distinguish between two aspects for each violating domain name, web-site or webpage: How much traffic is "stolen from the brand"; and how much damage is done to the brand. The system will extract from each page that is classified as violating the page component that contains the violation. This will be presented to the user, who may accept or reject or change the level of the assessed risk. The page components are saved with all relevant data as a piece of evidence. The websites containing trademark violation (in the domain name and/or in their content) will be scored using a scoring function. The score will be used to present a prioritized list of violating websites, webpages and domain names. The system may identify patterns between violating domain names, websites and webpages. This will help in optimizing the effort put into fighting against them.

[00382] The risks module may have the following characteristics: (a) its input is a list of domain names owned by the brand and related data; (b) the rank of each domain name is a weighted function of a set of scoring functions (indices) relevant to the specific list of domain names. The scoring functions are further discussed herein. The risks module may utilize keywords suggestion – such that, given a brand name and optionally additional keywords related to the brand, the system will suggest additional keywords. The module may further use a Name variations generator - given a brand name and relevant keywords, the relevant domain names will be generated in two ways: (a) names generated from search results using Google (or other search engines); (b) Names generated from the brand name and relevant keywords directly, e.g., by use of hyphens, major misspelling mistakes, "typos", spelling errors, typographical errors such as change of letters order, word swaps, spelling mistakes, find common mistakes in searches from web tools, suggest other keywords, transliteration from English to other languages, translation of meaningful names into other languages, or the like.

[00383] Similarly, TLDs suggestion may be made; given the list of TLDs provided by the user, the system may offer to add TLDs; for example, the system may have a set of rules regarding the set of TLDs to be used in the ROA, and/or the system may use tools such as Google trends.

[00384] The risk module may further perform, for example: Scanning the web to find violating websites and webpages, for each suspected website and webpage, asses the level of violation. Scanning the website content to find whether this website is performing any of the following against the customer brand (Competing; Selling counterfeit merchandise; Containing slander; Fraud, phishing, pharming, redirection to competitors, brand abuse, etc.). Analyze website/webpage content to assets its use: active website, PPC, etc. Analyze website/webpage content to determine SEO investment. Compare the content of selected website pages to discover changes in its use.

[00385] Sources of information regarding domain names may include, for example: Initial data collected on the web; system's statistics collectors – relevant just to pages and websites that reside on the servers that employ the system's statistics collector; Owned web-sites generated statistics, for example by using Google Analytics; Learning based activities. The above mentioned sources will be collected when relevant on specific user, different users from the same organization in a specific role, different users from the same organization any role, different users from different organizations that belong to the same sector in the same country.

[00386] The brand name score function may help the customer choose a new brand name or register domain names for a current brand. The score is based on the availability of relevant domain names for registration purposes or domains that might be purchased. A generic set of scoring function of an existing website may include, for example: (a) Domain name index; "Generic name" level – how close is the name to a dictionary word; "Similarity metrics" to brand name; "Similarity metrics" to a predefined set of keyword relevant to the brand; "Similarity metrics" – between brand name and a variation; This function measures how close a name variation to the brand name is. The name might be contained spelled with a typo, add a keyword, use competitor name, etc. (b) number of appearances in searches; (c) Traffic index; (d) number of DNS requests; (e) Conversion index; (f) Type of use index: redirection to other websites, PPC parking, active website – violating or not relevant; (g) Taken-used domain name – investment in SEO, based on: Spider view index – process the fields used by search engines: title, description, number of words, number of keywords; Title index – "relevance" between title to brand and relevant keywords; description index – "relevance" between description to brand and relevant keywords; Meta Tags index – "relevance" between Meta Tags to brand and relevant keywords; HTML source code index – degree of HTML source code structure suitability to SEO requirements; Parking index –for a parking site - degree of pages structure suitability to existing structure of parking sites, is the

IP address in the range of one of the leading Parking sites; Advertisements index – based on the existence, quantity and quality of advertisements

[00387] The value of available domain names may be determined based on: Domain name index, such as, "Generic name" level, "Similarity metrics" to brand name, and "Similarity metrics" to a predefined set of keyword relevant to the brand; Past Traffic index; number of Past DNS requests; Conversion index; Type of use, such as, not-used or used in the past for forwarding or active website. A weighted score function using the above mentioned scoring functions may be used, in order to prioritize the list of relevant available domain names.

[00388] The score of websites and webpages may be based on: (1) Name index, such as, "Generic name" level, "Similarity metrics" to brand name, "Similarity metrics" to a predefined set of keyword relevant to the brand; (2) Analytics index (popularity) - traffic rank, page rank, number of indexed pages in different search engines, number of outgoing and back links, is registered in leading indices, is registered in social networks and tags websites, How long is the web-site registered and until when is the current registration, Black hat/white hat registrar, type of technology used by the website (HTML, Flash, etc.); (3) Investment index – based on analysis of website structure, such as, (a) Spider view index – relevance between title, description, keywords and meta tags; (b) number of words, number of keywords; (c) HTML source code index –built for search engine requirements; (d) Parking index – similar to parked domain structure, IP address in the range of parked domains companies; (4) Type of use index, such as, Competing / violating / not relevant, or forwarding / Landing page / Parked domain/website; (5) Advertisements index – based on the number of ads and their similarity to the brand and keywords. A weighted score function using the above mentioned scoring functions may be used, in order to prioritize the list of taken domain names

[00389] In addition to the above mentioned score for websites and webpages the following may also be processed: (a) Detecting and documenting trademark violation and brand abuse within the website content; (b) Find patterns between violating domain names, websites and webpages (regarding the same brand and between all brands in the system) in order to locate cyber squatters; find one entity using a big bulk of domain names, websites and webpages violating the brand; (c) Find patterns of violating domain names, websites and webpages in order to speculate which domain names might violate in the future and buy them in advance, as "Bid the squatters".

[00390] The value of owned domain names may be determined based on: Traffic – collected in the organization websites; DNS requests – using statistics collector installed on the DNS server wherever possible; Analytics indices; "Generic name" level; "Similarity metrics" to brand name; "Similarity metrics" to a predefined set of keyword; How long is the website in the air; Investment in SEO index; Type of use index; Conversion rate index. A weighted score function using the above mentioned scoring functions may be used in order to prioritize the list of relevant owned domain names

[00391] In order to help the legal personnel decide which domain names, websites and webpages to deal with first the system will try to find the owners/operators of a big quantity of violating domain names, websites and webpages.

[00392] Some embodiments may utilize a multi-step algorithm. Initially, the system asks the user for input: a Domain, a Brand, some Keywords, and possibly for some relations between them; and optionally the list of countries of interest.

[00393] Then, the system may search for suspicious domains / websites which may abuse the brand. Sites / domains that are known to belong to the user are excluded from the searches. Firstly, the search is made (in the existing domains list – provided by Domain List Manager Module) for domains with highest Similarity Metric to the Input; TLDs are set by using the data collected from the user; the output of this step is an ordered list of domains. Then, search is done (using Search Engine Agent Module) for websites relevant to the user input.

[00394] Then, Scores and Indices computation is performed, to set scores for the websites residing on the domains found in the above steps using a Website Analyzer Module. These scores may depend on previously computed ones, website data (obtained from Website Crawler Module), and data received from third party websites or other external sources.

[00395] Then, ranking computation and user output may be performed. The domains. Websites and webpages found will be presented to the user, ordered by the scores determined above, configurable to some extent by the user.

[00396] Optionally, the user may guide or assist the system via supervised learning techniques. The user may designate a class (e.g., High, Medium, Low) and the system may recalculate a new weighing scheme for the different scores. For each domain, website and webpage, the user may have access to detailed information, some of the most relevant scores, and may leave feedback on them, which may then be used by the system to teach the learning algorithms used in distinct Modules.

[00397] Reference is made to Fig. 9, which is a schematic block diagram illustration of a system 900 in accordance with some demonstrative embodiments of the invention.

[00398] System 900 may comprise a Domain List Manager module 901, which makes and constantly refreshes the list of all registered domains known to the system. Sources may include zone files, data by partners, or brought by automated WHOIS queries or custom-made crawler.

[00399] System 900 may further comprise a Similarity Metric module 902, which determines how much a given string is "similar" to a brand with its keywords; and may account for misspellings, hyphens, word orderings and similar perturbations. Metrics include: known typical typing mistakes; various additions (such as adding a character or adding a global or brand keyword), permutations (such as inner hyphen) and/or typographical errors.

[00400] System 900 may further comprise a Search Engine Agent module 903, responsible for finding sites or other relevant information about brand abuse, using search engines queries. For example, a corpus of text is produced. The text is passed on to a natural language processing tokenizer which may remove all “stop words” (words used for sentence structure only, like “the” and “and”). Keywords are calculated from the output of the tokenizer. The agent includes multiple Google and other search engine queries and the use of services such as Google Trends (or similar) API.

[00401] System 900 may further comprise a Website Crawler module 904, which crawls and fetches or reads all the relevant data from a website. The full HTML source is extracted from each website. Since the full HTML contains different elements which are not related to content, such as styling and scripting tags, such elements are parsed and filtered. The filtered content is passed on to a natural language processing tokenizer which is used to remove all “stop words” (words used for sentence structure only). A histogram of relevant words is produced for each website, optionally using a Website Text Histogram module.

[00402] System 900 may further comprise a Website Analyzer module 905, which generates one or more scores for a given domain/website/webpage. These scores may depend on, for example: Domain Properties (Name, TLD, WHOIS, IP); User Input (brand, domain, keywords); Data extracted from the page contents using the Website Crawler Module; Data received from some search engine queries using Search Engine Agent Module; Third-party sites providing data about the domain/website/webpage via API or other interface; some scores may depend on each other. See below for more concrete data-source specification.

[00403] The scores may be one of the following: abstract integer or real numbers (e.g. 158.34), percentages (61.5%), real world units (10 visitors per hour), qualitative estimates (high/medium/low), binary (yes/no), or classification elements (Parking/Commerce/Other).

[00404] Some of the scores may have a special role in subsequent process, for example: Selection score is the one used to select top N domains from the full list to present to the user; Default sorting score is the score by which these N domains are to be sorted (probably the same one); UI scores – are all the scores to be shown to the user.

[00405] The scores may include, for example: Domain Similarity Score; moz data such as mozRank – also called "domain authority", obtained using free MOZ API; Alexa API; WHOIS data; Homepage data; Google queries positions or rankings; site relevance score.

[00406] The site relevance score may be produced in the following manner: (1) The website crawler produces a histogram of content based words; each website is treated as a text corpus; (2) A vector space model is produced, i.e. a term document matrix with TF-IDF (term frequency – inverse document frequency) scores; a feature space is produced using the document-query model; the queries used as features include, for example, Brand name query and Brand keywords query.

[00407] The scores may include, for example: Relevance score, Popularity score, Investment score, Damage score ("RPID" scores). Each score may be calculated based on several sub-scores.

[00408] For example, the Relevance score may be determined based on: domain similarity; keyword occurrence in the website (with separation among title, tags, and text); mega-tags; inbound links (based on search engine data); keywords balance.

[00409] The Popularity score may be determined based on: data from traffic measuring sites; data from traffic estimation sites; PageRank data; search engine results and/or ranking; how generic is the domain; important outbound links; outbound link to brand-owner website; outbound link for Investor Relations or other suitable sites or pages.

[00410] The Investment score may be determined based on: known owner identity; value of the domain at domain marketplace(s); estimated investment in Search Engine Optimization (SEO); technologies used (sophisticated and expensive; or simple and inexpensive); domain registration date; domain expiry date; website type (e.g., static, redirecting, other).

[00411] The Damage score may be determined based on: negative words; competitor names or links; spelling mistakes; online commerce; parking site; ads are present; improper

business; brand exploitation, brand abuse, existence of MX (mailserver) record, redirection to competitors sites..

[00412] The data sources for generating the above scores may include for example: data from the Similarity Function Module (SFM); data from the Search Engine Agent Module (SEAM); data from the Web Crawler Module (WCM); data from API of the relevant site or automatic bot usage; data from WHOIS query to the relevant registry regarding the domain name; data from a relevant Dictionary file (such as, US-English).

[00413] The Crawler may create a database of domain names for each TLD. Lists of domain names are available only for few TLDs. For each domain name found the system will check whether a domain name with all different TLDs exists. For taken domain names with active website relevant to a specific brand – several levels may be used: get the home page; get the full website content; get pages via outgoing links. Optionally, a Registry Interface may be responsible for automatic interface with all domain registries.

[00414] The system may be implemented as a collection of web services that provide high performance and scalability. Services are deployed using SOA architecture basics. Examples of web services subsystems include: Task Manager, Search engine gate, Billing service, Domain aggregator, Rank collector, WHOIS and Zone file retriever. These subsystems or modules may communicate through secured fully authenticated web service calls. The presentation layer may include a web client, a smartphone client, and a tablet client able to communicate with the other subsystems through the same web services accessing the same resources and performing identical functions.

[00415] The architecture allows for performance improvements by providing the ability to deploy services on different web servers. The server components themselves may be deployed on different servers as well. The SOA architecture provides easy adoption to client's data and provides high scalability. For example, many web servers may be added to support the rising number of users. Sticky sessions can be used on each web instance.

[00416] The database is designed in a partitioned architecture. Each partition will handle a different set of ROA'S and users using alphabet rules. The architecture allows for performance improvements by providing the ability to deploy the same services multiple times on the same servers.

[00417] Data Recovery Ability: the system may have an equivalent data center for data recovery purposes. A load balancer router may direct the users to the secondary data center should the first one stops to respond. Continues replication should exist between the storage from both data centers.

[00418] Reference is made to Fig. 10, which is a schematic block diagram illustration of a system 1000, in accordance with some demonstrative embodiments of the present invention. System 1000 may include multiple client devices, for example, a computer 1001, a tablet 1002, and a smartphone 1003 (other suitable electronic devices may be used); which may communicate over wireless and/or wired communication links (e.g., through the Internet 1005, through HTTP or HTTPS connections) with one or more web-servers 1011-1012 (or a batch or farm of web-servers); optionally utilizing a load balancer 1015 to route communications to a particular web-server. The web-servers 1011-1012 may use an API 1020 to interface with one or more platform services 1030, for example, business logic modules 1040, application services 1050, data services 1060. Optionally, Object-Relational Mapping (ORM) and/or Direct-Access Layer (DAL) framework 1070 may be used to connect with applications database 1071 and/or data warehouse 1072.

[00419] The business logic modules 1040 may include, for example: task manager; algorithm tuner; user management and role module; self monetization module; notifications and messaging module; administration module; portfolio management module.

[00420] The application services 1050 may include, for example: domain aggregator service; algorithm service; ROA service; HTML classifier; billing service.

[00421] The data services 1060 may include, for example: Rank collector service; web crawler; WHOIS service; search engine gate service; zone file retriever service.

[00422] In a demonstrative implementation, the system may include the following layers: (1) Presentation: From this layer all input and data manipulation is performed. This layer consists of web, mobile and tablet clients that all use the Same API provided mainly by the file share business logic. (2) Business logic: Provides the business services for the client applications. The presentation layer will consume all its services from this layer. (3) Application services: A set of services that provide backend of the system. These services will mainly be consumed by the ROA service. (4) Data services: As set of services that collects relevant data into the system, mainly from third parties and the Internet. (5) DAL: Data ORM server that interacts with the database. Most of the data manipulation (inserts, deletes, update, and views) should be done in this layer. In some cases this layer will activate procedures from the database as well. (6) Storage: Represents database of the platform; there may be multiple database, for example, to server the production environment, and for Business Intelligence (BI) purposes. Reports may be held on the production data base server by using a reporting service module.

[00423] Some embodiments of the present invention may include a method, system and/or module to find, mark and analyze websites that are operated by authorized affiliates of the brand owner. Many organizations have a large number of affiliates (sometimes also defined as partners, business partners, resellers, distributors, or the like) that may be allowed to sell or offer the organization's products and/or services to the general public or to other merchants. In that regards such affiliate entities may be entitled for a certain usage of the brand – for example, the use of the brand in the content of their website, the use of the logo, and sometimes even the use of the brand in the domain name. Different organizations have different policies in regards to the use of their brand and trade marks by their affiliates.

[00424] When the brand monitoring and protection system performs its analysis, unless the organization has a list of the domain names of all the affiliates and provides it to the system in advance, the system may initially regard these websites (of affiliate entities) as potential risks to the brand. Since the number of affiliates may be large, the information about their domain names may not be easily retrieved by the organization, and many times the domain names they use may change, and this may create a problem for the organization to monitor the use by such affiliates. Furthermore, affiliates may be terminated but might continue to perform an unpermitted use of the brand, thereby creating even greater problem for the organization.

[00425] In order to resolve this problem that the Applicants have identified, the following solution may be provided by the system of the present invention. The organization may utilize the system to create and/or provide a verification package for each affiliate, which includes a "certificate". The certificate may be an encoded piece of code that has to be incorporated in the homepage (or a different page) of the affiliate's website or on the webserver, based on the requirements provided by the system. Each encoded certificate is created for each affiliate, and each one has a code that is unique for that affiliate and/or for the specific website being operated by the affiliate (e.g., unique certificate per affiliate, and/or per website operated by affiliate, and/or per domain used by affiliate). In case the affiliate has more than one website then additional unique certificate(s) can be created for such additional website(s) of that affiliate.

[00426] When the system finds a website to be a suspected risk, it looks for the certificate in the code of the website. If the unique code is found, then the website is marked as an affiliated website. The user will then be able to monitor that website through the affiliates module. All affiliates' websites may be analyzed by the system in a similar way to

the evaluations module, and allow the user to get an analysis for the relative contribution of each affiliate website to the brand.

[00427] The user (brand owner) may define restrictions for affiliates. For example – the user can define that an affiliate is not allowed to use the brand name in the domain name it operates. If an affiliate website is found to be violating a restriction, it will be marked under the "violating affiliate websites" section in the Affiliate module. The module includes a warning notification section similar to the Cease and Desist tool of the system, dedicated to send warnings and "cease and desist" notifications to violating affiliates.

[00428] In case the system finds the same code in more than one website, it means that the code was copied. The system will mark the websites with the same code as "suspected violating websites". The user may define an automatic notification to the relevant affiliate to check and resolve the issue. If the affiliate reports back that one of the websites does not belong to the affiliate's organization, the user will be able to mark that website as a risk and automatically send a new code to the affiliate for use in approved website(s). If the affiliate reports back asking for an additional code for the second website which is owned by the affiliate's organization, the user may request to automatically send an additional code for that affiliate for the additional website.

[00429] The Affiliates module also includes an initial implementation section, to which the user can upload or enter a list of affiliates (including their email addresses). The user is able to automatically create and send a "certificate requirement notification" to multiple affiliates by email or regular mail. The unique certificates will be automatically created by the system for each affiliate, and may be attached to the notification. The user is able to edit the text of the notification.

[00430] In some embodiments, optionally, each unique certificate may have (or may be associated with) an expiration date (e.g., 365 days or 180 days from certificate issuance), which may be set in advance by the brand owner, and may be embedded in and/or encoded within the unique certificate. The Affiliates module which finds and analyses such certificates, may take into account the expiration date of each certificate. An expired certificate may be regarded as if the certificate does not exist; or, may be handled differently (e.g., by showing to the brand owner a list of expired certificates and allowing the brand owner to take further steps). In some embodiments, the system may handle differently, for example, a certificate that expired recently (e.g., a week ago, possibly due to forgetting to renew it) or a certificate that expired further in the past (e.g., two years ago, possibly by an entity that is no longer an active or authorized affiliate of the brand owner).

[00431] The present invention may be implemented by a suitable combination of hardware components and/or software modules; using a server or multiple servers; a computer or computerized device, a workstation, or the like.

[00432] The present invention may be implemented as a computerized system which may comprise, for example, a processor, a CPU, memory unit, storage unit, a database, input unit (keyboard, mouse, keypad, touch-screen, touchpad), output unit (screen, touch-screen), wired and/or wireless transceiver or modem or network interface card, power source, Operating System, drivers, one or more applications, or the like.

[00433] Some embodiments may be implemented by using hardware components; or by using a non "pure software" implementation; or by an implementation that is not "pure software" and is not "software per se". Some embodiments may include hardware components (e.g., computers, servers, storage devices, memory devices, processors, or the like) for achieving or implementing the operations described herein. Some embodiments may affect the real-world, and/or may have an effect on the real world; as they may allow a brand owner to protect its brand from being abused, for example, by stopping or reducing sale or distribution of counterfeit merchandise or fake goods. Some embodiments, may provide technical solution to a technical problem, and/or may provide a technological solution to a technological problem; such as, how to efficiently and/or automatically detect, stop and/or reduce abuse of brand-names, online and/or offline.

[00434] Some of the features described above may be optional, and may not necessarily be included in all the embodiments of the present invention. Features may be combined or modified to achieve desired results.

[00435] Discussions herein utilizing terms such as, for example, "processing," "computing," "calculating," "determining," "establishing", "analyzing", "checking", or the like, may refer to operation(s) and/or process(es) of a computer, a computing platform, a computing system, or other electronic computing device, that manipulate and/or transform data represented as physical (e.g., electronic) quantities within the computer's registers and/or memories into other data similarly represented as physical quantities within the computer's registers and/or memories or other information storage medium that may store instructions to perform operations and/or processes.

[00436] Some embodiments of the present invention may take the form of an entirely hardware embodiment, an entirely software embodiment, or an embodiment including both hardware and software elements. Some embodiments of the present invention may be implemented in software, firmware, resident software, microcode, an application which may

be downloaded and/or installed by a user, an application which may run in a browser, a client-side application, a server-side application, a client-server application, or the like. Some embodiments of the present invention may take the form of a computer program product accessible from a computer-usable or computer-readable medium providing program code for use by or in connection with a computer or any instruction execution system. For example, a computer-usable or computer-readable medium may be or may include any apparatus that can contain, store, communicate, propagate, or transport the program for use by or in connection with the instruction execution system or device. Some embodiments of the present invention may be implemented, for example, using a machine-readable medium or article which may store an instruction or a set of instructions that, if executed by a machine, cause the machine (e.g., a computer or an electronic device) to perform a method and/or operations described herein.

[00437] Some embodiments of the present invention may include or may utilize, for example, a processor, a central processing unit (CPU), a digital signal processor (DSP), a controller, an integrated circuit (IC), a memory unit, a storage unit, input units, output units, wired and/or wireless communication units, an operating system, and other suitable hardware components and/or software modules.

[00438] Some embodiments may be implemented as, or by utilizing, an application or "app" for a Smartphone or tablet or portable computing device, which may be downloaded and/or installed onto such electronic device from an "app store" or an online marketplace for applications.

[00439] In some implementations, the terms "website" and "domain" may be inter-changeable; such that, for example, operations that are described herein with regard to a domain, may be applied to a website; and/or vice versa, such that operations that are described herein with regard to a website, may be applied to a domain. In some implementations, the term "website" may comprise a web-page; and may optionally comprise a profile or a page of an entity (e.g., a person, a company, a legal entity) in a social media website or a social network.

[00440] Functions, operations, components and/or features described herein with reference to one or more embodiments of the present invention, may be combined with, or may be utilized in combination with, one or more other functions, operations, components and/or features described herein with reference to one or more other embodiments of the present invention.

[00441] While certain features of the present invention have been illustrated and described herein, many modifications, substitutions, changes, and equivalents may occur to those skilled in the art. Accordingly, the claims are intended to cover all such modifications, substitutions, changes, and equivalents.

CLAIMS

[00442] What is claimed is:

1. A computerized method of protecting a brand name of a brand owner, the method comprising:

(a) crawling a global communication network to identify and collect data about web-sites that possibly abuse the brand name;

(b) for each web-site that possibly abuses the brand name, analyzing whether or not the web-site abuses the brand name by analyzing at least one of: (i) content of said web-site; and (ii) data about an owner of said web-site.

2. The computerized method of claim 1, comprising:

for each web-site that possibly abuses the brand name, generating an investment score indicating an estimated level of investment that was invested in development of said web-site.

3. The computerized method of claim 2, comprising:

for each web-site that possibly abuses the brand name, generating a damage score indicating a level of damage that said web-site is estimated to produce to said brand name.

4. The computerized method of claim 3, comprising:

for each domain that possibly abuses the web-site, generating a popularity score indicating a level of popularity of said web-site among users of the global communication network.

5. The computerized method of claim 4, comprising:

for each domain that possibly abuses the brand name, generating a relevance score indicating a level of relevance of said domain to said brand.

6. The computerized method of claim 5, comprising:

for each web-site that possibly abuses the brand name, generating an aggregated risk score based on, at least, one or more of: said investment score, said popularity score, said damage score, and said relevance score.

7. The computerized method of claim 1, comprising:

identifying a common pattern among multiple web-sites that are determined, by the computerized method, to be abusing the brand name.

8. The computerized method of claim 7, wherein identifying the common pattern among the multiple web-sites is performed based on at least one of:

identifying common domain ownership for said multiple web-sites;

identifying common domain registrar for said multiple web-sites;

identifying common DNS server for said multiple web-sites;

identifying common Internet Protocol (IP) address for said multiple web-sites;

identifying common content for said multiple web-sites;

identifying common web-site use type for said multiple domains;

identifying that multiple Internet Protocol (IP) addresses of said multiple web-sites belong to a same country;

identifying that said multiple web-sites have a same country code Top-Level Domain (ccTLD);

identifying that WHOIS records of said multiple web-sites share at least one same contact detail.

9. The computerized method of claim 7, comprising:

identifying a batch of multiple web-sites, that are owned by different entities and are determined by the computerized method to be abusing the brand name;

automatically generating drafts of cease-and-desist notifications directed to said entities;

upon approval of the brand owner, sending out said cease-and-desist notifications to said entities.

10. The computerized method of claim 1, comprising:

for a particular web-site that is determined by the computerized method to be abusing the brand name,

automatically analyzing at least (i) content of said web-site, and (ii) domain registration data of said web-site;

based on said analyzing, automatically presenting to the brand owner at least one option selected from: (a) to automatically send a cease-and-desist notification to an owner of said particular web-site, (b) to automatically start a negotiation process for purchasing said particular web-site, (c) to automatically send a take-down notice to a hosting service of said web-site.

11. The computerized method of claim 1, comprising:

generating a list of multiple web-sites that are determined by the computerized method to be abusing said brand name;

presenting to the brand owner said list of multiple web-sites.

12. The computerized method of claim 11, comprising:

sub-grouping web-sites in said list, based on Top-Level Domain (TLD) of said web-sites.

13. The computerized method of claim 11, comprising:

sub-grouping web-sites in said list, based on country code Top-Level Domain (ccTLD) of said web-sites.

14. The computerized method of claim 11, comprising:

sub-grouping domains in said list, based on a level of aggregated risk to the brand name.

15. The computerized method of claim 1, further comprising:

based on keywords entered by the brand owner, analyzing crawled data and identifying web-sites that abuse the brand name; wherein the keywords entered by the brand owner are used for generating a relevance score for each one of said web-sites.

16. The computerized method of claim 1, further comprising:

based on names of one or more competitors, that are entered by the brand owner, analyzing crawled data and identifying web-sites that abuse the brand name.

17. The computerized method of claim 1, further comprising:

based on a use type of a possibly-abusing web-site, analyzing crawled data and determining whether or not the possibly-abusing web-site abuses the brand name.

18. The computerized method of claim 1, further comprising:

determining that a possibly-abusing web-site is used for domain parking;

based on said determining, generating a determination whether or not the possibly-abusing domain abuses the brand name.

19. The computerized method of claim 1, further comprising:

determining that a possibly-abusing web-site is used for pay-per-click advertisements;

based on said determining, generating a determination that the possibly-abusing web-site abuses the brand name.

20. The computerized method of claim 1, further comprising:

determining that a possibly-abusing web-site is used for redirecting Internet traffic to a web-site associated with a competitor of the brand owner;

based on said determining, generating a determination that the possibly-abusing web-site abuses the brand name.

21. The computerized method of claim 1, further comprising:

determining that a possibly-abusing web-site is used for electronic commerce of counterfeit merchandise;

based on said determining, generating a determination that the possibly-abusing web-site abuses the brand name.

22. The computerized method of claim 1, further comprising:

generating a determination that a possibly-abusing web-site abuses the brand name, based on an analysis that takes into account at least one of: (i) a current content of said possibly-abusing web-site; (ii) a past content of said possibly-abusing web-site, which is different from said current content.

23. The computerized method of claim 1, further comprising:

generating a determination that a possibly-abusing web-site abuses the brand name, based on an analysis that takes into account at least one of: (i) a current type of use of said possibly-abusing web-site; (ii) a past type of use of said possibly-abusing web-site, which is different from said current type of use.

24. The computerized method of claim 1, further comprising:

determining that a possibly-abusing web-site appears in a pre-defined white-list of web-sites that are authorized by the brand owner to mention the brand name;

based on said determining, generating a determination that the possibly-abusing web-site does not abuse the brand name.

25. The computerized method of claim 1, further comprising:

determining that a possibly-abusing web-site is owned by an authorized affiliate of the brand owner;

based on said determining, and based on other estimated risk factors associated with said web-site, generating a determination whether or not the possibly-abusing web-site is abusing the brand name.

26. The computerized method of claim 1, further comprising:

determining that a possibly-abusing web-site is owned by an authorized affiliate of the brand owner, based on a unique code portion that is found embedded within a source code served from said web-site, wherein the unique code portion is unique per authorized affiliate of the brand owner.

27. The computerized method of claim 1, further comprising:

determining that a possibly-abusing web-site is owned by an authorized affiliate of the brand owner, based on a unique code portion that is found embedded within a source code served from said web-site, wherein the unique code portion is unique per web-site of authorized affiliate of the brand owner.

28. The computerized method of claim 3, comprising:

determining that a web-site that abuses the brand name, performs at least one of: (a) sells counterfeit merchandise; (b) directs users to a web-site of a competitor of the brand owner;

in response to said determining, increasing the damage score for said web-site.

29. The computerized method of claim 1, further comprising:

analyzing at least one of: (i) content of a list of domains that are owned by the brand owner, (ii) Internet traffic to said list of domains that are owned by the brand owner;

based on the analyzing, identifying a particular domain on said list, that is under-monetized;

generating a notification to the brand owner to perform self-monetization of said particular domain.

30. The computerized method of claim 1, further comprising:

collecting domain registration data for a batch of domains that are owned by the brand owner;

analyzing the domain registration data for said batch of domains, to determine at least one domain having registration details that are incorrect;

generating a notification to the brand owner, indicating that said at least one domain has registration details that require correction.

31. The computerized method of claim 30, further comprising:

automatically correcting domain registration data, for the at least one domain that has incorrect domain registration details, based on a default profile of registration data pre-defined by said brand owner.

32. The computerized method of claim 1, further comprising:

collecting domain registration data for a batch of domains that are owned by the brand owner;

analyzing the domain registration data for said batch of domains, to determine upcoming expiration dates of said domains;

based on the analyzing, generating notifications to the brand owner with regard to domain renewals, grouped into (i) a first group of urgent domain renewals, and (ii) a second group of non-urgent domain renewals.

33. The computerized method of claim 1, further comprising:

performing a domain availability analysis that takes into account at least one of: (i) the brand name; (ii) one or more user-provided keywords that are related to the brand name; (iii) one or more system-generated keywords that are related to the brand name; (iv) one or more countries-of-interest; (v) one or more global Top-Level Domains (gTLDs) of interest;

based on the domain availability analysis, performing a domain opportunity analysis to determine a particular domain name that is (A) available for registration, and (B) is relevant to the brand name;

generating a notification that proposes to the brand owner to register said particular domain.

34. The computerized method of claim 33, further comprising:

based on the domain opportunity analysis, performing generating a list of multiple domains that are (a) available for registration, and (b) are relevant to the brand name;

ranking said list of multiple domains by using a prioritizing algorithm that takes into account at least one of: (A) system-generated keywords; (B) user-provided keywords; (C) countries-of-interest; (D) global TLD of interest; (E) semantic analysis of the brand name; (F) common typos; (G) common linguistic mutations.

35. The computerized method of claim 1, further comprising:

generating a mutation of said brand name by introducing a typographical error to said brand name;

generating a candidate domain by adding a Top Level Domain (TLD) suffix to the mutation of the brand name;

based on domain registrar data, checking whether the candidate domain is registered to an entity other than the brand owner;

if the candidate domain is registered to an entity other than the brand owner, then, (i) analyzing a use of a web-site served from said candidate domain, and (ii) based on the analyzing, determining whether the candidate domain is abusing the brand name.

36. The computerized method of claim 1, further comprising:

generating a mutation of one or more keywords that are related to said brand name, by introducing a typographical error to said one or more keywords;

generating a candidate domain by adding a Top Level Domain (TLD) suffix to the mutation, wherein the candidate domain comprises said brand name and said mutation of one or more keywords;

based on domain registrar data, checking whether the candidate domain is registered to an entity other than the brand owner;

if the candidate domain is registered to an entity other than the brand owner, then, (i) analyzing a use of a web-site served from said candidate domain, and (ii) based on the analyzing, determining whether the candidate domain is abusing the brand name.

37. The computerized method of claim 1, further comprising:

determining one or more keywords, that are related to the brand name;

performing a search engine query that comprises said one or more keywords;

selecting a web-site that appears in search results of said search engine query;

analyzing at least one of: (i) content of said web-site, (ii) Internet traffic to said web-site, to determine whether or not said web-site abuses the brand name.

38. The computerized method of claim 1, further comprising:

determining one or more keywords, that are related to the brand name;

performing a search engine query that comprises said one or more keywords;

selecting a web-site that appears in search results of said search engine query;

obtaining through a domain registry data about an owner of said web-site;

if said web-site is owned by an entity other than the brand owner, then, analyzing content of said web-site to determine whether or not said web-site abuses the brand name.

39. The computerized method of claim 1, further comprising:

generating a cost effectiveness score for Search Engine Optimization (SEO) operations performed for a web-site of the brand owner, by:

(a) at a first time point, determining a first ranking of said web-site in search results of a particular search engine;

(b) at a second time point, determining a second ranking of said web-site in search results of a particular search engine;

(c) obtaining a user indication of monetary investment in SEO performed between the first time point and the second time point;

(d) generating the cost effectiveness score by taking into account, at least, the change between the first ranking and the second ranking, and said monetary investment in SEO.

40. The computerized method of claim 1, further comprising:

generating a cost effectiveness score for digital marketing operations performed for a web-site of the brand owner, by:

(a) at a first time point, determining a first ranking of said web-site in search results of a particular search engine;

(b) at a second time point, determining a second ranking of said web-site in search results of a particular search engine;

(c) obtaining a user indication of monetary investment in digital marketing performed between the first time point and the second time point;

(d) generating the cost effectiveness score by taking into account, at least, a change between the first ranking and the second ranking, and said monetary investment in digital marketing.

41. The computerized method of claim 1, further comprising:

generating a cost effectiveness score for Search Engine Optimization (SEO) operations performed for a web-site of the brand owner, by:

(a) at a first time point, determining a first ranking of said web-site in search results of a particular search engine;

(b) at a second time point, determining a second ranking of said web-site in search results of a particular search engine;

(c) generating the cost effectiveness score by taking into account, at least, change between (i) the first ranking at the first time-point, and (ii) the second ranking at the second time point.

42. The computerized method of claim 1, further comprising:

generating a cost effectiveness score for digital marketing operations performed for a web-site of the brand owner, by:

(a) at a first time point, determining a first ranking of said web-site in search results of a particular search engine;

(b) at a second time point, determining a second ranking of said web-site in search results of a particular search engine;

(c) generating the cost effectiveness score by taking into account, at least, change between (i) the first ranking at the first time-point, and (ii) the second ranking at the second time point.

43. The computerized method of claim 1, wherein the brand name comprises a name of a person.

44. The computerized method of claim 1, wherein the analyzing further takes into account at least one of: keywords used in the content of said web-site, Internet traffic data for said web-site, Search Engine Optimization (SEO) data of said web-site, structure of said web-site, programming technologies used by said web-site.

45. The computerized method of claim 2, wherein generating the investment score is based on an analysis that takes into account at least one of:
level of sophistication of one or more programming technologies used by said web-site;
whether one or more programming technologies used by said web-site are recent or outdated;
an amount of content contained in said web-site;
a number of web-pages contained in said web-site;
whether or not said web-site is compliant with World Wide Web Consortium (W3C) requirements;
whether or not said web-site is compliant with Search Engine Optimization (SEO) standards.

46. The computerized method of claim 1, further comprising:
identifying a common pattern for multiple cross-brand abusing web-sites.

47. The computerized method of claim 46, comprising:
detecting a first web-site which abuses a first brand name of a first brand owner;
detecting a second web-site which abuses a second, different, brand name, of a second, different, owner;

detecting one or more common characteristics that are common the first and second web-sites.

48. The computerized method of claim 47, comprising:

sending a notification about detection of the multiple cross-brand abusing web-sites, to at least one of the first brand owner and the second brand owner.

49. The computerized method of claim 47, comprising:

sending a notification about detection of the multiple cross-brand abusing web-sites, to at least one of the first brand owner and the second brand owner;

enabling a cooperative action to be taken by the first and second brand owner.

50. The computerized method of claim 1, comprising:

determining that a certain web-site is abusing the brand name;

searching in a secondary marketplace for domains and/or web-sites, whether said certain web-site is offered for sale;

if said certain web-site is offered for sale, through said secondary marketplace, then enabling to the brand owner to purchase said certain web-site through an automated system that interfaces with said secondary marketplace.

51. The computerized method of claim 1, comprising:

determining that a batch of multiple websites are abusing the brand name;

searching in a secondary marketplace for domains and/or websites, which ones of said multiple websites are offered for sale;

generating a list of said multiple websites that are abusing the brand name, and indicating on said list one or more of the websites that are offered for sale on the secondary marketplace.

52. The computerized method of claim 1, comprising:

scanning an entire registry of a Top-Level Domain (TLD) for websites that abuse any one of a group of brand names;

generating a risk score for each one of said websites;

based on the risk score, generating a ranked list of said websites.

53. The computerized method of claim 1, comprising:

scanning an entire registry of a Top-Level Domain (TLD) for websites that are non-compliant with one or more rules that apply to said TLD registry;

generating a non-compliance score for each one of said websites;

based on the non-compliance score, generating a ranked list of said websites.

54. The computerized method of claim 1, comprising:

determining that a certain website is possibly abusing the brand name;

capturing and storing a screenshot of said website, together with a time-and-date stamp.

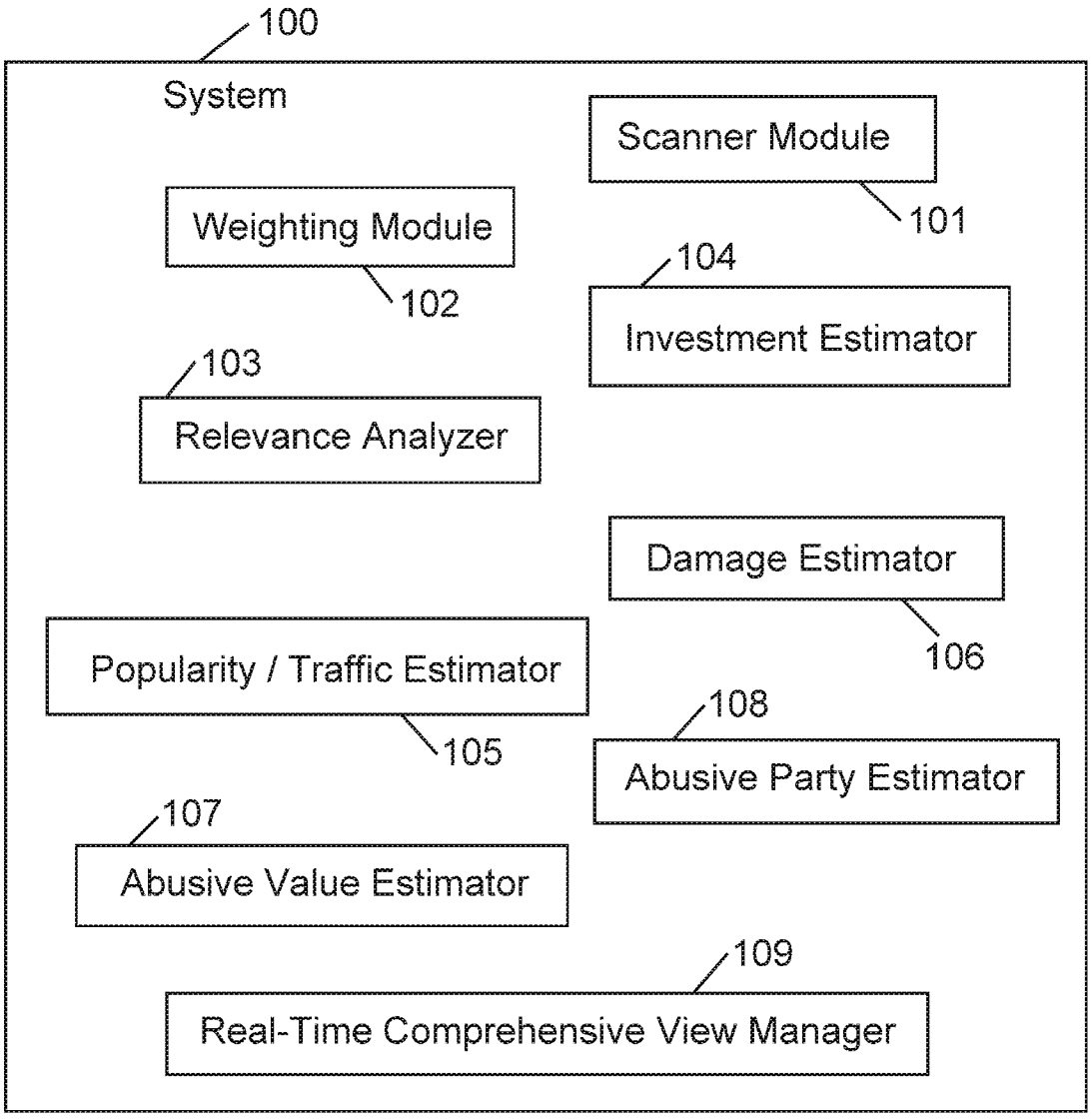
100
System
Scanner Module
101
Weighting Module
102
104
Investment Estimator
103
Relevance Analyzer
Damage Estimator
106
Popularity / Traffic Estimator
105
108
Abusive Party Estimator
107
Abusive Value Estimator
109
Real-Time Comprehensive View Manager

Fig. 1

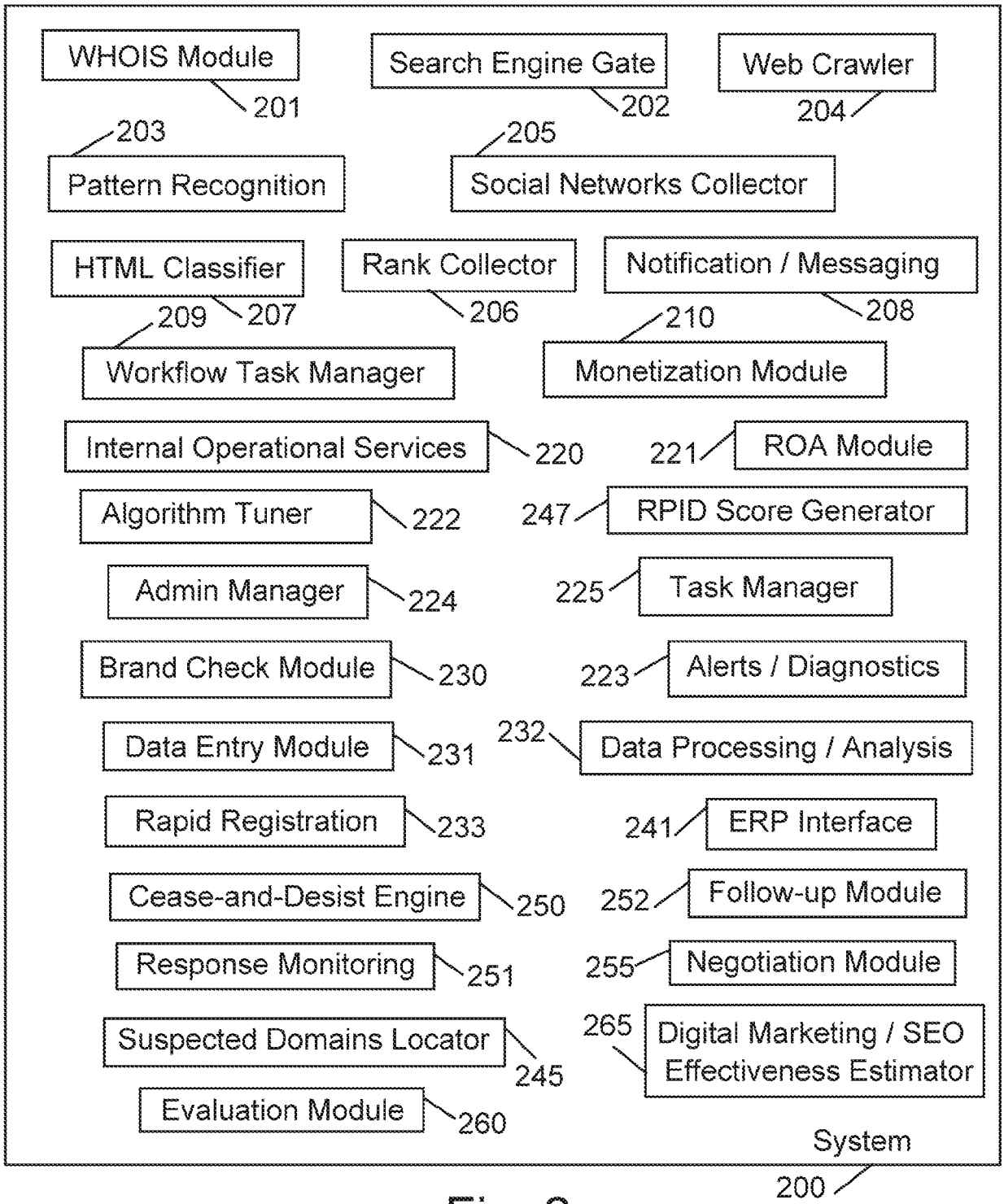
WHOIS Module
201
Search Engine Gate
202
Web Crawler
204
203
Pattern Recognition
205
Social Networks Collector
HTML Classifier
209
207
Rank Collector
206
Notification / Messaging
208
210
Workflow Task Manager
Monetization Module
Internal Operational Services
220
221
ROA Module
Algorithm Tuner
222
247
RPID Score Generator
Admin Manager
224
225
Task Manager
Brand Check Module
230
223
Alerts / Diagnostics
Data Entry Module
231
232
Data Processing / Analysis
Rapid Registration
233
241
ERP Interface
Cease-and-Desist Engine
250
252
Follow-up Module
Response Monitoring
251
255
Negotiation Module
Suspected Domains Locator
245
265
Digital Marketing / SEO Effectiveness Estimator
Evaluation Module
260
System
200

Fig. 2

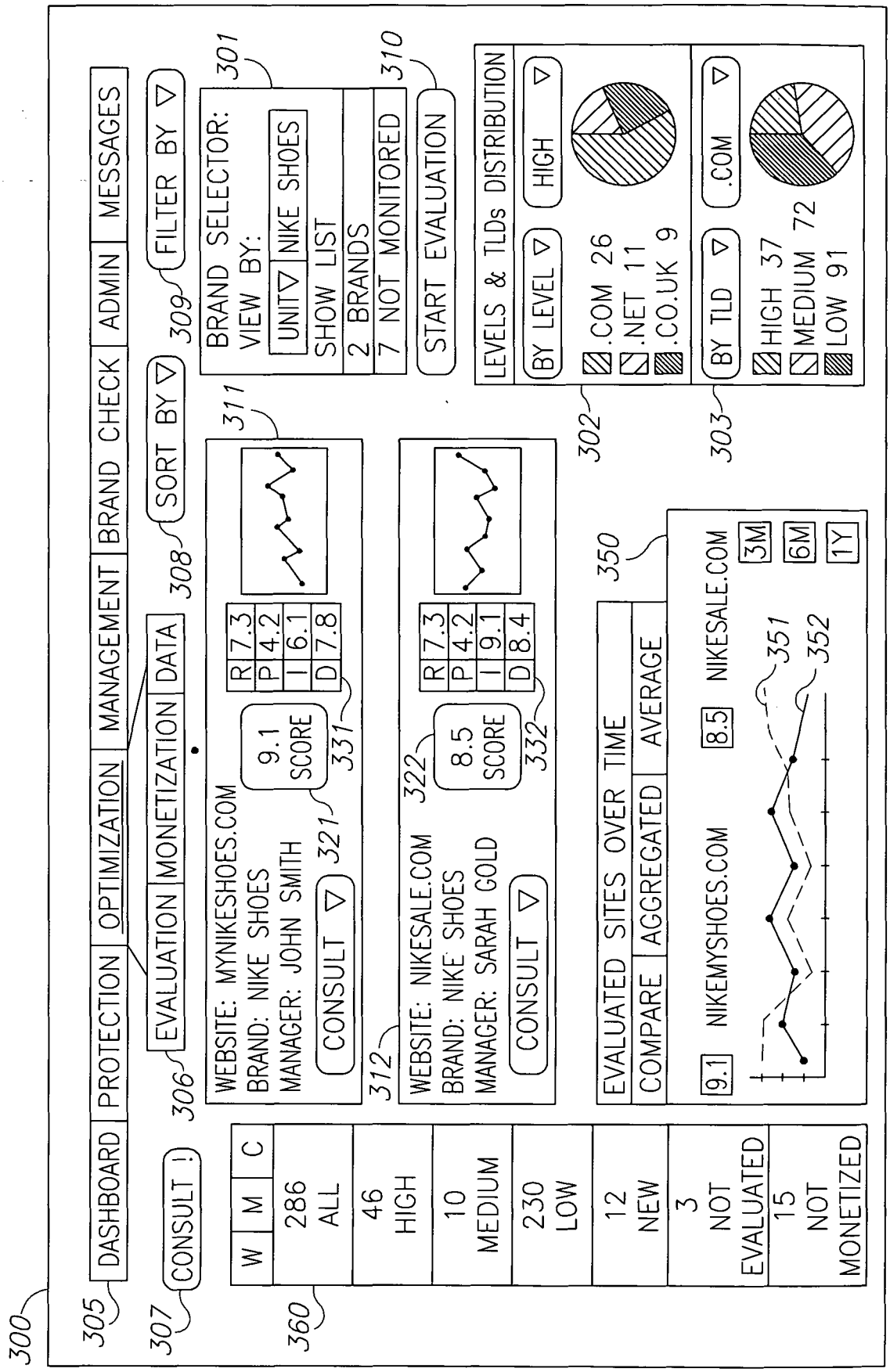
300
DASHBOARD
PROTECTION
OPTIMIZATION
MANAGEMENT
BRAND CHECK
ADMIN
MESSAGES
305
CONSULT !
307
EVALUATION
MONETIZATION
DATA
306
FILTER BY
309
SORT BY
308
BRAND SELECTOR:
VIEW BY:
UNIT
NIKE SHOES
SHOW LIST
2 BRANDS
7 NOT MONITORED
301
310
START EVALUATION
W
M
C
286
ALL
46
HIGH
10
MEDIUM
230
LOW
12
NEW
3
NOT
EVALUATED
15
NOT
MONETIZED
360
WEBSITE: MYNIKESHOES.COM
BRAND: NIKE SHOES
MANAGER: JOHN SMITH
9.1
SCORE
321
331
R 7.3
P 4.2
I 6.1
D 7.8
311
CONSULT
312
WEBSITE: NIKESALE.COM
BRAND: NIKE SHOES
MANAGER: SARAH GOLD
8.5
SCORE
322
332
R 7.3
P 4.2
I 9.1
D 8.4
CONSULT
EVALUATED SITES OVER TIME
COMPARE
AGGREGATED
AVERAGE
350
9.1
NIKEMYSHOES.COM
8.5
NIKESALE.COM
3M
6M
1Y
351
352
LEVELS & TLDs DISTRIBUTION
BY LEVEL
HIGH
.COM 26
.NET 11
.CO.UK 9
302
BY TLD
.COM
HIGH 37
MEDIUM 72
LOW 91
303

FIG.3

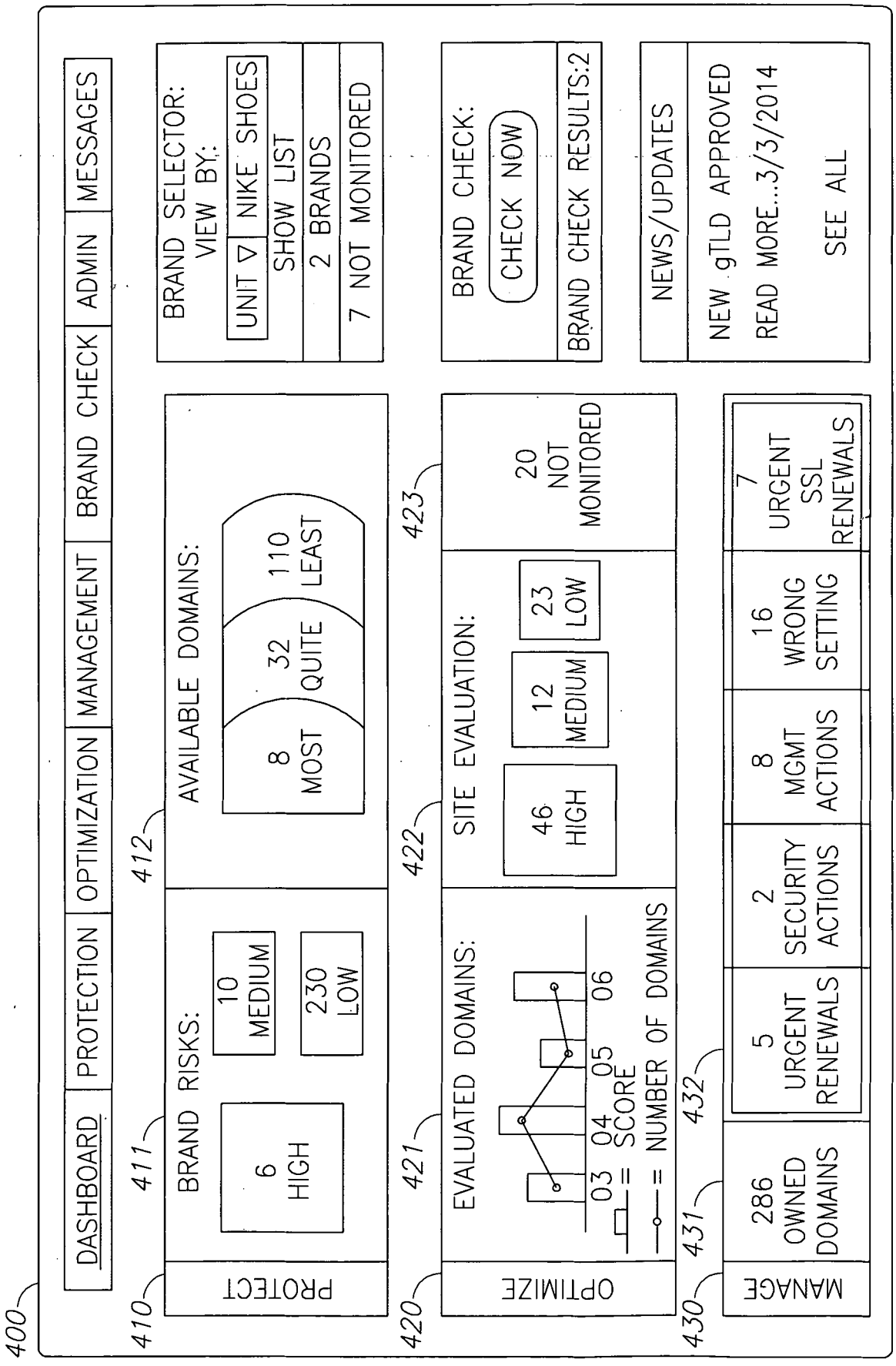
400
DASHBOARD
PROTECTION
OPTIMIZATION
MANAGEMENT
BRAND CHECK
ADMIN
MESSAGES
410
PROTECT
411
BRAND RISKS:
6 HIGH
10 MEDIUM
230 LOW
412
AVAILABLE DOMAINS:
8 MOST
32 QUITE
110 LEAST
BRAND SELECTOR: VIEW BY:
UNIT
NIKE SHOES
SHOW LIST
2 BRANDS
7 NOT MONITORED
BRAND CHECK:
CHECK NOW
BRAND CHECK RESULTS:2
NEWS/UPDATES
NEW gTLD APPROVED
READ MORE...3/3/2014
SEE ALL
420
OPTIMIZE
421
EVALUATED DOMAINS:
03 04 05 06
SCORE
NUMBER OF DOMAINS
422
SITE EVALUATION:
46 HIGH
12 MEDIUM
23 LOW
423
20 NOT MONITORED
430
MANAGE
431
286 OWNED DOMAINS
432
5 URGENT RENEWALS
2 SECURITY ACTIONS
8 MGMT ACTIONS
16 WRONG SETTING
7 URGENT SSL RENEWALS

FIG.4

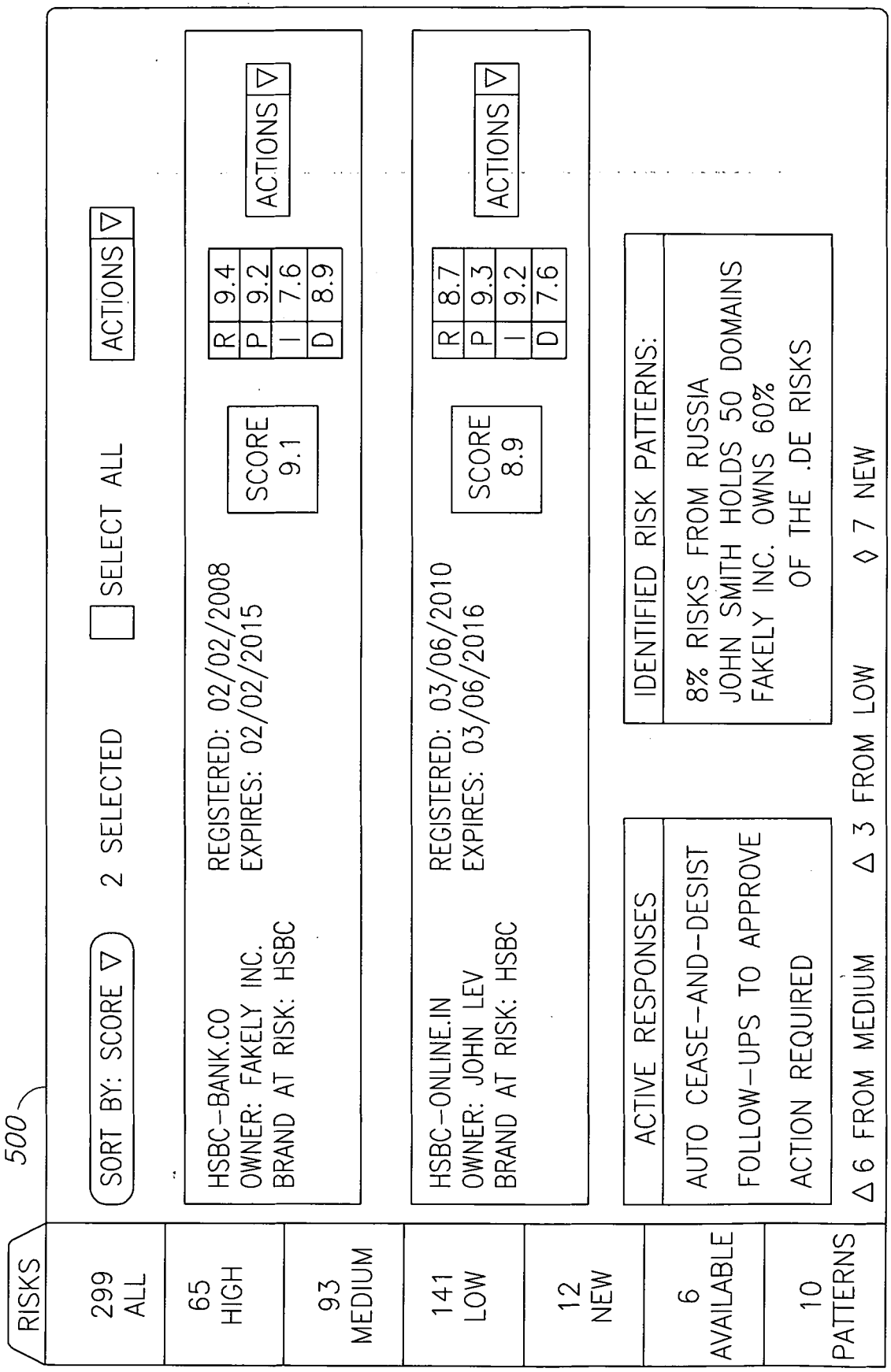
500
RISKS
299 ALL
65 HIGH
93 MEDIUM
141 LOW
12 NEW
6 AVAILABLE
10 PATTERNS
SORT BY: SCORE
2 SELECTED
SELECT ALL
ACTIONS
HSBC-BANK.CO
OWNER: FAKELY INC.
BRAND AT RISK: HSBC
REGISTERED: 02/02/2008
EXPIRES: 02/02/2015
SCORE 9.1
R 9.4
P 9.2
I 7.6
D 8.9
ACTIONS
HSBC-ONLINE.IN
OWNER: JOHN LEV
BRAND AT RISK: HSBC
REGISTERED: 03/06/2010
EXPIRES: 03/06/2016
SCORE 8.9
R 8.7
P 9.3
I 9.2
D 7.6
ACTIONS
ACTIVE RESPONSES
AUTO CEASE-AND-DESIST
FOLLOW-UPS TO APPROVE
ACTION REQUIRED
IDENTIFIED RISK PATTERNS:
8% RISKS FROM RUSSIA
JOHN SMITH HOLDS 50 DOMAINS
FAKELY INC. OWNS 60%
OF THE .DE RISKS
Δ 6 FROM MEDIUM
Δ 3 FROM LOW
◊ 7 NEW

FIG.5

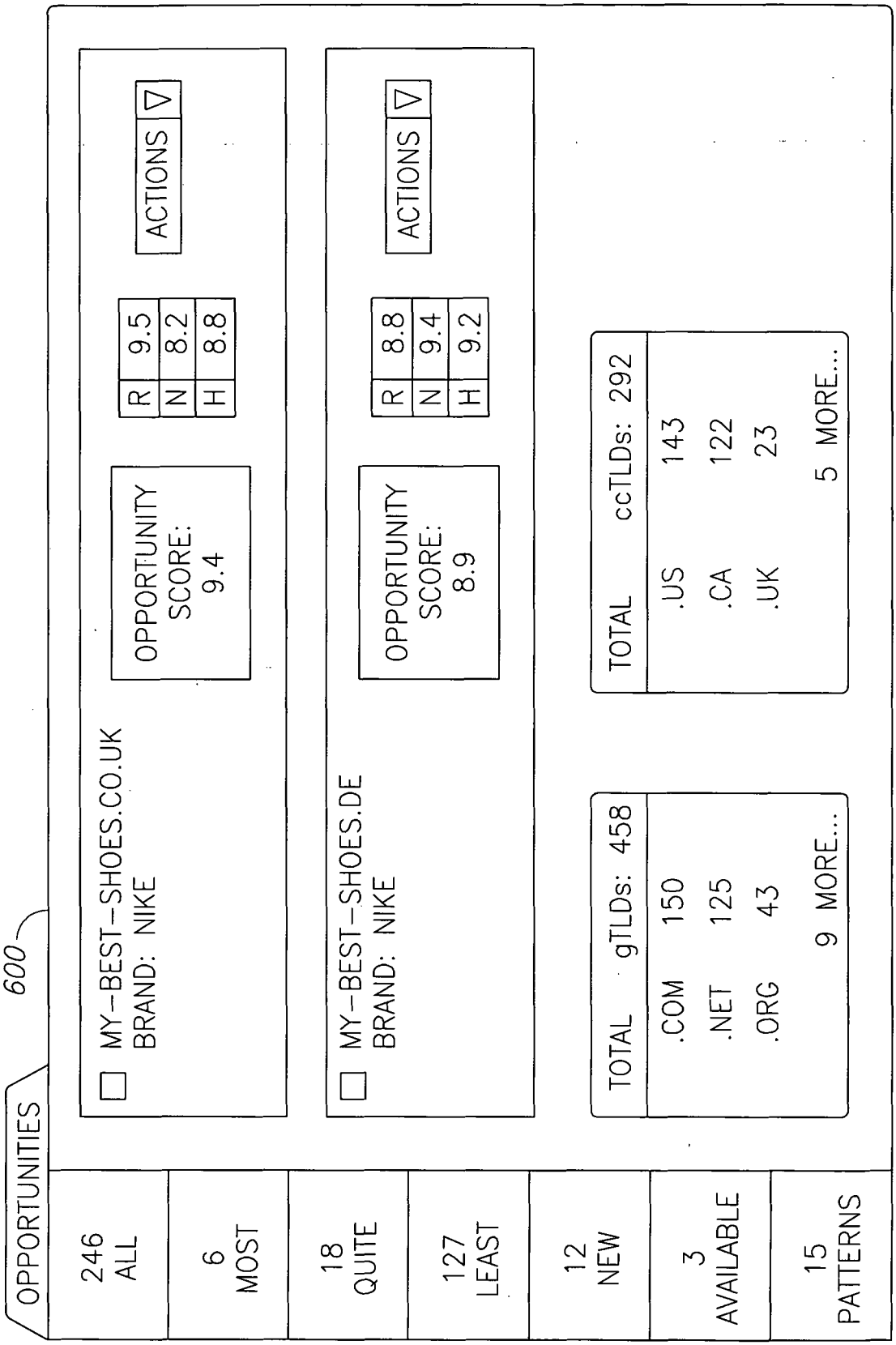
OPPORTUNITIES
600
246 ALL
6 MOST
18 QUITE
127 LEAST
12 NEW
3 AVAILABLE
15 PATTERNS
MY-BEST-SHOES.CO.UK
BRAND: NIKE
OPPORTUNITY SCORE: 9.4
R 9.5
N 8.2
H 8.8
ACTIONS
MY-BEST-SHOES.DE
BRAND: NIKE
OPPORTUNITY SCORE: 8.9
R 8.8
N 9.4
H 9.2
ACTIONS
TOTAL gTLDs: 458
.COM 150
.NET 125
.ORG 43
9 MORE....
TOTAL ccTLDs: 292
.US 143
.CA 122
.UK 23
5 MORE...

FIG.6

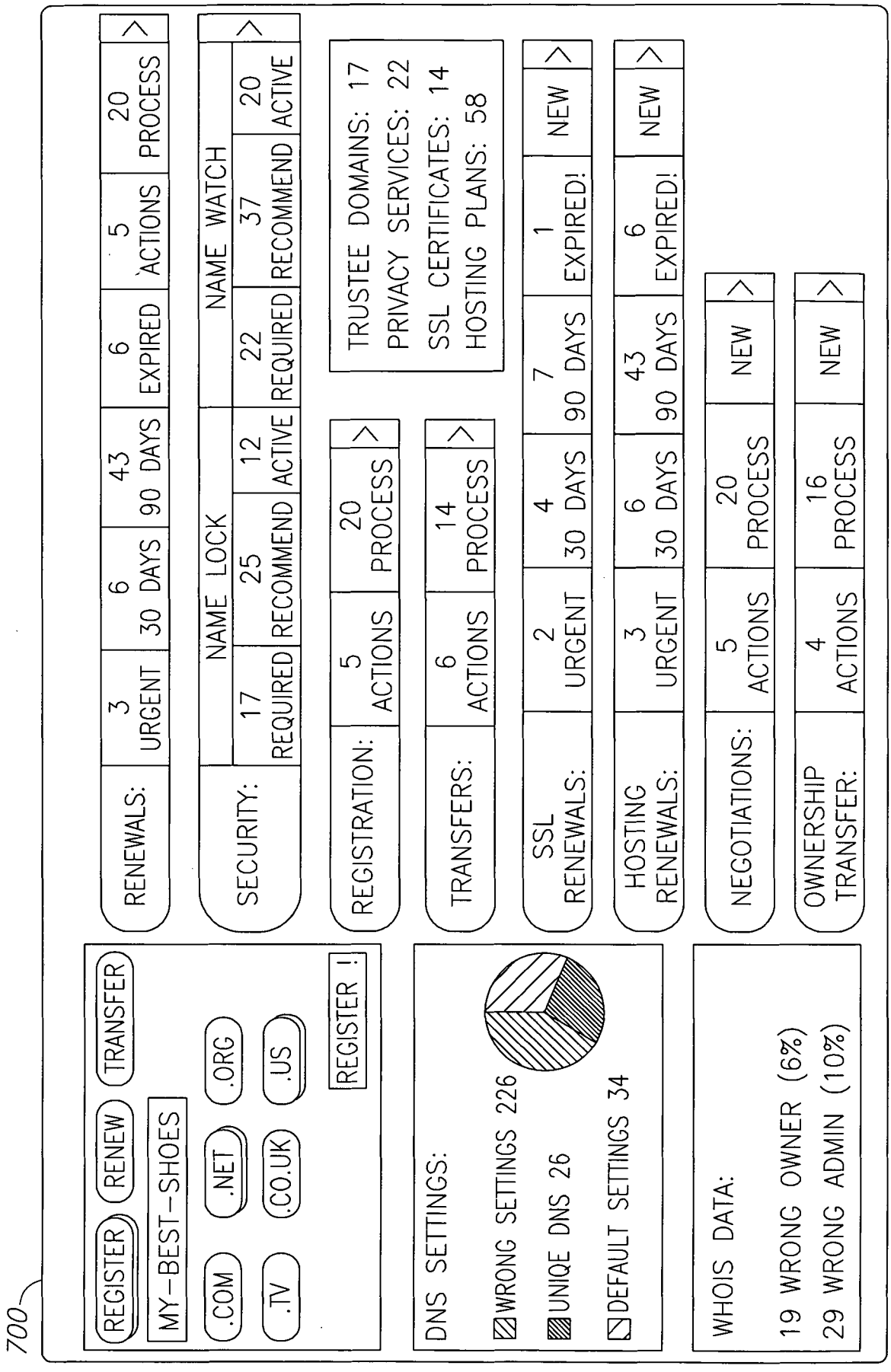
700
REGISTER
RENEW
TRANSFER
MY-BEST-SHOES
.COM
.NET
.ORG
.TV
.CO.UK
.US
REGISTER !
DNS SETTINGS:
WRONG SETTINGS 226
UNIQE DNS 26
DEFAULT SETTINGS 34
WHOIS DATA:
19 WRONG OWNER (6%)
29 WRONG ADMIN (10%)
RENEWALS:
3 URGENT
6 30 DAYS
43 90 DAYS
6 EXPIRED
5 ACTIONS
20 PROCESS
SECURITY:
NAME LOCK
NAME WATCH
17 REQUIRED
25 RECOMMEND
12 ACTIVE
22 REQUIRED
37 RECOMMEND
20 ACTIVE
REGISTRATION:
5 ACTIONS
20 PROCESS
TRUSTEE DOMAINS: 17
PRIVACY SERVICES: 22
SSL CERTIFICATES: 14
HOSTING PLANS: 58
TRANSFERS:
6 ACTIONS
14 PROCESS
SSL RENEWALS:
2 URGENT
4 30 DAYS
7 90 DAYS
1 EXPIRED!
NEW
HOSTING RENEWALS:
3 URGENT
6 30 DAYS
43 90 DAYS
6 EXPIRED!
NEW
NEGOTIATIONS:
5 ACTIONS
20 PROCESS
NEW
OWNERSHIP TRANSFER:
4 ACTIONS
16 PROCESS
NEW

FIG.7

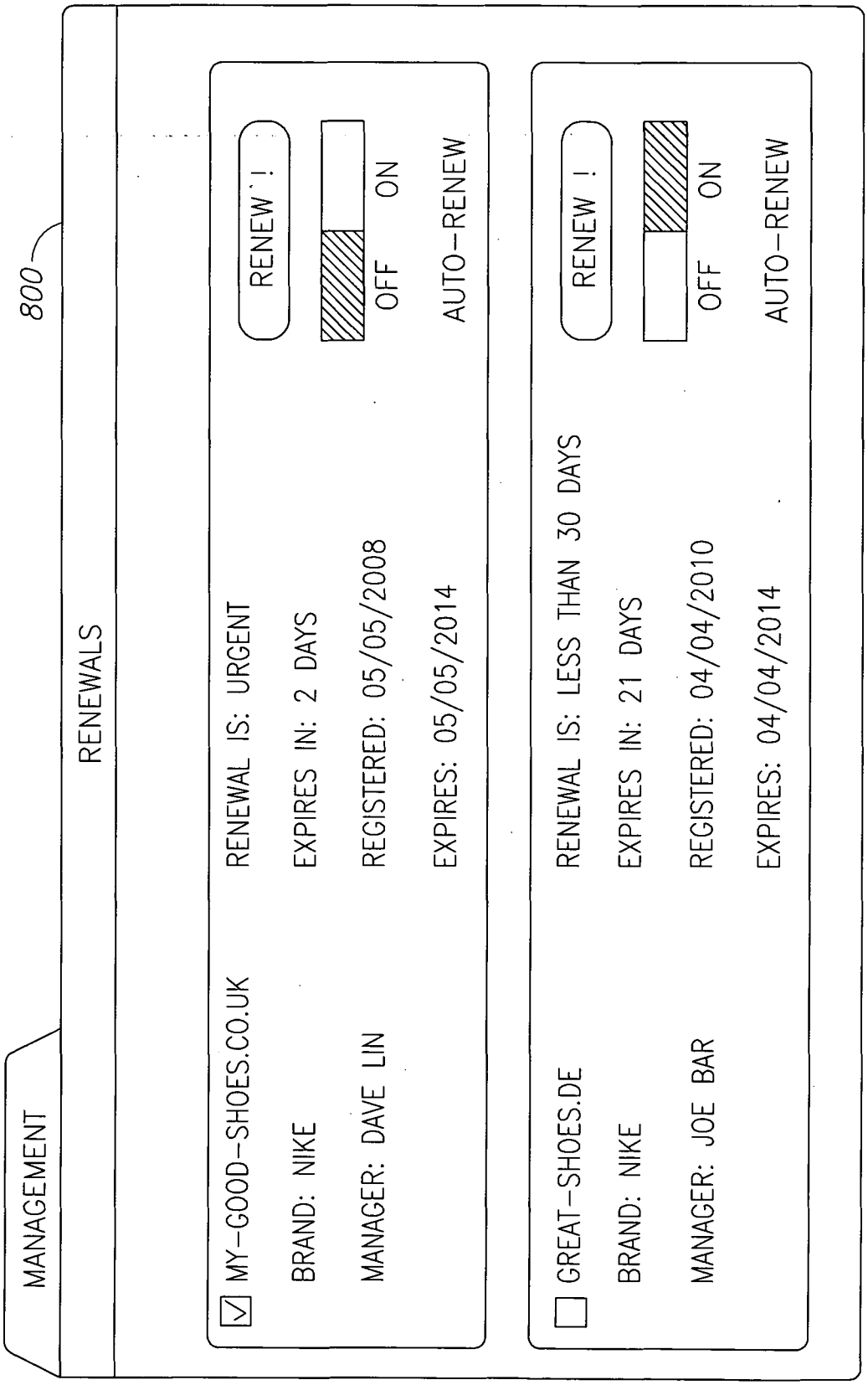
800
MANAGEMENT
RENEWALS
☑ MY-GOOD-SHOES.CO.UK
BRAND: NIKE
MANAGER: DAVE LIN
RENEWAL IS: URGENT
EXPIRES IN: 2 DAYS
REGISTERED: 05/05/2008
EXPIRES: 05/05/2014
RENEW !
OFF ON
AUTO-RENEW
☐ GREAT-SHOES.DE
BRAND: NIKE
MANAGER: JOE BAR
RENEWAL IS: LESS THAN 30 DAYS
EXPIRES IN: 21 DAYS
REGISTERED: 04/04/2010
EXPIRES: 04/04/2014
RENEW !
OFF ON
AUTO-RENEW

FIG.8

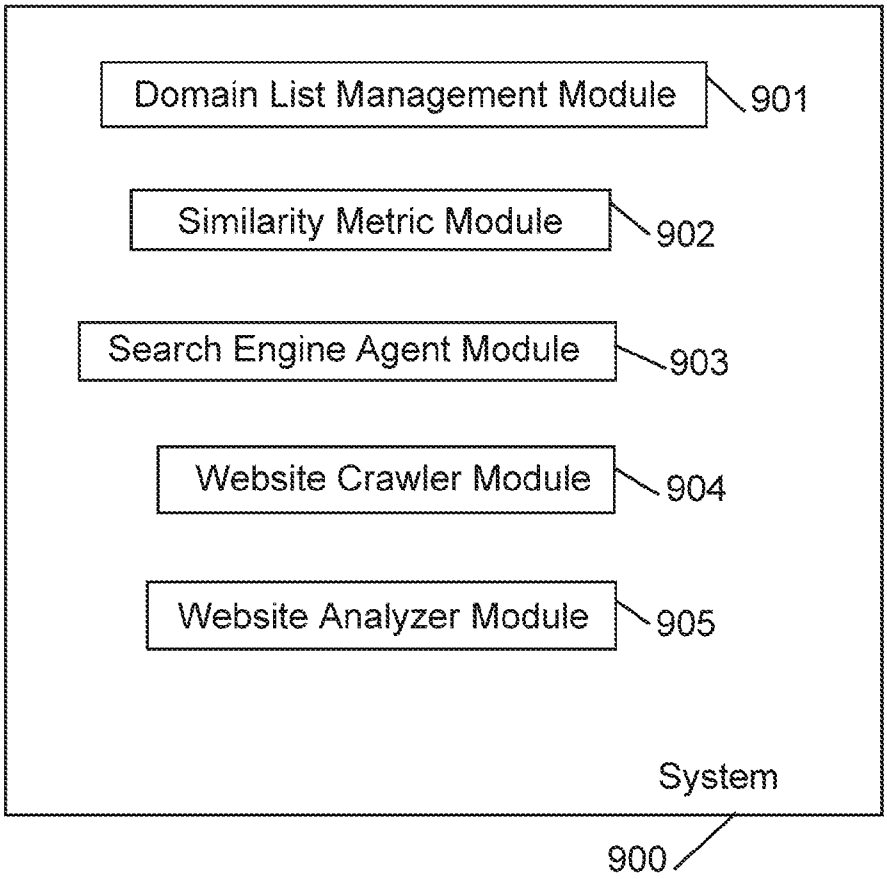
Domain List Management Module
901
Similarity Metric Module
902
Search Engine Agent Module
903
Website Crawler Module
904
Website Analyzer Module
905
System
900

Fig. 9

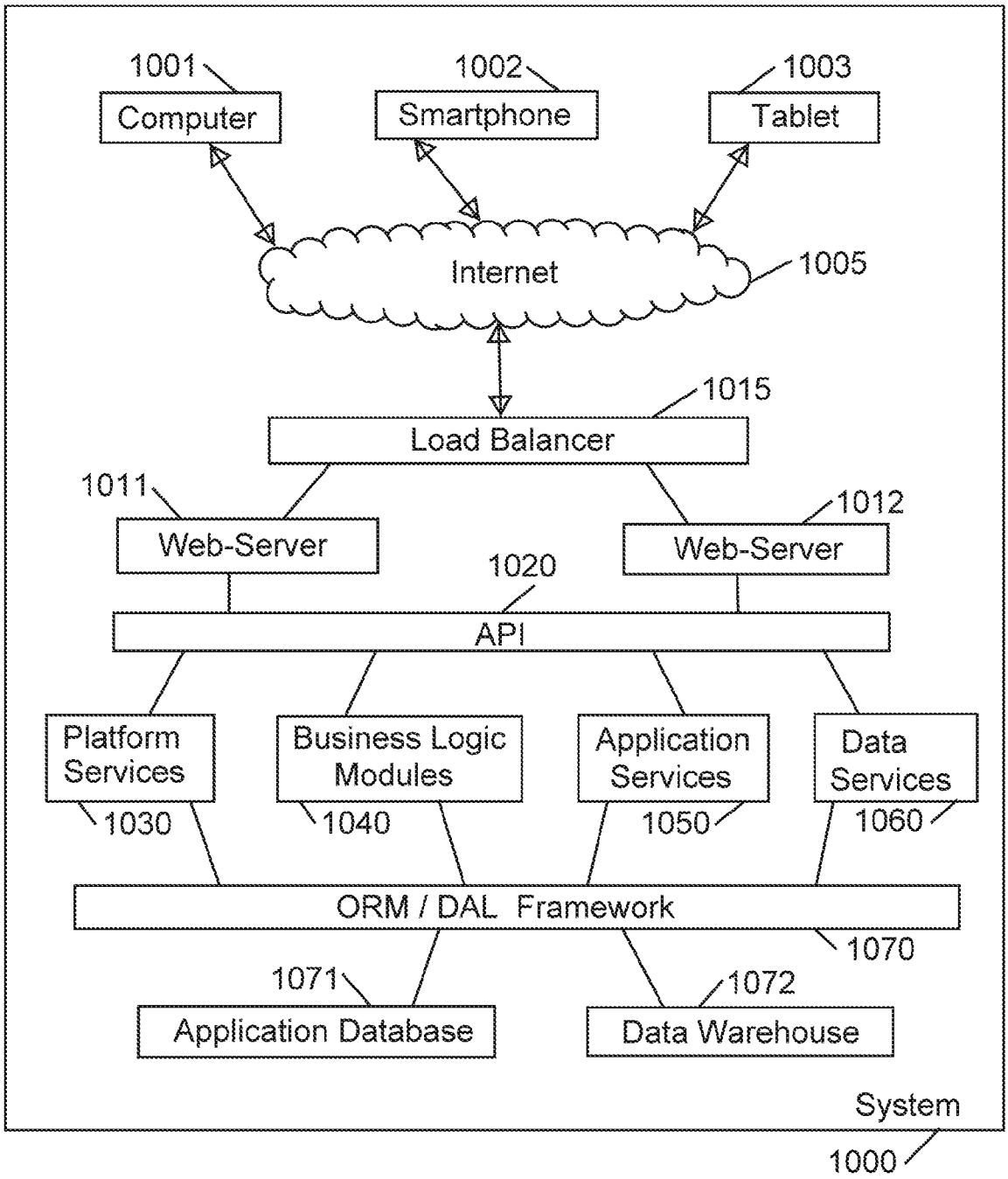
1001
Computer
1002
Smartphone
1003
Tablet
Internet
1005
1015
Load Balancer
1011
Web-Server
1012
Web-Server
1020
API
Platform Services
1030
Business Logic Modules
1040
Application Services
1050
Data Services
1060
ORM / DAL Framework
1070
1071
Application Database
1072
Data Warehouse
System
1000

Fig. 10

INTERNATIONAL SEARCH REPORT

International application No.
PCT/IB2014/060577

A. CLASSIFICATION OF SUBJECT MATTER
IPC (2014.01) G06F 15/173, G06F 21/00, G06Q 30/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC (2014.01) G06F 15/173, G06F 21/00, G06Q 30/00

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
Databases consulted: Esp@cenet
Search terms used: brand Owner score website abuse content crawling counterfeit

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2013007271 A1 Stout et al. 03 Jan 2013 (2013/01/03) ¶¶0008,0017,0037,0045,0053,0054,0062,0084	1-54
X	US 2007162349 A1 Silver 12 Jul 2007 (2007/07/12) ¶¶0028,0037,0047	1
A	US 2009064330 A1 Shraim et al. 05 Mar 2009 (2009/03/05) The entire document	1-54
A	US 2011004850 A1 Lodico et al. 06 Jan 2011 (2011/01/06) The entire document	1-54
A	US 2002174132 A1 Silverman 21 Nov 2002 (2002/11/21) The entire document	1-54

☐ Further documents are listed in the continuation of Box C. ☒ See patent family annex.

* Special categories of cited documents:
"A" document defining the general state of the art which is not considered to be of particular relevance
"E" earlier application or patent but published on or after the international filing date
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
"O" document referring to an oral disclosure, use, exhibition or other means
"P" document published prior to the international filing date but later than the priority date claimed
"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
11 Sep 2014	11 Sep 2014

Name and mailing address of the ISA:	Authorized officer
Israel Patent Office Technology Park, Bldg.5, Malcha, Jerusalem, 9695101, Israel Facsimile No. 972-2-5651616	MAUDA Nissim Telephone No. 972-2-5651733

INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.
PCT/IB2014/060577

Patent document cited search report	Publication date	Patent family member(s)	Publication Date
US 2013007271 A1	03 Jan 2013	US 2013007271 A1	03 Jan 2013
		US 8285830 B1	09 Oct 2012
US 2007162349 A1	12 Jul 2007	US 2007162349 A1	12 Jul 2007
		US 2009119143 A1	07 May 2009
		WO 2007047871 A2	26 Apr 2007
		WO 2007047871 A3	10 Jan 2008
US 2009064330 A1	05 Mar 2009	US 2009064330 A1	05 Mar 2009
		CA 2588138 A1	01 Jun 2006
		CA 2588723 A1	08 Jun 2006
		EP 1794683 A2	13 Jun 2007
		EP 1815667 A2	08 Aug 2007
		EP 1825398 A2	29 Aug 2007
		IL 179041 D0	08 Mar 2007
		JP 2008507005 A	06 Mar 2008
		JP 2008521149 A	19 Jun 2008
		JP 2008522291 A	26 Jun 2008
		US 2006069697 A1	30 Mar 2006
		US 7457823 B2	25 Nov 2008
		US 2006068755 A1	30 Mar 2006
		US 7870608 B2	11 Jan 2011
		US 2007192853 A1	16 Aug 2007
		US 7913302 B2	22 Mar 2011
		US 2007294762 A1	20 Dec 2007
		US 7992204 B2	02 Aug 2011
		US 2007294352 A1	20 Dec 2007
		US 8041769 B2	18 Oct 2011
		US 2005257261 A1	17 Nov 2005
		US 8769671 B2	01 Jul 2014
		US 2007107053 A1	10 May 2007

INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.
PCT/IB2014/060577

Patent document cited search report	Publication date	Patent family member(s)	Publication Date
		US 2007299777 A1	27 Dec 2007
		US 2007299915 A1	27 Dec 2007
		WO 2005109225 A2	17 Nov 2005
		WO 2005109225 A3	26 Jun 2008
		WO 2006058217 A2	01 Jun 2006
		WO 2006058217 A3	29 Nov 2007
		WO 2006060284 A2	08 Jun 2006
		WO 2006060284 A3	04 Oct 2007
US 2011004850 A1	06 Jan 2011	US 2011004850 A1	06 Jan 2011
		US 8458604 B2	04 Jun 2013
US 2002174132 A1	21 Nov 2002	US 2002174132 A1	21 Nov 2002
		US 2005050003 A1	03 Mar 2005

(19)中华人民共和国国家知识产权局

(12)发明专利申请

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(21)申请号 201480031384.1

(22)申请日 2014.04.09

(30)优先权数据
61/810,742 2013.04.11 US

(85)PCT国际申请进入国家阶段日
2015.11.30

(86)PCT国际申请的申请数据
PCT/IB2014/060577 2014.04.09

(87)PCT国际申请的公布数据
WO2014/167516 EN 2014.10.16

(71)申请人 布兰德席德有限公司
地址 以色列拉马特沙容

(72)发明人 约阿夫·科伦 尤瓦尔·赞特克伦 大卫·弗里德曼

(74)专利代理机构 北京派特恩知识产权代理有限公司 11270
代理人 徐川 武晨燕

(51)Int.Cl.
G06Q 30/00(2012.01)

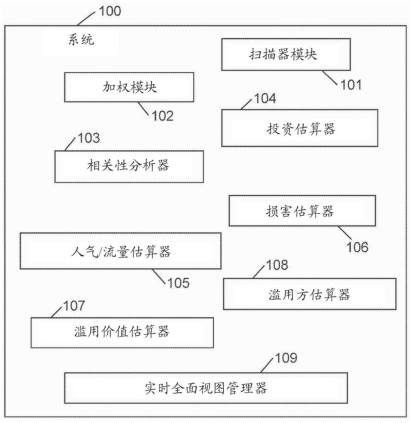
权利要求书7页 说明书49页 附图10页

(54)发明名称

对品牌名称和域名进行保护的设备、系统以及方法

(57)摘要

一种保护品牌拥有者的品牌名称的计算机化方法,包括:(a)抓取全球通信网络以识别并且收集关于可能滥用品牌名称的网站的数据;(b)针对可能滥用品牌名称的每个网站,通过分析下述中至少一项来分析该网站是否滥用品牌名称:(i)该网站的内容;以及(ii)关于该网站的拥有者的数据。该方法还包括:针对可能滥用品牌名称的每个网站,(A)生成投资分数,该投资分数指示估算的对网站的开发进行投资的投资水平;以及(B)生成损害分数,该损害分数指示估算的网站对品牌名称造成的损害的程度。



CN 105324786 A

1.一种保护品牌拥有者的品牌名称的计算机化方法,所述方法包括 :

(a) 抓取全球通信网络以识别并且收集关于可能滥用所述品牌名称的网站的数据 ;

(b) 针对可能滥用所述品牌名称的每个网站,通过分析下述各项中至少一项来分析所述网站是否滥用所述品牌名称 :(i) 所述网站的内容 ;以及 (ii) 关于所述网站的拥有者的数据。

2.根据权利要求 1 所述的计算机化方法,包括 :

针对可能滥用所述品牌名称的每个网站,生成投资分数,所述投资分数指示估算的对所述网站的开发进行投资的投资水平。

3.根据权利要求 2 所述的计算机化方法,包括 :

针对可能滥用所述品牌名称的每个网站,生成损害分数,所述损害分数指示估算的所述网站对所述品牌名称造成的损害的程度。

4.根据权利要求 3 所述的计算机化方法,包括 :

针对可能滥用所述网站的每个域,生成人气分数,所述人气分数指示在所述全球通信网络的用户之中所述网站的人气水平。

5.根据权利要求 4 所述的计算机化方法,包括 :

针对可能滥用所述品牌名称的每个域,生成相关性分数,所述相关性分数指示所述域与所述品牌的相关性水平。

6.根据权利要求 5 所述的计算机化方法,包括 :

针对可能滥用所述品牌名称的每个网站,基于下述各项中的至少一项或多项生成合计的风险分数 :所述投资分数、所述人气分数、所述损害分数以及所述相关性分数。

7.根据权利要求 1 所述的计算机化方法,包括 :

识别通过所述计算机化方法确定的正在滥用所述品牌名称的多个网站之中的通用模式。

8.根据权利要求 7 所述的计算机化方法,其中,基于以下各项中的至少一项来识别所述多个网站之中的所述通用模式 :

识别所述多个网站的共同的域所有权 ;

识别所述多个网站的共同的域注册商 ;

识别所述多个网站的共同的 DNS 服务器 ;

识别所述多个网站的共同的互联网协议 IP 地址 ;

识别所述多个网站的共同的内容 ;

识别所述多个域的共同的网站使用类型 ;

识别所述多个网站的多个互联网协议 IP 地址属于同一国家 ;

识别所述多个网站具有相同的国家代码顶级域 ccTLD ;

识别所述多个网站的域名查询记录共享至少一个相同的联系方式。

9.根据权利要求 7 所述的计算机化方法,包括 :

识别被不同的实体所拥有并且通过所述计算机化方法确定正在滥用所述品牌名称的一批多个网站 ;

自动生成针对所述实体的停止侵权通知的草稿 ;

一旦所述品牌拥有者批准之后,将所述停止侵权通知发送给所述实体。

10.根据权利要求 1 所述的计算机化方法，包括 ：

针对通过所述计算机化方法确定的正在滥用所述品牌名称的特定网站，

自动分析以下至少之一 ：(i) 所述网站的内容，以及 (ii) 所述网站的域注册数据 ；

基于该分析，给所述品牌拥有者自动展示选自以下各项中的至少一个选项 ：(a) 将停止侵权通知自动发送给所述特定网站的拥有者，(b) 自动开始协商处理以为了购买所述特定网站，(c) 自动将撤除通知发送给所述网站的托管服务。

11.根据权利要求 1 所述的计算机化方法，包括 ：

生成通过所述计算机化方法确定正在滥用所述品牌名称的多个网站的列表 ；

将多个网站的所述列表展示给所述品牌拥有者。

12.根据权利要求 11 所述的计算机化方法，包括 ：

基于所述网站的顶级域 TLD 对所述列表中的网站划分子组。

13.根据权利要求 11 所述的计算机化方法，包括 ：

基于所述网站的国家代码顶级域 ccTLD 对所述列表中的网站划分子组。

14.根据权利要求 11 所述的计算机化方法，包括 ：

基于对所述品牌名称的合计风险的水平对所述列表中的域划分子组。

15.根据权利要求 1 所述的计算机化方法，还包括 ：

基于由所述品牌拥有者输入的关键词，对抓取的数据进行分析并且识别滥用所述品牌名称的网站 ；其中，由所述品牌拥有者输入的所述关键词用于生成所述网站中每个网站的相关性分数。

16.根据权利要求 1 所述的计算机化方法，还包括 ：

基于由所述品牌拥有者输入的一个或多个竞争对手的名称，对抓取的数据进行分析并且识别滥用所述品牌名称的网站。

17.根据权利要求 1 所述的计算机化方法，还包括 ：

基于可能滥用的网站的使用类型，对抓取的数据进行分析并且确定所述可能滥用的网站是否滥用了所述品牌名称。

18.根据权利要求 1 所述的计算机化方法，还包括 ：

确定可能滥用的网站被用于域名停放 ；

基于该确定，生成可能滥用的域是否滥用了所述品牌名称的确认。

19.根据权利要求 1 所述的计算机化方法，还包括 ：

确定可能滥用的网站被用于按点击付费广告 ；

基于该确定，生成所述可能滥用的网站滥用了所述品牌名称的确认。

20.根据权利要求 1 所述的计算机化方法，还包括 ：

确定可能滥用的网站被用于将互联网流量重定向到与所述品牌拥有者的竞争对手关联的网站 ；

基于该确定，生成所述可能滥用的网站滥用了所述品牌名称的确认。

21.根据权利要求 1 所述的计算机化方法，还包括 ：

确定可能滥用的网站被用于假冒商品的电子商务 ；

基于该确定，生成所述可能滥用的网站滥用了所述品牌名称的确认。

22.根据权利要求 1 所述的计算机化方法，还包括 ：

基于考虑到以下各项中至少一项的分析，生成可能滥用的网站滥用了所述品牌名称的确认：(i) 所述可能滥用的网站的当前内容；(ii) 所述可能滥用的网站的、与所述当前内容不同的过去的内容。

23. 根据权利要求 1 所述的计算机化方法，还包括：

基于考虑到以下各项中至少一项的分析，生成可能滥用的网站滥用了所述品牌名称的确认：(i) 所述可能滥用的网站的当前的使用类型；(ii) 所述可能滥用的网站的、与所述当前的使用类型不同的过去的使用类型。

24. 根据权利要求 1 所述的计算机化方法，还包括：

确定可能滥用的网站出现在由所述品牌拥有者授权提起所述品牌名称的预先定义的网站的白名单中；

基于该确定，生成所述可能滥用的网站没有滥用所述品牌名称的确认。

25. 根据权利要求 1 所述的计算机化方法，还包括：

确定可能滥用的网站是由所述品牌拥有者的授权的分支机构所拥有的；

基于该确定，并且基于与所述网站关联的其它估算的风险因素，生成所述可能滥用的网站是否正在滥用所述品牌名称的确认。

26. 根据权利要求 1 所述的计算机化方法，还包括：

基于发现嵌入在从所述网站得到服务的源代码之中的独特代码部分，确定可能滥用的网站是由所述品牌拥有者的授权的分支机构所拥有的，其中，所述独特代码部分对所述品牌拥有者的每个授权的分支机构来说是独一无二的。

27. 根据权利要求 1 所述的计算机化方法，还包括：

基于发现嵌入在从所述网站得到服务的源代码之中的独特代码部分，确定可能滥用的网站是由所述品牌拥有者的授权的分支机构所拥有的，其中，所述独特代码部分对所述品牌拥有者的授权的分支机构的每个网站来说是独一无二的。

28. 根据权利要求 3 所述的计算机化方法，包括：

确定滥用所述品牌名称的网站进行以下各项中的至少一项：(a) 出售假冒商品；(b) 将用户指向所述品牌拥有者的竞争对手的网站；

响应于所述确定，增加所述网站的所述损害分数。

29. 根据权利要求 1 所述的计算机化方法，还包括：

对以下各项中至少一项进行分析：(i) 由所述品牌拥有者所拥有的域的列表的内容，(ii) 到由所述品牌拥有者所拥有的域的所述列表的互联网流量；

基于该分析，识别所述列表上未货币化的特定的域；

生成给所述品牌拥有者的通知以执行所述特定域的自货币化。

30. 根据权利要求 1 所述的计算机化方法，还包括：

收集针对由所述品牌拥有者所拥有的一批域的域注册数据；

分析所述一批域的所述域注册数据，以确定具有不正确的注册细节的至少一个域；

生成给所述品牌拥有者的通知，指示所述至少一个域具有需要更正的注册细节。

31. 根据权利要求 30 所述的计算机化方法，还包括：

针对具有不正确的域注册细节的所述至少一个域，基于由所述品牌拥有者预先定义的注册数据的默认配置来自动收集域注册数据。

32. 根据权利要求 1 所述的计算机化方法，还包括：

收集针对由所述品牌拥有者所拥有的一批域的域注册数据；

分析所述一批域的所述域注册数据，以确定即将到来的所述域的失效日期；

基于该分析，给所述品牌拥有者生成关于域续约的通知，所述域续约分组为 (i) 紧急域续约的第一组，以及 (ii) 非紧急域续约的第二组。

33. 根据权利要求 1 所述的计算机化方法，还包括：

进行考虑到以下各项中至少一项的域可用性分析：(i) 所述品牌名称；(ii) 与所述品牌名称相关的一个或多个用户提供的关键词；(iii) 与所述品牌名称相关的一个或多个系统生成的关键词；(iv) 一个或多个感兴趣的国家；(v) 一个或多个感兴趣的全球顶级域 gTLD；

基于所述域可用性分析，进行域机会分析以确定 (A) 可用于注册的，以及 (B) 与所述品牌名称相关的特定域名；

生成建议所述品牌拥有者来注册所述特定域名的通知。

34. 根据权利要求 33 所述的计算机化方法，还包括：

基于所述域机会分析，生成 (a) 可用于注册的，以及 (b) 与所述品牌名称相关的多个域的列表；

通过使用考虑到以下各项中至少一项的优先级算法来对多个域的所述列表进行排名：(A) 系统生成的关键词；(B) 用户提供的关键词；(C) 感兴趣的国家；(D) 感兴趣的全球顶级域；(E) 所述品牌名称的语义分析；(F) 常见的拼写错误；(G) 常见的语言语音变体。

35. 根据权利要求 1 所述的计算机化方法，还包括：

通过将排字错误引入到所述品牌名称来生成所述品牌名称的变体；

通过将顶级域 TLD 后缀添加到所述品牌名称的所述变体来生成候选域；

基于域注册商数据，检查所述候选域是否被注册到除了所述品牌拥有者之外的实体；

如果所述候选域被注册到除了所述品牌拥有者之外的实体，那么 (i) 分析从所述候选域得到服务的网站的使用，以及 (ii) 基于该分析，确定所述候选域是否正在滥用所述品牌名称。

36. 根据权利要求 1 所述的计算机化方法，还包括：

通过将排字错误引入到与所述品牌名称相关的一个或多个关键词来生成所述一个或多个关键词的变体；

通过将顶级域 TLD 后缀添加到所述变体来生成候选域，其中，所述候选域包括所述品牌名称和一个或多个关键词的所述变体；

基于域注册商数据，检查所述候选域是否被注册到除了所述品牌拥有者之外的实体；

如果所述候选域被注册到除了所述品牌拥有者之外的实体，那么 (i) 分析从所述候选域得到服务的网站的使用，以及 (ii) 基于该分析，确定所述候选域是否正在滥用所述品牌名称。

37. 根据权利要求 1 所述的计算机化方法，还包括：

确定与所述品牌名称相关的一个或多个关键词；

执行包括所述一个或多个关键词的搜索引擎查询；

选择出现在所述搜索引擎查询的搜索结果中的网站；

对以下各项中至少一项进行分析：(i) 所述网站的内容，(ii) 到所述网站的互联网流量，以确定所述网站是否滥用了所述品牌名称。

38. 根据权利要求 1 所述的计算机化方法，还包括：

确定与所述品牌名称相关的一个或多个关键词；

执行包括所述一个或多个关键词的搜索引擎查询；

选择出现在所述搜索引擎查询的搜索结果中的网站；

通过域注册机构数据获得所述网站的拥有者；

如果所述网站是由除了所述品牌拥有者之外的实体所拥有的，那么，对所述网站的内容进行分析以确定所述网站是否滥用了所述品牌名称。

39. 根据权利要求 1 所述的计算机化方法，还包括：

通过以下操作，生成针对所述品牌拥有者的网站执行的搜索引擎优化 SEO 操作的成本有效性分数：

(a) 在第一时间点处，确定所述网站在特定的搜索引擎的搜索结果中的第一排名；

(b) 在第二时间点处，确定所述网站在特定的搜索引擎的搜索结果中的第二排名；

(c) 获得在所述第一时间点与所述第二时间点之间执行的 SEO 中货币投资的用户指示；

(d) 通过至少考虑所述第一排名与所述第二排名之间的变化以及 SEO 中的所述货币投资来生成所述成本有效性分数。

40. 根据权利要求 1 所述的计算机化方法，还包括：

通过以下操作，生成针对所述品牌拥有者的网站执行的数字化营销操作的成本有效性分数：

(a) 在第一时间点处，确定所述网站在特定的搜索引擎的搜索结果中的第一排名；

(b) 在第二时间点处，确定所述网站在特定的搜索引擎的搜索结果中的第二排名；

(c) 获得在所述第一时间点与所述第二时间点之间执行的数字化营销中货币投资的用户指示；

(d) 通过至少考虑所述第一排名与所述第二排名之间的变化以及数字化营销中的所述货币投资来生成所述成本有效性分数。

41. 根据权利要求 1 所述的计算机化方法，还包括：

通过以下操作，生成针对所述品牌拥有者的网站执行的搜索引擎优化 SEO 操作的成本有效性分数：

(a) 在第一时间点处，确定所述网站在特定的搜索引擎的搜索结果中的第一排名；

(b) 在第二时间点处，确定所述网站在特定的搜索引擎的搜索结果中的第二排名；

(c) 通过至少考虑 (i) 所述第一时间点处的所述第一排名与 (ii) 所述第二时间点处的所述第二排名之间的变化来生成所述成本有效性分数。

42. 根据权利要求 1 所述的计算机化方法，还包括：

通过以下操作，生成针对所述品牌拥有者的网站执行的数字化营销操作的成本有效性分数：

(a) 在第一时间点处，确定所述网站在特定的搜索引擎的搜索结果中的第一排名；

(b) 在第二时间点处，确定所述网站在特定的搜索引擎的搜索结果中的第二排名；

(c) 通过至少考虑 (i) 所述第一时间点处的所述第一排名与 (ii) 所述第二时间点处的所述第二排名之间的变化来生成所述成本有效性分数。

43. 根据权利要求 1 所述的计算机化方法，其中，所述品牌名称包括人名。

44. 根据权利要求 1 所述的计算机化方法，其中，所述分析还考虑以下各项中的至少一项 ：所述网站的内容中使用的关键词、所述网站的互联网流量数据、所述网站的搜索引擎优化 SEO 数据、所述网站的结构、所述网站所使用的编程技术。

45. 根据权利要求 2 所述的计算机化方法，其中，生成所述投资分数是基于考虑到以下各项中至少一项的分析的 ：

由所述网站使用的一个或多个编程技术的复杂程度 ；

由所述网站使用的一个或多个编程技术是近期的还是过时的 ；

所述网站中包含的内容量 ；

所述网站中包含的网页的数目 ；

所述网站是否符合万维网联盟 W3C 要求 ；

所述网站是否符合搜索引擎优化 SEO 标准。

46. 根据权利要求 1 所述的计算机化方法，还包括 ：

识别多个跨品牌滥用网站的通用模式。

47. 根据权利要求 46 所述的计算机化方法，包括 ：

检测滥用第一品牌拥有者的第一品牌名称的第一网站 ；

检测滥用不同的第二拥有者的不同的第二品牌名称的第二网站 ；

检测所述第一网站和所述第二网站共同的一个或多个共同特征。

48. 根据权利要求 47 所述的计算机化方法，包括 ：

将与所述多个跨品牌滥用网站的检测有关的通知发送给所述第一品牌拥有者和所述第二品牌拥有者中的至少一个品牌拥有者。

49. 根据权利要求 47 所述的计算机化方法，包括 ：

将与所述多个跨品牌滥用网站的检测有关的通知发送给所述第一品牌拥有者和所述第二品牌拥有者中的至少一个品牌拥有者 ；

使得所述第一品牌拥有者和所述第二品牌拥有者能够采取合作行动。

50. 根据权利要求 1 所述的计算机化方法，包括 ：

确定某一网站正在滥用所述品牌名称 ；

在域和 / 或网站的二级市场中搜索所述某一网站是否被公开出售 ；

如果所述某一网站通过所述二级市场被公开出售，那么使得所述品牌拥有者能够通过与所述二级市场接口的自动化系统来购买所述某一网站。

51. 根据权利要求 1 所述的计算机化方法，包括 ：

确定一批多个网站正在滥用所述品牌名称 ；

在域和 / 或网站的二级市场中搜索所述多个网站中哪些被公开出售 ；

生成正在滥用所述品牌名称的所述多个网站的列表，并且在所述列表上指示所述网站中在所述二级市场上被公开出售的一个或多个网站。

52. 根据权利要求 1 所述的计算机化方法，包括 ：

扫描顶级域 (TLD) 的整个注册机构以找到滥用一组品牌名称中任何一个品牌名称的

网站；

针对所述网站中的每一个网站生成风险分数；

基于所述风险分数，生成所述网站的排序的列表。

53. 根据权利要求 1 所述的计算机化方法，包括：

扫描顶级域 TLD 的整个注册机构以找到与施加到所述顶级域的一个或多个规则不符合的网站；

针对所述网站中的每一个网站生成不符合分数；

基于所述不符合分数，生成所述网站的排序的列表。

54. 根据权利要求 1 所述的计算机化方法，包括：

确定某一网站可能正在滥用所述品牌名称；

捕捉并且存储所述网站的屏幕截图连同时间日期戳。

对品牌名称和域名进行保护的设备、系统以及方法

相关申请的交叉引用

本申请要求于2013年4月11日提交的美国临时专利申请No.61/810,742的优先权和权益，故通过引用的方式将其全部内容合并到本文中。

技术领域

本发明涉及品牌名称和域名的领域。

背景技术

每天数百万用户利用互联网来阅读或者以其他方式消费网页内容。例如，用户可以利用通常运行浏览器的个人计算机、膝上型计算机、智能手机或者平板电脑来在线阅读新闻、在线观看视频、通过社交网络与其他用户进行交互、在线玩游戏等。

许多公司和企业实体投入大量资金来制作并且维护高质量的网站。这些网站可以允许用户查找有关产品和服务的信息、阅读有关产品和服务的新闻、在线购买产品和服务等。

发明内容

本发明可以包括，例如用于对品牌名称和域名进行保护的设备、系统以及方法。

本发明可以包括一种保护品牌拥有者的品牌名称的计算机化或自动化方法。该方法可以包括：(a)抓取(crawl)全球通信网络以识别并且收集关于可能滥用品牌名称的网站的数据；(b)针对可能滥用品牌名称的每个网站，通过分析下述中至少一项来分析该网站是否滥用品牌名称：(i)所述网站的内容；以及(ii)关于所述网站的拥有者的数据。

该方法可以包括：针对可能滥用所述品牌名称的每个网站，生成投资分数，该投资分数指示估算的对所述网站的开发进行投资的投资水平。

该方法可以包括：针对可能滥用所述品牌名称的每个网站，生成损害分数，该损害分数指示估算的所述网站对所述品牌名称造成的损害的程度。

该方法可以包括：针对可能滥用所述网站的每个域，生成人气分数，该人气分数指示在所述全球通信网络的用户之中所述网站的人气水平。

该方法可以包括：针对可能滥用所述品牌名称的每个域，生成相关性分数，该相关性分数指示所述域与所述品牌的相关性水平。

该方法可以包括：针对可能滥用所述品牌名称的每个网站，基于下述各项中的至少一项或多项生成合计的风险分数：所述投资分数、所述人气分数、所述损害分数以及所述相关性分数。

该方法可以包括：识别通过所述计算机化方法确定正在滥用所述品牌名称的多个网站之中的通用模式。

在一些实施例中，基于以下各项中的至少一项来识别所述多个网站之中的所述通用模式：识别所述多个网站的共同的域所有权；识别所述多个网站的共同的域注册商；识别所述多个网站的共同的DNS服务器；识别所述多个网站的共同的互联网协议(IP)地址；识别

所述多个网站的共同的内容；识别所述多个域的共同的网站使用类型；识别所述多个网站的多个互联网协议（IP）地址属于同一国家；识别所述多个网站具有相同的国家代码顶级域（ccTLD）；识别所述多个网站的域名查询记录共享至少一个相同的联系方式。

该方法可以包括：识别被不同的实体所拥有并且通过所述计算机化方法确定正在滥用所述品牌名称的一批多个网站；自动生成针对所述实体的停止侵权通知（cease-and-desist notification）的草稿；一旦所述品牌拥有者批准之后，将所述停止侵权通知发送给所述实体。

该方法可以包括：针对通过所述计算机化方法确定的正在滥用所述品牌名称的特定网站：自动分析以下至少之一（i）所述网站的内容，以及（ii）所述网站的域注册数据；基于该分析，给所述品牌拥有者自动展示选自以下各项的至少一个选项：（a）将停止侵权通知自动发送给所述特定网站的拥有者，（b）自动开始协商处理以为了购买所述特定网站，（c）自动将撤除通知（take-down notice）发送给所述网站的托管服务（hosting service）。

该方法可以包括：生成通过所述计算机化方法确定正在滥用所述品牌名称的多个网站的列表；将多个网站的所述列表展示给所述品牌拥有者。

该方法可以包括：基于所述网站的顶级域（TLD）对所述列表中的网站划分子组。

该方法可以包括：基于所述网站的国家代码顶级域（ccTLD）对所述列表中的网站划分子组。

该方法可以包括：基于对所述品牌名称的合计风险的水平对所述列表中的域划分子组。

该方法可以包括：基于由所述品牌拥有者输入的关键词，对抓取的数据进行分析并且识别滥用所述品牌名称的网站，其中，由所述品牌拥有者输入的所述关键词用于生成所述网站中每个网站的相关性分数。

该方法可以包括：基于由所述品牌拥有者输入的一个或多个竞争对手的名称，对抓取的数据进行分析并且识别滥用所述品牌名称的网站。

该方法可以包括：基于可能滥用的网站的使用类型，对抓取的数据进行分析并且确定所述可能滥用的网站是否滥用了所述品牌名称。

该方法可以包括：确定可能滥用的网站被用于域名停放；基于该确定，生成可能滥用的域是否滥用了所述品牌名称的确认。

该方法可以包括：确定可能滥用的网站被用于按点击付费广告；基于该确定，生成所述可能滥用的网站滥用了所述品牌名称的确认。

该方法可以包括：确定可能滥用的网站被用于将网络流量重定向到与所述品牌拥有者的竞争对手关联的网站；基于该确定，生成所述可能滥用的网站滥用了所述品牌名称的确认。

该方法可以包括：确定可能滥用的网站被用于假冒商品的电子商务；基于该确定，生成所述可能滥用的网站滥用了所述品牌名称的确认。

该方法可以包括：基于考虑到以下各项中至少一项的分析，生成可能滥用的网站滥用了所述品牌名称的确认：（i）所述可能滥用的网站的当前内容；（ii）所述可能滥用的网站的与所述当前内容不同的过去的内容。

该方法可以包括：基于考虑到以下各项中至少一项的分析，生成可能滥用的网站滥用

了所述品牌名称的确认 :(i) 所述可能滥用的网站的当前的使用类型 ;(ii) 所述可能滥用的网站的与所述当前的使用类型不同的过去的使用类型。

该方法可以包括 :确定可能滥用的网站出现在由所述品牌拥有者授权提起所述品牌名称的预先定义的网站的白名单中 ;基于该确定,生成所述可能滥用的网站没有滥用所述品牌名称的确认。

该方法可以包括 :确定可能滥用的网站是由所述品牌拥有者的授权的分支机构所拥有的 ;基于该确定,并且基于与所述网站关联的其它估算的风险因素,生成所述可能滥用的网站是否正在滥用所述品牌名称的确认。

该方法可以包括 :基于发现嵌入在从所述网站得到服务的源代码之中的独特 (unique) 代码部分,确定可能滥用的网站是由所述品牌拥有者的授权的分支机构所拥有的,其中,所述独特代码部分对所述品牌拥有者的每个授权的分支机构来说是独一无二的。

该方法可以包括 :基于发现嵌入在从所述网站得到服务的源代码之中的独特代码部分,确定可能滥用的网站是由所述品牌拥有者的授权的分支机构所拥有的,其中,所述独特代码部分对所述品牌拥有者的授权的分支机构的每个网站来说是独一无二的。

该方法可以包括 :确定滥用所述品牌名称的网站进行以下各项中的至少一项 :(a) 出售假冒商品 ;(b) 将用户指向所述品牌拥有者的竞争对手的网站 ;响应于所述确定,增加所述网站的所述损害分数。

该方法可以包括 :对以下各项中至少一项进行分析 :(i) 由所述品牌拥有者所拥有的域的列表的内容,(ii) 到由所述品牌拥有者所拥有的域的所述列表的网络流量 ;基于该分析,识别所述列表上未货币化的特定的域 ;生成给所述品牌拥有者的通知以执行所述特定域的自货币化。

该方法可以包括 :针对由所述品牌拥有者所拥有的一批域来收集域注册数据 ;分析所述一批域的所述域注册数据,以确定具有不正确的注册细节的至少一个域 ;生成给所述品牌拥有者的通知,指示所述至少一个域具有需要更正的注册细节。

该方法可以包括 :针对具有不正确的域注册细节的所述至少一个域,基于由所述品牌拥有者预先定义的注册数据的默认配置来自动收集域注册数据。

该方法可以包括 :针对由所述品牌拥有者所拥有的一批域来收集域注册数据 ;分析所述一批域的所述域注册数据,以确定即将到来的所述域的失效日期 ;基于该分析,给所述品牌拥有者生成关于域续约的通知,分为 (i) 紧急域续约的第一组,以及 (ii) 非紧急域续约的第二组。

该方法可以包括 :进行考虑到以下各项中至少一项的域可用性分析 :(i) 所述品牌名称 ;(ii) 与所述品牌名称相关的一个或多个用户提供的关键词 ;(iii) 与所述品牌名称相关的一个或多个系统生成的关键词 ;(iv) 一个或多个感兴趣的国家 ;(v) 一个或多个感兴趣的全球顶级域 (gTLD) ;基于所述域可用性分析,进行域机会分析以确定 (A) 可用于注册的,以及 (B) 与所述品牌名称相关的特定域名 ;生成建议所述品牌拥有者来注册所述特定域的通知。

该方法可以包括 :基于所述域机会分析,生成 (a) 可用于注册的,以及 (b) 与所述品牌名称相关的多个域的列表 ;通过使用考虑到以下各项中至少一项的优先级算法来对多个域的所述列表进行排名 :(A) 系统生成的关键词 ;(B) 用户提供的关键词 ;(C) 感兴趣的国家 ;

(D) 感兴趣的全球 TLD ;(E) 所述品牌名称的语义分析 ;(F) 常见的拼写错误 ;(G) 常见的语言语音变体。

该方法可以包括 :通过将排字错误引入到所述品牌名称来生成所述品牌名称的变体 ;通过将顶级域 (TLD) 后缀添加到所述品牌名称的所述变体来生成候选域 ;基于域注册商数据,检查所述候选域是否被注册到除了所述品牌拥有者之外的实体 ;如果所述候选域被注册到除了所述品牌拥有者之外的实体,那么 (i) 分析从所述候选域得到服务的网站的使用,以及 (ii) 基于该分析,确定所述候选域是否正在滥用所述品牌名称。

该方法可以包括 :通过将排字错误引入到与所述品牌名称相关的一个或多个关键词来生成所述一个或多个关键词的变体 ;通过将顶级域 (TLD) 后缀添加到所述变体来生成候选域,其中,所述候选域包括所述品牌名称和一个或多个关键词的所述变体 ;基于域注册商数据,检查所述候选域是否被注册到除了所述品牌拥有者之外的实体 ;如果所述候选域被注册到除了所述品牌拥有者之外的实体,那么 (i) 分析从所述候选域得到服务的网站的使用,以及 (ii) 基于该分析,确定所述候选域是否正在滥用所述品牌名称。

该方法可以包括 :确定与所述品牌名称相关的一个或多个关键词 ;执行包括所述一个或多个关键词的搜索引擎查询 ;选择出现在所述搜索引擎查询的搜索结果中的网站 ;对以下各项中至少一项进行分析 :(i) 所述网站的内容,(ii) 到所述网站的网络流量,以确定所述网站是否滥用了所述品牌名称。

该方法可以包括 :确定与所述品牌名称相关的一个或多个关键词 ;执行包括所述一个或多个关键词的搜索引擎查询 ;选择出现在所述搜索引擎查询的搜索结果中的网站 ;通过域注册机构数据获得所述网站的拥有者 ;如果所述网站是由除了所述品牌拥有者之外的实体所拥有的,那么,对所述网站的内容进行分析以确定所述网站是否滥用了所述品牌名称。

该方法可以包括 :通过以下操作,生成针对所述品牌拥有者的网站执行的搜索引擎优化 (SEO) 操作的成本有效性分数 :(a) 在第一时间点处,确定所述网站在特定的搜索引擎的搜索结果中的第一排名 ;(b) 在第二时间点处,确定所述网站在特定的搜索引擎的搜索结果中的第二排名 ;(c) 获得在所述第一时间点与所述第二时间点之间执行的 SEO 中货币投资的用户指示 ;(d) 通过至少考虑所述第一排名与所述第二排名之间的变化以及 SEO 中的所述货币投资来生成所述成本有效性分数。

该方法可以包括 :通过以下操作,生成针对所述品牌拥有者的网站执行的数字化营销操作的成本有效性分数 :(a) 在第一时间点处,确定所述网站在特定的搜索引擎的搜索结果中的第一排名 ;(b) 在第二时间点处,确定所述网站在特定的搜索引擎的搜索结果中的第二排名 ;(c) 获得在所述第一时间点与所述第二时间点之间执行的数字化营销中货币投资的用户指示 ;(d) 通过至少考虑所述第一排名与所述第二排名之间的变化以及数字化营销中的所述货币投资来生成所述成本有效性分数。

该方法可以包括 :通过以下操作,生成针对所述品牌拥有者的网站执行的搜索引擎优化 (SEO) 操作的成本有效性分数 :(a) 在第一时间点处,确定所述网站在特定的搜索引擎的搜索结果中的第一排名 ;(b) 在第二时间点处,确定所述网站在特定的搜索引擎的搜索结果中的第二排名 ;(c) 通过至少考虑 (i) 所述第一时间点处的所述第一排名与 (ii) 所述第二时间点处的所述第二排名之间的变化来生成所述成本有效性分数。

该方法可以包括 :通过以下操作,生成针对所述品牌拥有者的网站执行的数字化营销

操作的成本有效性分数：(a) 在第一时间点处，确定所述网站在特定的搜索引擎的搜索结果中的第一排名；(b) 在第二时间点处，确定所述网站在特定的搜索引擎的搜索结果中的第二排名；(c) 通过至少考虑 (i) 所述第一时间点处的所述第一排名与 (ii) 所述第二时间点处的所述第二排名之间的变化来生成所述成本有效性分数。

在一些实施例中，所述品牌名称包括（或者是）人名。

在一些实施例中，所述分析还考虑以下各项中的至少一项：所述网站的内容中使用的关键词、所述网站的网络流量数据、所述网站的搜索引擎优化 (SEO) 数据、所述网站的结构、所述网站所使用的编程技术。

在一些实施例中，生成所述投资分数是基于考虑到以下各项中至少一项的分析的：由所述网站使用的一个或多个编程技术的复杂程度；由所述网站使用的一个或多个编程技术是近期的还是过时的；所述网站中包含的内容量；所述网站中包含的网页的数目；所述网站是否符合万维网联盟 (W3C) 要求；所述网站是否符合搜索引擎优化 (SEO) 标准。

该方法可以包括：识别多个跨品牌滥用网站的通用模式。

该方法可以包括：检测滥用第一品牌拥有者的第一品牌名称的第一网站；检测滥用不同的第二拥有者的不同的第二品牌名称的第二网站；检测所述第一网站和所述第二网站共同的一个或多个共同特征。

该方法可以包括：将与所述多个跨品牌滥用网站的检测有关的通知发送给所述第一品牌拥有者和所述第二品牌拥有者中的至少一个品牌拥有者。

该方法可以包括：将与所述多个跨品牌滥用网站的检测有关的通知发送给所述第一品牌拥有者和所述第二品牌拥有者中的至少一个品牌拥有者；使得所述第一品牌拥有者和所述第二品牌拥有者能够采取合作行动。

该方法可以包括：确定某一网站正在滥用所述品牌名称；在域和 / 或网站的二级市场中搜索所述某一网站是否被公开出售；如果所述某一网站通过所述二级市场被公开出售，那么使得所述品牌拥有者能够通过与所述二级市场接口的自动化系统来购买所述某一网站。

该方法可以包括：确定一批多个网站正在滥用所述品牌名称；在域和 / 或网站的二级市场中搜索所述多个网站中哪些被公开出售；生成正在滥用所述品牌名称的所述多个网站的列表，并且在所述列表上指示所述网站中在所述二级市场上被公开出售的一个或多个网站。

该方法可以包括：扫描顶级域 (TLD) 的整个注册机构 (registry) 以找到滥用一组品牌名称中任何一个品牌名称的网站；针对所述网站中的每一个网站生成风险分数；基于所述风险分数，生成所述网站的排序的列表。

该方法可以包括：扫描所述 TLD 注册机构以找到与施加到顶级域 (TLD) 的整个注册机构的一个或多个规则不符合的网站；针对所述网站中的每一个网站生成不符合分数；基于所述不符合分数，生成所述网站的排序的列表。

该方法可以包括：确定某一网站可能滥用所述品牌名称；捕捉并且存储所述网站的屏幕截图连同时间日期戳。

本发明可以提供其它和 / 或额外的好处或优点。

附图说明

出于说明的简明和清楚的目的，附图中所示的元素不一定是按比例绘制的。例如，为了表现清楚起见，一些元素的尺寸相对于其它元件可以被夸大。此外，附图标记可以在图之间重复使用以表示对应的或类似的元素。附图列出如下。

图 1 是根据本发明的一些说明性实施例的系统的示意性框图图示；

图 2 是根据本发明的另一些说明性实施例的系统的示意性框图图示；

图 3 是根据本发明的一些说明性实施例的由评估模块生成并显示的用户界面和屏幕的示意图；

图 4 是可以根据本发明的一些说明性实施例生成并显示的屏幕上控制面板的示意图；

图 5 是可以根据本发明的一些说明性实施例生成并显示的品牌风险界面的示意图；

图 6 是可以根据本发明的一些说明性实施例生成并显示的品牌机会界面的示意图；

图 7 是可以根据本发明的一些说明性实施例生成并显示的管理模块界面的示意图；

图 8 是可以根据本发明的一些说明性实施例生成并显示的管理模块子部分界面的示意图；

图 9 是根据本发明的一些说明性实施例的另一系统的示意性框图图示；以及

图 10 是根据本发明的一些说明性实施例的另一系统的示意性框图图示。

具体实施方式

在以下的详细描述中，阐述了许多具体细节以便提供对一些实施例的深入理解。然而，本领域普通技术人员可以理解的是，可以在没有这些具体细节的情况下实施一些实施例。在其他情况下，没有详细描述公知的方法、过程、组件、单元和 / 电路，以免使本讨论模糊不清。

申请人已经意识到，对互联网进行扫描暴露了一个日益严重的问题：对于网上活跃的组织（从小公司到大企业），他们中的大部分遭受几十到数百（或者甚至数千）的网站的侵害，这些网站侵犯他们的商标并且滥用他们的品牌，或者出售品牌所有者的产品的仿冒品，或者模仿“原始的”或合法的网站，或者欺骗用户让其以为假冒的网站“隶属于”合法的或原始的网站或者品牌所有者。

例如，互联网上主要收入来源是将访客吸引到为每次“点击”按点击付费的广告或列表付费以及其他类似方法付费的网站。因此，促使不道德的一些组织使用不正当或者非法的活动来吸引更多的访客。由于域名和 DNS 系统中的漏洞，因此这些攻击的主要途径之一是通过利用域名，通常是可能与品牌名称或者与商标或服务商标混淆的域名。

一些品牌滥用网站不一定使用包括该品牌名称的域名，相反地，这些网站可以在它们的内容中和 / 或它们的活动中滥用品牌或者侵犯商标权（例如重定向到竞争对手或者出售假冒产品等）。

此外，互联网为诸如黑客、前雇员、心怀不满的员工、竞争对手、域名抢注者以及不法分子和 / 或恐怖组织之类的所有想要危害公司或组织的人提供了许多机会和手段。所有上述的这些人可能被欲望驱使而损害组织、获得经济利润或者完成其他货币或意识形态的目标。申请人已经意识到，在大多数情况下，对合法拥有品牌的公司有直接的经济损失和品牌资产损失。

申请人已经意识到组织面临的风险可能包括，例如：(a) 滥用品牌和/或侵犯商标权的网站或网页；(b) 利用公司的品牌来吸引用户到其它网站（有时候到竞争对手网站），并且凭此来从合法的品牌网站“窃取”用户流量；(c) 出售假冒产品或者伪造产品的网站，以及用于“灰色”市场销售（产品的未经授权的销售）的网站；(d) 滥用品牌以及出售竞争性产品或服务的网站；(e) 通过对域名的语音模仿和打字错误（排字上的错误）的商标侵权和品牌滥用（许多时候用于包含按点击付费 (PPC) 广告或者其它类型的网络广告并且意图通过吸引用户流量来利用品牌的“绑定域名”网站）；(f) 用于假冒和企业模仿的欺诈网站（包括但不限于网络钓鱼和网址嫁接网站、假冒博客等）；(g) 通过互联网诽谤以及散布攻击性信息或者破坏性信息或者虚假信息或者负面信息。组织面临的这些品牌保护问题伴随着域名组合管理问题和其它数字化品牌管理问题。

存在数百个顶级域名扩展 (TLD)。一些具有用作扩展的二级域名 (SLD)（例如，“.co.uk”、“.kids.us”等）。总体来说，现今有数百个 TLD 和 SLD 活跃在世界范围的互联网上。不久之后，数百个新的通用 TLD(gTLD) 将加入到互联网根区，作为互联网名称和数字地址分配机构 (ICANN) 的主动权的一部分。许多这些 TLD 将是国际化 TLD(IDN)，其是与拉丁语不同的语言脚本的 TLD（例如，中文、日语、希伯来语、阿拉伯语等）。

每个 TLD 是由不同的注册机构管理的并且被注册在不同的数据库中。许多注册机构使用不同的技术、不同的注册协议、不同的程序和/或不同的注册规则和限制条件。

世界各地的公司和组织都拥有数字资产，该数字资产是积累的品牌、商标、公司的兼并和收购、国际分支、IT 系统、基于网络的系统等的组合。这些数字资产的基本部分中的一些是由这些组织所拥有的域名。中型组织和大型组织可能拥有几十、几百、几千甚至上万个域名。这些域名的价值可以达到数百万美元，并且由于故障或对这些域名的活动的攻击而造成的收入损失也可能达到数百万美元。

申请人已经意识到，域名组合和品牌管理问题包括，例如：(a) 控制和监控问题；(b) 评估问题；(c) 技术规程；(d) 由于故障而造成的损害；(e) 组织控制的结构缺失；(f) 安全问题；(g) 组织的责任问题；(h) 缺乏 ERP（企业资源计划）融合；(i) 由于网络流量、假冒销售、欺诈和/或品牌淡化的损失而造成的收入和/或利润损失。

控制和监控问题 - 小型公司、中型公司以及大公司花费几千美元到数百万美元用于注册以及维护他们的域名组合。必须对这些资产进行管理。现有的管理能力是有限的。域名影响关键流程，并且因此需要适当的工具去管理这些域名。此外，没有帮忙评估这些域名组合开支是否是有效果的适当的监控方案。

评估问题：对于组织来说重要的是知道或者估算出他们拥有的域名的价值，以及在那些域名上活动的网站对他们的品牌的相对贡献。目前没有能提供有效且可靠的方案来评估这些数字资产及它们的贡献的适当的工具。没有能对这些资产和它们的价值进行分析的系统，也没有定义针对这些评估的衡量的工具。

繁多的技术规程：组织被迫以非有效的方法来管理他们的数字资产和域名，因为他们需要与数百（很快数千）个注册机构以及注册商打交道。如上所述，每个注册机构可能有不同的规程、规则和协议，事实上造成了显著的管理问题以及组织的开销。

由于故障而造成的损害：缺乏适当且有效的控制和监控工具可能会导致由于失察或者技术错误而造成的域名的未续约（从而造成网站失效、邮件服务器关闭）和/或域名的损

失。这样的错误会给组织造成重大的财务损害，并且在某些情况下损失可能是不可挽回的。

组织控制的结构缺失：域名的管理是通过注册商和注册机构而不是通过组织的部门之一来完成的，这些注册商和注册机构是与拥有该域名的组织不相关的一方。这造成结构漏洞，因为注册商和注册机构将一直在组织的控制之外。这也是技术漏洞以及安全漏洞。

安全问题：域名的安全风险在不断增加。这些风险包括：通过在注册机构或注册商的欺诈或修改进行域名劫持、通过对域设置的未经授权修改使网站关闭、用于欺诈的“嫁接”攻击、通过获得对域名的控制而进行模仿、工业间谍活动、恶意软件散布等。这些安全问题很多时候是缺乏对域名组合的控制的结果。这些问题可能导致重大损害、直接损失、潜在的收入损失以及组织的关键系统的故障。

组织的责任问题：在组织中至少有三个不同的部门可能会涉及数字化品牌管理（包括品牌保护和域名组合管理）的不同方面：信息技术（IT）部，通常负责域注册和网站操作的技术方面；市场营销部，负责品牌推广方面和品牌资产；以及法律部，负责对组织的商标和品牌进行保护。通常，可能涉及组织中的其他管理层，比如C级管理层、财务或会计部门等。组织中有不止一方负责品牌管理的事实可能造成缺乏控制，低效率，冗余、重叠、矛盾的决定以及可能出现的故障。此外，品牌管理通常缺乏基于度量的策略。

缺乏ERP融合：没有可以与诸如ERP系统之类的现有的组织管理系统融合的域管理和/或品牌保护工具，因此不同部门之间的协调是不足的和/或局部的。

本发明包括可以用来解决、减少、防止、消除和/或缓解申请人已经意识到存在的问题中的一些问题或所有问题的设备、系统和方法。

本文中所使用的术语“受保护的品牌”可以包括例如由合法拥有者所拥有的品牌名称和/或域名和/或网站名称和/或商标和/或服务商标，这些合法拥有者试图保护和/或防止该品牌不受可能企图直接或间接地损害和/或滥用该品牌的第三方的侵害。术语“受保护的品牌”可以包括：例如公司名称（例如“Samsung”）、产品名称（例如“Galaxy Note”）、服务名称、标语、人名（例如著名人物、“名人”、活着的人、已故的人）等。应注意的是，受保护的品牌可以被或者可以不被可能被注册和/或没被注册的商标和/或服务商标所保护；然而，受保护的品牌不需要必须已经被保护为商标或服务商标。此外，受保护的品牌可以包括组织正考虑采用作为品牌并且组织想要（例如预先）检查是否已经被第三方利用的潜在的或候选的名称或品牌。

本文中所使用的术语“品牌拥有者”可以包括例如受保护的品牌的合理的和/或合法的拥有者；或者具有合法权利拥有和/或使用受保护的品牌的人或实体。例如，如果受保护的品牌是人名，那么品牌拥有者可以是那个人他自己或她自己；或者可以是与那个人有关的实体（例如，小野洋子列侬（Yoko Ono Lennon）女士是商标品牌“约翰列侬（John Lennon）”的拥有者）。

本文中使用的术语“原始网站”可以包括例如由与受保护的品牌有关的或者与多个这种受保护的品牌有关的品牌拥有者所拥有和/或所操作的合法网站。

本文中使用的术语“滥用的资产”或者“滥用的域”或者“滥用的网站”可以包括例如不是由品牌拥有者所拥有和/或所控制的、并且未经品牌拥有者批准或同意而例如在域名中、在显示的内容中或者通过其他手段滥用或者利用（直接或间接）受保护的品牌（或者它的变体或者它的其他版本）的一个或多个网站或域名或网页。

本文中使用的术语“滥用方”可以包括例如拥有、操作和/或控制滥用资产的人或实体。

[0096] 在使用这些术语的说明性示例中，位于加利福尼亚州库比蒂诺的“Apple Inc.”公司可以是诸如“iPhone”、“iPad”、“iPod”、“iMac”、“iOS”之类的受保护的品牌的品牌拥有者，并且可以操作域“apple.com”上的原始网站；反之，佛罗里达州迈阿密的名叫约翰史密斯(John Smith)的人可能是在域“buy-cheap-iphone-here.com”上(或者当在网站“buy-cheap-cellphones-here.com”的内容中滥用这些品牌时在这样的网站上)拥有并且操作滥用网站的滥用方。

参照图1，图1是根据本发明的一些说明性实施例的系统100的示意性框图图示。例如，系统100可以包括可以使用适当的硬件单元和/或软件单元来实现的以下模块或组件：扫描器模块101、加权模块102、相关性分析器模块103、滥用投资估算器104、人气/流量估算器105、损害估算器106、滥用价值估算器107、滥用方估算器108以及实时全面视图管理器109。

扫描器模块101可以是自动化和机器人式的工具，其能够扫描互联网并且测量对组织(例如，品牌拥有者)来说重要的各种参数以便管理该组织的数字化品牌，并且提供更新的数据和度量以保护这样的受保护的品牌。

加权模块102可以对不同的参数和统计信息进行加权，以便给品牌拥有者提供品牌拥有者应该对其行使知识产权的风险网站和网页的优先级，以及提供品牌拥有者应该注册以便进一步保护其受保护的品牌的可用域名的优先级。

相关性分析器模块103可以基于滥用网站的域名和/或内容对多个参数进行分析，以生成来自这些滥用网站的风险的(与受保护的品牌相关的)相关性分析报告。

滥用投资估算器104可以对滥用方注册域名和/或操作使用或滥用(直接或间接)受保护的品牌的滥用网站而进行的投资的水平进行估算或进行测量。

人气/流量估算器105可以估算与受保护的品牌相关的滥用网站的人气水平和/或流量和/或使用程度(例如，浏览、搜索、在线交易或其他方式的互动)。应当注意的是，人气/流量估算器105可以负责其他功能，例如出于机会分析的目的(例如，为了确定将哪个域名建议给品牌拥有者去注册，以及在哪个TLD中)而对顶级域名(TLD)的人气进行估算。

损害估算器106可以对滥用网站迄今为止对品牌拥有者造成的和/或预期或者估计到会对品牌拥有者造成的实际的和/或潜在的损害进行估算。

滥用价值估算器107可以整合不同的度量，并且例如通过利用来自相关性分析器模块103、滥用投资估算器104和/或人气/流量估算器105的数据来估算滥用网站对操作它的滥用方的价值。

滥用模式估算器108可以估算或者识别商标侵权和/或品牌利用网站和域名以及滥用网站的模式，以便更好地找出进行侵权或利用或滥用的各方或者可以导致识别出或者找到这些各方的信息。

实时全面视图管理器109可以生成并向品牌拥有者显示所有的在线品牌管理方面的全面实时的视图。这些在线品牌管理方面包括：风险、机会(对于受保护的品牌有价值的可用域名)、网站和域名组合管理的当前组合的评估和/或本文中描述的其他特征。

在说明性实现中，可以使用五步法。需要澄清的是，可以使用其他数目和/或顺序的操

作来估算风险和 / 或机会。

第一步可以包括 :例如,使用扫描引擎和自动化工具来生成数据库用于信息收集。系统可以包括用于信息收集的扫描引擎和抓取器 (crawler) 以及自动化工具,其使用与输入到系统中的品牌有关的初始信息。扫描工具可以包括 :例如域名注册机构的扫描、“域名查询 (whois)”数据服务器的扫描、扫描 DNS 服务器、扫描在线数据的“机器人”模块、用于收集统计信息的工具、从与网站有关的信息和数据的不同提供方提取数据的工具、从搜索引擎和索引或目录提取信息的工具、扫描并且收集网站的内容的抓取器、收集不同的互联网评分的工具、从搜索引擎和 / 或从排名网站收集信息的工具和 / 或其他适当的模块。收集的所有信息被存储在为系统的所有模块服务的中央数据库中。可替选地,可以使用分布式架构或者可以使用其它适当的架构。

第二步可以包括 :例如对数据库中收集的数据进行处理。系统可以利用目前手动执行的数据收集和分析处理的自动化处理。对通过品牌监控过程和域名组合管理模块收集的数据进行分析,以便生成不间断的实时分析。以下是系统处理数据的两个示例 :

(a) 对收集的关于现有网站的信息进行处理 :当发现采用被怀疑侵犯品牌权益的域名时,系统将在步骤 1 中收集该网站上发布的信息 (内容、标题、标签、图形等)。在数据处理阶段,数据将被分类并且被排序,使得网站将被分类为例如按点击付费的广告网站 (或者“停放的域名”) 或者分类为内容网站。新的分类和排序将被存储在系统的中央数据库中。

(b) 对与客户端拥有的域名有关的信息进行处理 :在阶段 1 中,系统可以收集与每个域名有关的信息。在处理阶段,对于被认为是由客户端拥有的域名,系统可以检查每个域的不同的联系人是否与客户端定义的默认联系人相似。不一致性将被标记在数据库中,并且分类将被附到联系人没有更新的域。

第三步可以包括例如使用独特的算法的数据分析。对于收集或处理的数据可以进行不同的分析,以便为系统的不同模块和部分生成不同的指标和测量,(风险分析 (并且在模式识别部分内))、机会、最优化,以及在该部分内的评估和货币化),域管理模块和品牌检查模块。

第四步可以包括例如将结果和数据展示给用户 (用户界面)。该步骤可以包括数据和不同结果的提取以及对用户界面执行的分析,该用户界面包括控制面板、不同的表格、图形、饼图、分数和排名以及用于进行主动动作的选项 (例如通过改变分数来教导系统、停止侵权动作、域注册相关动作等)。可选地,可以使用彩色编码,例如以红色条目示出需要立即关注,和 / 或以绿色条目示出看来是正确的并且无害的等。

第五步可以包括例如基于用户的决定来执行自动动作。例如,系统可以利用生成客户端选择在系统中执行的自动且大批的动作或批量动作的工具和 / 或模块 :例如发送大批量的停止侵权通知,按用户决定推出 (并且针对其使用品牌检查部分) 的新品牌的一定的优先级一键式大批量注册所有的域等。

说明性实现可以利用具有四个子模块或者子单元的算法或模块,该四个子模块或者子单元可以被称作 RPID(相关性、人气、投资、损害)。例如,相关性算法或模块对域名和 / 或网站的内容对品牌的影响力进行检查或分析 ;人气算法或模块对网站在互联网上的人气进行检查或分析 ;投资算法或模块对网站中的投资水平、网站在互联网上的发展与推广进行检查或分析。损害算法或模块对由于滥用品牌的网站的存在或者由于没有注册域名而对品

牌以及对品牌拥有者造成的潜在的损失和损害进行检查或分析。此外，评分算法或模块将上述四个 RPID 算法或模块的不同的因素和不同的分数进行加权，以便生成每个网站和 / 或域名的最终分数。

参照图 2，图 2 是根据本发明的一些说明性实施例的系统 200 的示意性框图实现。例如，在一些实施例中，系统可以利用一个或多个信息服务模块或数据收集模块，这些一个或多个信息服务模块或数据收集模块可以基于算法和系统的操作服务的请求以及基于由系统从用户收集的信息来获得或提供信息。收集的信息被传递以用于通过算法或模块进行处理和分析，并且然后将结果相应地展示在 GUI 中。以下是一些可以作为系统的内部和 / 或外部信息服务来操作的工具或模块。

“域名查询 (whois)”模块 201 收集与域名有关的所有相关信息。例如，是以谁的姓名注册的、注册日期、有效期限、DNS 服务器等。该组件连接到提供这些信息的多个服务器以便实时地提供信息。该组件被开发成使得该组件可以收集所有 TLD 的数据，也就是说，数百个现有的以及所有将来会将被委派并操作的 TLD。

搜索引擎门户 202 通过 API 提供对搜索引擎和热门网站（例如 Google、Bing、Yahoo ！ 、Baidu、Yandex、Twitter、Facebook、LinkedIn、CrunchBase 等）的集中且统一的访问。该组件可以基于位置来收集信息（当用户从不同的国家连接到搜索引擎时搜索结果可能会改变）。

模式识别模块 203 可以基于通过其他服务（例如域名查询内容、网络抓取器、IP 查找器等）收集的信息来进行操作，以对侵权网站中的模式进行确认和 / 或分类，以便识别重复的侵权方法。

网络抓取器 204 从提供给它的链接中提取 HTML 信息，并且还通过从它接收的网页生成“蜘蛛”网络来为系统收集额外的域。

社交网络收集器 205 自动收集来自社交网络的信息。该服务使用到社交网络（例如 LinkedIn、CrunchBase、Facebook 等）和 / 或其它社交或基于群体的网站（例如，微博、Twitter）的不同的接口，搜索与品牌相关的信息和页面（例如在它们的页面名中使用品牌的页面、提到品牌的帖子等）并且收集这些信息。

排名收集器 206 从诸如 Alexa、MOZ、Compete、Google 等的第三方信息提供者自动收集关于网站的信息。该信息可以被用于例如人气算法的计算。

HTML 分类器 207 对从网站收集的内容进行识别并分类。它定义了页面中的投资水平、搜索引擎优化兼容性、网站是哪种类型的（例如，停放、销售、内容等）。算法可以使用该服务来定义投资指标和对每个网站的损害。

通知和消息传送模块 208 使得能够发送系统和非系统通知。该服务使得能够当作为更新送来时发送系统通知，或者系统错误消息，以及将作为邮件或 SMS 发送给收件人的一般的通知（例如，停止侵权通知）。该服务允许针对每个用户的定制和个人管理。

工作流任务管理器 209 使得能够根据由用户定义的规则来针对系统中不同的动作的性能管理授权进程。该组件使得能够在系统中生成任务。可以将任务分配给特定的用户，并且可以对任务的状态进行监控。该服务还能够与 ERP 软件产品和 / 或提供者进行整合以及通信。

货币化模块 210 使得能够将去往由用户组织（品牌拥有者）拥有的域名的互联网用户

流量货币化。例如，该组件使得能够自动生成针对域名的登录页面，该登录页面将提供关于品牌的基本信息，使互联网用户转移到组织的主网站，或者以不同的方式来为品牌打广告。该服务使得登录页面能够被定制，并且能够针对每个未货币化的域名来实际生成小网站。

系统 200 还可以包括、或者可以利用或者可以与一个或多个内部操作服务 220 相关联，该一个或多个内部操作服务 220 可以从用户以及从系统的后台收集信息，将信息提供给系统的内部信息服务和算法或模块，以及将收集的信息展示在 GUI 中。此外，该一个或多个内部操作服务 220 可以针对系统的所有模块给用户提供行政和管理服务。以下是可以作为系统的内部操作服务的一些工具或模块 ：

风险和机会分析 (ROA) 模块 221 可以执行风险和机会分析。该服务获得品牌名称的输入、相关品牌关键词、品牌拥有者的网站等。该服务在插入到服务的数据上并且基于该服务从不同的系统信息服务收集的信息来激活算法。该服务可以可选地利用 RPID 分数生成器 247 来计算 RPID 分数和 / 或合在一起构成 RPID 分数的单个分数。

算法调谐器模块 222 使得用户能够对算法排名的每个网站 / 域的分数进行改变。在进行了改变之后，算法可以从这些改变进行学习并且可以基于新信息再次运行。

任务管理器 223 使得能够将任务分配给系统中不同的用户，并且能够与系统中其它用户进行咨询。该服务使得能够更新任务的进程、由用户添加评论和注释、将任务存档等。该服务还能够与 ERP 软件产品和 / 或提供者进行整合以及通信。

行政管理器模块 224 可以操纵系统中对每个组织而言是特定的不同设置的配置。这些设置可以包括，例如 ：(a) 用户管理和角色，可以提供用户和权限的一组定义的组件 ；在用户、组织和品牌之间连接 ；定义哪些动作对每个用户都是允许的以及哪些信息用户将接触或者将不会接触 ；(b) 计费模块，定义账户详细信息、信用卡、支付方式等 ；(c) 品牌部分，使得能够将品牌添加到系统 ；(d) 针对更新和系统通知的定义。

警报和诊断模块 225 对所有系统组件的操作进行采样并监控。警报和诊断模块 225 收集更新、错误或者可能发生的其它系统性问题。系统的所有组件可以持续地报告它们的正常运行和错误。

品牌核查模块 230 可以使得组织能够对组织想要推出的品牌的使用水平进行评估。该模块还推荐对于注册而言哪些可用的域名是最相关的。如果用户发现品牌使用的整体水平非常低并且有足够的机会用于域名注册，那么用户可以选择并且以快速 （“一键式”） 处理来注册相关的名称组合。

品牌核查模块 230 可以包括或可以利用多个子模块或处理，例如 ：

数据输入模块 231 可以允许或者可以操纵由潜在的新品牌的用户的数据输入。例如，用户输入想要推出的品牌名称或者多个品牌 ；用户添加相关的关键词 ；用户定义活动的相关国家或地区 ；用户定义行业分类 (如果存在的话) ；以及可选地，用户提供竞争对手名称。需要澄清的是，数据输入模块 231 可以与系统的其它功能协同操作，例如，使得用户能够输入数据以请求搜索和 / 或鉴别品牌滥用网站，以便确定风险和 / 或机会等。

数据处理 / 分析模块 232 运行 ROA 处理，该处理类似于当该品牌已经被用户所拥有时将使用的处理。系统搜寻机会 (可用于注册的具有高相关性的域名)，并且系统寻找潜在的风险 ：包括搜索与核查的品牌具有高相关性的现有的域名、寻找在它们的内容中使用品牌的网站、收集来自搜索引擎及数据提供者等的数据。系统还可以对商标数据库 (例如，由诸

如美国专利及商标局之类的政府机构或者由其他国家的商标注册商所操作，或者私人拥有的商标记录）进行扫描，以发现用户感兴趣的新品牌是否已经被注册为商标，或者是否与现有的商标或者等待审批的商标申请相同或类似。

咨询报告模块 232 可以生成与风险模块和机会模块中提供的报告类似的报告。报告使得用户能够看见新品牌的潜在“风险”，即，网站已经使用品牌，以及能够评估可用于注册的域名的不同的机会。报告还可以提供以下分析：

(a) 高相关性域名使用：以具有高相关性的域名多少被采用以及多少可用于注册的百分比表示的总图。

(b) 品牌的通用水平：由基于品牌与词典词语的差异程度来分析用作品牌的词多么通用的算法提供的分数。

(c) 搜索引擎中针对品牌的搜索水平。

(d) 对采用的（注册的）域名的综合分析，例如，多少是伴随着活动网站的、活动网站是什么类型的（例如它是否是暂停的域、电子商务网站、博客等）、多少是已经注册但未激活的。

(e) 基于国家和语言的优先次序；按不同的国家（基于服务器的位置和 ccTLD（国家代码顶级域名））和 / 或不同的语言（基于网站中使用的语言）生成并显示品牌的使用水平的分析。

(f) 当选择商标数据库搜索时，品牌是否被注册为商标（或者有等待审批的商标申请）以及如果是则关于商标注册或申请的细节的报告。

快速注册模块 233 可以使得用户能够快速注册一个或多个域。例如，该模块使得用户能够标记出品牌的优选的变体（不同的字符串）、优选的国家以及优选的 gTLD 或者 gTLD 类型（即，基于行业类型）。然后用户可以以快速处理或以“批量”形式注册所有相关的选择的域名。

货币化模块 210 可以帮助使用系统的组织来快速找出组织拥有的没有使用并且因此没有货币化的域名，以及容易地定义并在这些域名上发布登录页面或小网站以便使这些域名货币化，并且利用到这些域名的潜在的互联网用户流量以及对组织的整体 SEO（搜索引擎优化）活动的潜在贡献。模块包括以下组件：

(a) 按组织的组合核查所有的域名并且找出这些域名是否转为活动网站的服务。

(b) 具有以下分级的所有未货币化域的 GUI 中的展示：(i) 用于重定向的域（重定向到伴随活动网站的另一域名）；(ii) 完全非活动的域（例如，转为 404 错误页面或其它“没有找到网站”错误页面的域）。

(c) 来自评估模块的未货币化域的分数分析，使得用户能够决定哪个域更重要并且应该首先被货币化。

(d) 用于针对每个域名生成登录页面的平台，包括以快速处理的方式对未货币化域名中的一部分或全部生成登录页面的能力：(i) 能够生成用于登录页面的模板的工具，包括管理图形组件、组织自己设计或由系统提供模板的能力、内容管理工具等；(ii) 生成默认内容和将被分配给特定品牌的登录页面和 / 或特定的 TLD 中的域名的登录页面的特定结构的能力。(iii) 以快速处理的方式将网站激活并上传到互联网，使得能够快速且便利地发布这种微型网站或登录页面。

(e) 本地化能力，包括本地的 SEO 和 / 或本地的翻译。例如，执行专用于本地语言的不同的 SEO 操作（例如，编辑标题、标签等的多语言能力）。此外或者可替选的，模块可以提供多语言翻译，例如，自动将用于翻译的内容发送给翻译提供者（可以选择翻译提供者，翻译提供者可以是人和 / 或自动化翻译，或者可以是利用自动化翻译和人工翻译或复审两者的服务），以及在译者提供了翻译之后通过专用于系统的接口或 API 自动上传翻译后的登录页面。

ERP 接口模块 241 可以执行系统与 ERP 软件产品的融合，以使得能够生成用于品牌保护和域管理、相关任务的分配以及相关预算的管理的决策处理。模块可以包括以下能力 :(a) 与 ERP 软件完全融合 ;(b) 生成用于品牌保护决策、域组合管理以及预算的内部的组织决策处理 ;(c) 将执行不同的活动的能力添加到 ERP 软件，这些不同的活动例如有域注册、域续约、发送停止侵权通知等 ;(d) 对系统的基于权限的访问，以及其它访问控制措施 ;(e) 给组织中的不同职能分配任务，监控任务的执行以及任务进度 ;(f) 例如，在预算相关动作授权之后，将组织的适当的内部单元记入预算中，基于单元默认值 (DNS 服务器、联系人）来自动更新域名的详细信息以及基于单元来自动更新其它技术细节（例如邮件服务器和针对每个域的主机记录）;(g) 通过行政方或管理者的用户化和权限管理。

可选地，疑似域定位模块 245 可以与 RPID 分数生成器 247 协同操作，并且可以使用用于对其字符串中包含品牌名称的域名进行定位的多步法。需要澄清的是“域名标签”是域名的非后缀名的部分。例如，在域“example.com”中，字符串“example”（是域名的第二级）是域名标签，在域“example.co.uk”中，字符串“example”（是域名的第三级）是域名标签。

第一步可以包括 :例如获得公共区域文件。系统自动地和 / 或定期地下载 TLD 注册机构的域名区域文件，该 TLD 注册机构使这些域名区域文件可用于下载。每个区域文件中存在的域名的列表被输入（例如，导入）到“现有域名”的数据库中。

第二步可以包括 :例如基于公共区域文件生成独有的潜在域字符串。将现有域名的列表排序并且将每个域的域名标签从扩展名分离，以生成潜在域字符串的列表。例如，其中域被注册在第二级中的域“example.com”将被分成域标签“example”和后缀“.com”，其中域被注册在第三级中的域名“example.co.uk”将被分成域字符串“example”和后缀“.co.uk”。然后将潜在域字符串的列表排序。如果存在相同字符串，则可以执行重复稀释，使得重复相同的字符串中只有一个将被留在数据库中，以便该列表将只包含不重复的独特的字符串。

第三步可以包括 :例如，抓取网络以扩展现有域名的列表。可选地，在本发明的一些实施例中，系统的网络抓取器以下述方式来使用现有域名的列表 :为了扫描现有域名列表中的每个域名，抓取器转到每个域名并下载主页的内容。抓取器扫描内容并且搜索链接 (URL)。当找到链接时，系统把域名与包含在 URL 中的任何子域或文件夹分离。例如，如果找到以下链接 :http://www.example.com/example_folder/example_file.htm，那么系统从 URL 提取域“example.com”。然后系统核查域是否存在于“现有域名列表”中。如果域名不存在，那么将该域名添加到列表。然后抓取器以递归或迭代的方式转到发现的每个 URL，下载页面并且寻找页面中的 URL 等。循环地进行扫描处理，使得当抓取器完成对现有域名列表中所有域名的处理时，抓取器回到列表的开始并且再次以递归或迭代的方式搜索全部列表。可选地系统通过多个服务器同时执行多个网站扫描。

第四步可以包括 :通过基于合法网站的“白名单”或者基于其它准则将因为它们作为合法的一般利益网站的一般信誉而已知为（或者推测为）非侵权的网站去除来稀释列表。例如,如果受保护的品牌为“迪斯尼”,那么搜索引擎可能包括诸如“CNN.com”上关于华特迪士尼公司的文章之类的结果,并且可以基于“CNN.com”作为合法网站的信誉来将该结果稀释掉,该合法网站可以作为“合理使用”而提到品牌。相反,搜索引擎还可能找到诸如“BuyMickeyMousePants.com”之类的可能不在批准网站或一般合法网站的这种白名单上的网站,因此可以保持这样的列表而不被稀释。

第五步可以包括 :例如对包含品牌名称或其变体的域的列表进行扫描。系统使用字符串相关性算法（提供作为品牌名称的变体的相关字符串的列表）,并且搜索现有域名的列表以及来自搜索引擎的其中域名标签包含字符串或者与字符串类似的域的列表。将找到的每个域名标记为“疑似域名”。

第六步可以包括 :例如将收集的消息存储在数据库中。如果在以前的搜索中存在的域名不存在了,那么收集的关于该域名的信息被转移到历史数据库。历史数据库可以用在将来对没有公开它们的区域文件的 TLD 的根域名服务器的查询中,以用于分析、统计等。

可选地,自动化停止侵权引擎 250 可以操纵停止侵权通知以及后续跟进。基于先前发现的风险网站,即潜在地侵权或滥用品牌的网站、网页或域名,代表品牌的用户能够通过自动或半自动地将停止侵权通知发送给每个这种风险网站的注册人或其它方和 / 或列为与该网站联系的联系人（例如主机提供商、域注册商等）来对这些侵权做出反应。

当用户浏览系统中的风险列表时,他 / 她能够对所列出的风险网站中的一个网站、多个网站或全部网站做标记。然后用户可以选择向与所选择或所标记的网站关联的各方或所有者或操作者或其它实体“发送停止侵权通知”的动作。

用户被定向到以所选择的风险网站的风险分数和其他细节（例如注册人、注册日期、“屏幕截图”的缩略图或可以通过系统的网页抓取器来获得和捕捉的页面的屏幕截图等）来展示所选择的风险网站的页面。

例如,存在与运营网站有关的不同的责任方。这些各方可以包括但不限于 :域名的注册人（持有人）、域名的管理联系人、域名的技术联系人、域名的付款联系人、域名的注册商、域名的注册机构以及网站的主机提供商或 ISP（互联网服务提供商）。

系统可以存储针对上述的责任方中的每一方预先定义的停止侵权通知的措辞或模板。用户可以撰写他自己的停止侵权措辞、使用现有的措辞或者编辑现有的措辞以满足他的需要或以适应具体情况。可以通过电子邮件和 / 或通过常规打印邮件来发送通知。用户可以选择他 / 她想要将通知发送给的责任方的类型（即,注册人、主机提供商等）。

用户可以浏览要针对每个风险网站一个接一个发送的每个通知或者可以选择自动发送批量通知给所选类型的所有责任方。系统自动提取与针对每个风险网站收集的责任方有关的先前存储的信息。

如果用户选择自动发送批量通知给某些类型的所有责任方,那么系统将会把电子邮件地址（如果用户选择发送电子邮件通知）或姓名和物理地址（如果用户选择发送常规的打印邮件通知）自动添加到预定义的与每种类型的责任方关联的措辞,并且将通过电子邮件（或通过邮寄发送打印件）来发送针对每个风险网站的每个所选择的责任方的专用通知。可以将从系统发送的所有电子邮件存储在数据库中,并且用户可随时进行检索。

例如，如果用户选择自动将停止侵权电子邮件通知发送给所选择的风险网站的所有注册人和主机提供商，那么系统将自动提取每个风险网站的每个注册人的电子邮件地址并且将会把具有针对注册人预先定义的措辞的邮件单独且自动地发送给注册人中的每一个，同时提取每个风险网站的每个主机提供商的电子邮件地址并且将会把具有针对主机提供商预先定义的措辞的邮件单独且自动地发送给主机提供商中的每一个。可选地，用户可以命令系统以逐步的方式而不是同时来自动发送一批电子邮件，以便生成逐步效果或层级效果，使得注册人在特定的时间 / 日期接收到电子邮件通知，ISP 在另一时间 / 日期（例如，晚一天或一小时）接收到电子邮件，管理联系人在又一时间 / 日期（例如，晚两天或两小时）接收到电子邮件等。在另一实施例中，用户可以命令系统紧接地自动发送一批电子邮件，以便给接收通知的多个收件人基本上同时（例如，彼此之间不超过几秒或几分钟）造成“震慑”效果。如果用户选择，他可以浏览每封电子邮件并且在发送之前单独编辑每封电子邮件，然后手动授权发送每封电子邮件。

可选地，停止侵权引擎 250 可以包括用于自动监测回复或响应的响应监测模块 251。用户定义将展示为停止侵权通知的发件人的邮件地址，和 / 或用于这样的发出通知的“回复”邮件地址。针对来自停止侵权通知被发送给的各方的回复，用户可以允许系统对发件人的电子邮箱进行监控（或者对已发送通知的“回复”邮件地址进行监控）。系统自动对该邮箱中接收到的邮件进行扫描并且搜索从停止侵权通知被发送给其的邮件地址接收的邮件。如果找到这样的邮件，则将会将其存储在数据库中并且关联到发送给该方的邮件。可选地，系统可以被配置成区分自动响应邮件（例如，来自 ISP 的说“我们确认收到您的邮件”的邮件）和具体的非自动响应邮件，并且系统可以用标记或其它指示来指出响应看上去是自动的还是非自动的。用户可以浏览发送的通知以及它们附连的回复。系统可以展示下述表格，该表格具有针对每个风险网站的已发送通知和收到的回复的数目的总结以及针对所有风险网站的合计，可选地还显示通知被发送和 / 或响应被接收的日期。

可选地，停止侵权引擎 250 可以包括后续跟进模块 252，该后续跟进模块 252 可以针对发送给责任方的停止侵权通知来使能一个或多个后续跟进选项。例如，可以通过系统将后续跟进自动或手动地发送给先前将通知发送给其的所有各方。用户可以决定后续跟进的时机（即，最初通知之后的一周、一个月等）以及后续跟进将发送给其的责任方的类型。用户可以根据时间进程在一批后续跟进邮件或者逐步或级联的阶段式后续跟进邮件之间选择。类似于通知，可能存在针对上述的责任方中的每一方预先定义的停止侵权后续跟进的措辞。用户可以撰写他自己的停止侵权后续跟进措辞、使用现有的措辞或者编辑现有的措辞以满足他的需要。可以通过电子邮件和 / 或通过常规打印邮件来发送后续跟进通知。用户可以选择他 / 她想要将后续跟进通知发送给的责任方的类型（即，注册人、主机提供商等）。

用户可以浏览要针对每个风险网站一个接一个发送的每个通知或者可以选择自动将通知批量发送给所选类型的所有责任方。系统自动提取与针对每个风险网站收集的责任方有关的先前存储的信息。如果用户选择自动发送批量后续跟进通知给某些类型的所有责任方，那么系统可以把电子邮件地址（如果用户选择发送电子邮件通知）或姓名和物理地址（如果用户选择发送常规的打印邮件后续跟进通知）自动添加到预定义的与每种类型的责任方关联的措辞，并且将通过电子邮件（或通过邮寄发送打印件）来发送针对每个风险网

站的每个所选择的责任方的专用后续跟进通知。可以将从系统发送的所有电子邮件存储在数据库中，并且用户可随时进行检索。

如果系统发现风险网站被关闭（即，域名被删除和/或网站不再进行解析，因此风险网站上没有可用内容），或者如果网站的内容已经明显改变（例如，达到与受保护的品牌的相关度很低或者没有相关性的程度），那么系统可以将该具体的风险网站从用于后续跟进的风险网站列表自动删除，并且系统可以通知用户：出现了积极结果以及品牌侵权域/网站被关闭或其风险分数降低。系统可以生成、更新并维护由于系统的操作而导致的成功结果的列表，其中包括成功结果被检测到的日期，可选地还存储证明了积极结果的屏幕截图或其它数据捕捉。可选地，在几天之后和/或几周或几月之后，系统可以对成功结果自动跟进，以证实关闭或风险分数的降低不仅仅是暂时的或误导性的，或者不是由于风险网站的短暂的技术问题而造成的。

用户可以定义：如果允许用户对回复进行监控，并且针对具体的风险网站接收到对停止侵权通知的回复，那么系统将该具体的风险网站从用于跟进的风险网站列表删除或移除，或者将该风险网站标记为在确定的一段时间内（例如一个月或一年）不需要进一步跟进的网站。

可选地，系统200可以包括用于自动推荐协商的协商模块255，该协商用于基于历史数据来购买风险域名。作为对诸如停止侵权通知，纠纷解决处理(DRP)和诉讼之类的法律活动的替代，系统可以向品牌拥有者自动推荐使用专业的协商服务来对持有侵犯品牌或商标的网站的域名进行购买。系统向用户自动推荐哪个域名容易被购买的概率更高，并且可选地还推荐价格范围（例如，当目标是利用协商有望收购价格比法律诉讼的预期成本低时）。

系统的协商推荐算法使用统计数据和历史数据来分析在协商中域名被收购的可能性和价格范围。该算法将特定域的数据与收集的关于在二级市场中出售的其他域名（例如，相同的注册人的、或者附属实体的、或者在域名中具有类似的字符串的域名的）的统计数据进行比较。统计数据是基于以下两者的：系统的历史数据，以及如果可得到的话从诸如域名市场网站（例如afternic.com、sedo.com等）之类的外包数据提供者接收的与域名的二级市场有关的外部数据。

被协商推荐算法评估、分析和比较的信息包括但不限于以下数据：域字符串特征（长度、字符串的通用水平、字符串中流行关键词的使用等）、TLD（它是类似于“.com”之类的流行的TLD还是与活动类型以及品牌的目标产业相关的字符串等）、搜索引擎结果中的名次或排名、人气算法的结果和数据（包括与流量水平、导入链接数有关的数据等）、投资算法的结果和数据（包括来自诸如MOZ之类的不同的SEO评估网站的排名的数据、网站的内容的分析等）。

在一些实现中，系统200可以给用户提供独特的信息，指示风险网站或滥用网站或侵权网站在域和/或网站的“二级市场”中或者通过域交换市场或者通过拍卖或“即点即买”域市场可用于购买。例如，系统可以给用户展示十个品牌滥用网站的列表，并且可以指示或标记出或高亮出这十个品牌滥用网站中三个品牌滥用网站可用于购买，即使它们已经注册到第三方。系统可以展示系统标识为可在二级市场中用于购买的每个这种“被采用的”品牌滥用网站的请求价格。系统可以使得用户（例如，品牌拥有者或品牌管理者）能够一键操作来购买系统标识为在域和/或网站的二级市场中可用于收购的“被采用的”品牌滥用网

站。为此，系统可以针对每个品牌滥用域或网站来核查是否该品牌滥用域或网站已经由其拥有者通过二级市场公开发售，该二级市场允许域拥有者和 / 或网站拥有者出售或公开发售他们的域和 / 或网站。这种特性可以使得品牌拥有者能够通过立即授权和 / 或指挥对这类域和 / 或网站的二级市场购买来立即且有效地处置对他 / 她的受保护品牌的具体的“风险”或“威胁”。可选地，系统可以被链接到预存储的支付信息（例如，品牌拥有者的公司帐户或信用卡信息），以能够立即处理这样的购买指令。

系统 200 还可以包括评估模块 260，该评估模块 260 也可以被称作“网站和域组合评估模块”。评估模块可以给组织提供组织的网站和域组合以及它们的相对价值的整体视图。该系统模块展示按照其对品牌的贡献值以优先级顺序排列的所拥有的域名。这使得用户能够看见哪个域 / 网站提供最大的价值以及哪个几乎没有贡献值。

评估分数是由评估算法基于三个主要算法的分数来计算的 :相关性算法、投资算法和评估人气算法。除了针对人气算法中使用的测量而收集的信息之外，系统可以收集关于每个网站的信息和数据，这些信息和数据包括但不限于 :(a) 直接流量数据（由诸如 Alexa 和 MOZ 之类的评估流量的外部数据资源和 / 或由安装在客户端的服务器上来收集这样的数据的统计模块和 / 或由诸如提供与具体网站或网页有关的搜索数据或分析数据的谷歌分析之类的服务所提供）;(b) 使用安装在其上域名被定义的 DNS 服务器上的系统的 DNS 数据收集器来收集的 DNS 请求数据。上述测量被结合到人气算法中并且用于生成评估人气算法。

评估算法（和 / 或系统的其它算法或模块）可以是学习算法。用户可以基于他 / 她自己的看法来改变网站的重要程度。因此，系统将会把用户的偏好结合到算法中以用于将来的结果分析。评估模块可以使得用户能够对他的域名和网站的相对价值进行评估。因此，用户可以决定丢弃（例如，删除或不续约）价值较低并且因此对公司的线上活动贡献很小的域名。系统的其它算法和 / 或模块可以被实现为学习算法，该学习算法可以根据用户的反馈逐渐学习 :哪些风险对用户更重要、哪些机会对用户更有吸引力、用户对哪些参数或度量更感兴趣，或者被实现为可以通过使用机器学习算法来学习的其它决定或偏好。

系统 200 可以可选地包括数字化营销 /SEO 效果估算器 265，其可以评估随着时间的推移搜索引擎优化 (SEO) 和 / 或数字化营销（或网上营销）活动的以及可选的与这种努力或活动花费的预算或成本相关的效果和益处（成本效果）。

例如，可以基于多种度量来计算 SEO 分数，这些度量包括 :流量数据、该网站在不同的搜索引擎网站上不同的查询的不同的搜索结果中的位置、导入链接的数量、与搜索引擎优化 (SEO) 需求的适合度、与诸如进行衡量的政府网站之类的可信网站的链接紧密度、内容分析、标题和标签的适合度、导入的链接、与诸如政府网站之类的可信网站的链接紧密度、来自对网站进行衡量的不同的分析网站（例如，Alexa 和 MOZ) 的排名、网站的流量和广告转换数据、来自广告系统（例如 Google AdWords) 以及其他广告的类似系统的数据、来自搜索引擎网站分析系统（例如 Google Analytics) 的数据等。

可以基于 SEO 需求的不同变化、影响 SEO 的搜素引擎算法中的不同变化以及影响 SEO 和数字化营销的其它相关信息源来持续地更新为了分析 SEO 分数而测量且收集的因素。

因此，当在时间点 T1 测量 SEO 分数，然后在稍后的时间点 T2 测量 SEO 分数时，在该时间段内 (T1 与 T2 之间)SEO 分数的差异提供了对该时间段内测量的具体的网站的客户端的 SEO 活动和 / 或数字化营销活动的测量或间接评估。如果 SEO 活动被停止或被修改，那么

测量作为SEO分数的一部分的不同的度量将受到影响并被改变，并且分数可能减小或增加（如果修改改进了测量值）。因此，客户端可以监控并评估它的SEO提供者或内部SEO团队以及它的数字营销活动的有效性。

可选地，系统可以对指示每周或每月投资或花费了多少钱在SEO努力中的数据进行存储，然后系统可以自动生成并显示指示在SEO分数上叠加的花费资金的图（或其它适当的表示）。该系统可以自动推断出更多的花费资金（或，恒定量的花费）促进了SEO分数的维持或增加，或者与此相反，系统可以提醒用户即使钱花在了在SEO上（或甚至，SEO预算增加），SEO分数还是在降低，用户可能需要采取行动（例如，替换SEO提供商）。

如上所述，RPID算法基于用于对每个潜在的风险网站进行分析的多个（例如四个）子算法（相关性、人气、投资和损害）的分数来确定总体风险分数。

RPID算法将分数进行排名并且归属到每个域。它的成功很大程度上依赖于是潜在风险域的域、可能侵犯品牌的域的联营。为了定位这样的域，可以使用各种机制。根据品牌名称生成输入错误或拼写错误并且对潜在的已注册域进行识别。在区域文件中搜索品牌以及使用NsLookup（网路资讯查询）（当区域文件不能被识别时）是另一来源。使用搜索引擎来进行搜索是另一方法。系统可以制定一个可以潜在地定位侵权域的查询。一个幼稚的方法将是简单地搜索品牌名称。通常这种方法的主要问题是含糊不清，因为具有多种含义的品牌名称将产生不成功的查询。当通过互联网来进行检查时，几乎任何词都可能有多个含义。系统使用采用特定的配置并且整合外部工具的更精确的查询。

可以考虑相关性估算器，例如，域相关性，内容相关性和图形相关性。

[0187] 域相关性子模块可以基于域标签与品牌的紧密度或接近度以及基于字符串中统计上流行或与品牌相关的相关性关键词的使用来确定域名的分数。算法对品牌的变体（例如排字错误、基于打字错误的错误、拼写错误和/或关键词使用）进行分析。与互联网上这些变体的流行程度（即，在现有域名列表中他们的统计频率）有关的统计数据可以用作算法的一部分。

内容相关性子模块可以基于由抓取器作为一组文档而提取的网页的收集。针对文档的收集来处理基于品牌为每个品牌专门构建的一组查询、品牌的相关性关键词以及关键词的LSI（潜在语义指标）。查询提供了反映内容与品牌及其关键词的相关性的分数。这些查询反映了品牌名称显著性、关键词显著性以及整体品牌相关词汇。

为了生成是给定品牌的特征的一组关键词，系统可以使用多种来源的可靠文本，这些可靠文本然后被公式化到关键词查询中。这些来源可以包括：谷歌搜索和其他搜索引擎、LinkedIn公司信息、CrunchBase公司信息、品牌公司拥有的域、用户输入的关键词以及其它来源。通过使用协同过滤方法来完成这样的关键词到查询中的聚集。

用于文本分析的标准算法通常依赖于与该组文档有关的一些特定假设，例如，文档的长度在某个可重新扫描的范围内。然而，来自互联网的文档分析显示这样的假设是不正确的。例如，网页的长度可能短到只有一句话以及长到许多卷。因此，系统可以采用专门适用于网页结构的算法（例如，文档与一组关键词之间的余弦距离矩阵）。

图形相关性子模块可以使用与上文类似的框架来进行操作，使得可以针对网页的收集来处理图形组成查询（测量颜色、标志结构等），以便提供品牌拥有者的图形组成与测量的网页之间的相似度分数。

人气估算器模块基于不同的测量的排名来生成人气分数，这些不同的测量例如有：网络度量、提供流量数据的外部工具、使用情况统计、链接结构（内部链接、外部链接、导入链接的数目等）、网站在不同的搜索引擎网站（例如，Google、Yahoo、Bing 等）上的不同的查询（例如仅包括品牌的查询、包括品牌与一个或多个相关性关键词的查询、包括品牌与相关性关键词的不同组合的查询、不包括品牌的主要相关搜索词的查询等）的不同的搜索结果中的位置或排名、网站和 / 或网页的社交媒体人气（例如，“喜欢”或者粉丝的数量、Facebook 和 / 或 Google+ 上对页面的评论和其它“散布”措施等）以及可以提供与网站的使用和人气有关的信息的任何其它数据。

将各种来源的信息整合以得到网站流量的估计值。网站的人气分数得自于它的流量以及其它网站的流量。在计算人气分数之前使用归一化函数。归一化函数可以考虑人气分数的期望分布、人气分数的期望稳定性、互联网中各种网站的流量的分布以及互联网上网站的实际流量的不稳定性。

投资水平估算器基于以下各项生成分数：网站与搜索引擎优化 (SEO) 需求的适合度、使用统计（用户与网站的交互的测量，例如，通常具有高投资水平的网站可能比具有低投资水平的网站更吸引用户）、HTML 标签结构的分析和用于构建网站的技术（这些是否是需要更大的资源投资的技术等）、与域名及其拥有者有关的历史记录（例如，很长时间由同一拥有者注册的域意味着较高的投资水平，因为域拥有者必须支付很长时间的年费以保持拥有该域）、评价价值（例如来自域二级市场网站、评价提供者等）、网站的视觉分析等。

可以对投资的各组分的重要性手动地进行评估，还可以根据其在互联网中的盛行进行评价，例如，互联网中特征的高出现可能表明它易于实现而且它不能对投资分数贡献太多。

损害估算器生成反应网站可能对品牌拥有者造成的损害程度的分数。某网站可能具有高相关性分数、高人气分数和高投资分数，但它可能不是侵犯商标和 / 或对危害品牌的网站。例如，得了某种疾病的人推销或讨论用于该疾病的某种药的非盈利性组织的网站可能不被视为对品牌有害。因此，损害算法意图提供将分析网站是否是有害的的分数。

该分析可以包括：贬义词使用、域名中拼写错误的使用、重定向到广告或竞争对手的网站、使用类型（例如“停放“站点）、横幅广告或其它类型的在线广告的使用程度、不正当业务或有风险业务的使用（例如赌博、色情、出售酒精或烟草或药品等）、与诸如政府网站之类的可信网站的链接紧密度（即，应该点击多少步链接才能从可信网站到达被测量的网站）、用于除了品牌拥有者的产品之外的产品的在线贸易的网站的使用、可以增加从网站发送的 SPAM（垃圾邮件）或欺诈邮件（例如网络钓鱼邮件）的概率的网站的邮件服务器的存在（即，域名的 DNS 记录中 MX 记录的存在）等。算法可以集合来自多个来源的信息，例如 MX 记录、域名查询数据、网络度量等，以便预测或估算网站的功能和 / 或损害。

机器学习：上述的特征或分数 (R，P，I，D) 可以定义“测量”，系统使用该测量来对风险进行排名和评分。与所有这四个分数的范围函数关联的最终分数例如可以是这些特征的加权和，例如：

$$\text{Score} = \Sigma_{i \in \{R,P,I,D\}} w_i \cdot s_i$$

可以通过专业知识（例如，手动地）来定义加权 wi。根据该函数与系统 UI 的交互，该函数的细节可以适于任何特定的用户。用户的一些动作表明目前的评分函数令人不满，诸如停止侵权或风险水平调整之类的用户交互是可以用作机器学习算法的训练集的人类指

示。算法可以考虑评分函数的函数形式。

新的 gTLD 推荐 :可能不同于上述算法来建模新的通用 TLD 推荐。因为关于新的 gTLD 只有非常少的可靠数据,因此可以使用不同的用于排名的方法。系统使用称为语义相关性的通用框架来对这种 gTLD 与品牌的相关性进行排名。系统可以找出品牌与每个 gTLD 语言学地相关到何种程度。

两种主要的方法可以对这样的测量进行评估 :(A) 信息理论测量 :相对于每个单个词的出现,在网站中找出两个词的同时出现。假设这样的共同出现具有言内意义并且搜索引擎返回这种可靠的计数 (实际上他们没有,每个搜索引擎以各种方式来操纵查询)。“归一化谷歌距离”是一种用于计算这种测量的方法。(B) 本体论测量 :使用现有的本体来定位两个词,并且然后将图形距离用作语义相关性的估计。假设这样的本体存在。“维基百科距离”是一种用于计算这种测量的方法。

因为上述测量都存在固有的缺点,因此可以使用不同的方法 :(a) 使用有意义的词 / 表达来制定搜索引擎的查询,而不是使用 gTLD 作为字符串。(b) 对链接进行分析,而不是使用查询结果的计数。“好的”(有效的、准确的) 查询应该返回“好的”(相关的、准确的、跟主题相关的) 链接,伴随着相关的搜索、图像、新闻等。系统使用基于上述的测量。基于在片段和 URL 中对品牌的提及连同 gTLD 的词一起来针对每个链接定义“优秀的”或有效的测量。(c) 将 gTLD 和品牌的已知属性 (根据其配置) 进行结合来得到更适于品牌的分数。

系统可以使用可以依赖于所有上述三个测量并且绕过缺点的其它方法 (使用不同的搜索策略、结合由用户提供的系统的数据的“优秀的”或有效的测量和丰富的本体)。

根据本发明的系统可以被实现为计算机化平台或基于网站的服务、或者独立的软件 / 硬件模块、或者实现为致力于数字品牌保护和线上品牌管理的“软件即服务”(SaaS)。可选地,可以以其它方式来实现系统,例如,可以由品牌拥有者或网站拥有者购买并且然后自主安装以及操作的硬件和 / 或软件产品 (有或者没有订阅服务)。

系统的说明性实现,例如 :(a) 对潜在危害组织的品牌或侵犯组织的商标的互联网站点进行监控 ;(b) 从与站点有关的多个数据源收集大量的信息,并且基于高度精细的算法将风险自动按优先顺序排列 ;(c) 使用类似的方法对组织拥有的站点进行监控、收集数据并且使用算法对站点进行评估,以便帮助组织 ;(d) 对站点的组合进行更好的管理 ;(e) 评估 SEO 活动的有效性 ;(f) 将组织的数字资产更好的货币化 ;(g) 能够自动且智能地管理组织的域组合。

系统可以,例如 :(a) 对于品牌滥用 (品牌和商标侵权) 的互联网进行扫描并监控 ;(b) 对于据称有风险并且利用品牌和 / 或商标或服务商标或商品名称的网站进行定位 ;(c) 测量并且收集与可疑网站的多个方面有关的数据,其中包括它们与品牌的相关性和紧密度、它们的人气、它们的发展中的投资估算以及它们可能造成的潜在损害 ;(d) 基于它们对组织的潜在风险对不同的网站进行分析并按优先顺序排名 ;(e) 提供用于在线管理品牌的商业智能。

系统可以提供用于对数字化品牌名称管理和域名管理进行分析、监控和控制的自动化服务。系统可以使用网络抓取器和数据收集器、可以提供组合监控和控制、操纵各种各样的技术规程、帮助将问题引起的损害最小化、监控安全、能够分配组织责任、发现商标或服务商标违规行为 (或疑似违规行为) 和伪造以及协助打击违规方。

组合管理模块是下述模块，与组织拥有的域名有关的信息被馈送给该模块。系统从与组织的数字化品牌或非数字化品牌（例如，组织线下和/或线上所使用的商标或品牌）相关的网络收集数据，提供当前状态的更新视图。基于由根据系统的所有用户的使用收集的系统的经验构建的常识，通过跨组织的优先级以及通过学习由该组织的员工完成的特定的优先级校正，将信息进行分析并按优先顺序排列。

系统通过对用户完成的动作进行学习来改进分析和优先化。将首先从经营者的员工的使用进行学习，之后，将可用于其它组织。通过系统的使用收集的集体智慧将不断加强并调整系统。

在一些实施例中，系统可以利用模块和/或算法以便检测、识别和/或确定跨品牌侵权。在说明性示例中，系统可以收集并分析数据：域注册数据、网络流量数据、网站内容和/或其它数据，并且可以检测：(a) 诸如“Samsung-Phonez.co.uk”之类的第一网站滥用属于第一品牌拥有者的第一品牌；以及 (b) 诸如“Nokia-Phonez.co.uk”之类的第二网站滥用属于第二品牌拥有者的第二品牌。跨品牌侵权检测器模块可以寻找并且可以识别侵权网站中的模式，例如，(A) 两个滥用网站都以“phonez”的后缀结尾，该“phonez”是“phones”的俚语或拼写错误；和/或 (B) 两个滥用网站都包含了在同一领域（例如，移动电话）中运营的品牌或公司的名称；和/或 (C) 两个滥用网站都处于相同的 TLD 或 gTLD 或 ccTLD，例如上述示例中以“.co.uk”结尾；和/或 (D) 两个滥用网站至少共享一个共同的注册细节或联系人或 ISP 或托管公司或 DNS 记录或 IP 地址或对两个滥用网站可以是共同的其它参数。系统可以以一种或多种方式来独特地利用这种跨品牌侵权检测。例如，可以通过它本身被用于进一步处理和/或通过系统进行分析来仅检测这种跨品牌模式，例如，增加属于该模式的滥用网站中的每一个的风险分数，或者将他们的状态从“可能滥用”变成“确实滥用”。此外，系统可以通知品牌拥有者（例如，跨品牌侵权中涉及的多个品牌拥有者中的一个、或者他们中的一些，或者他们中的全部）所检测的跨品牌侵权，并且可以由此使得这些多个品牌拥有者之间在他们的后续操作（例如，法律步骤、停止侵权通知、DRP 投诉、协商购买、撤除通知等）中能够合作。这可以给合作的品牌拥有者提供多种好处，例如，减少了用于采取强制措施的成本、展示了多个品牌拥有者反对共同的跨品牌侵权人的“统一”立场以及增加的能力，用于在法律程序中证明滥用网站的性质确实是滥用的，因为他们侵犯了多个不同的品牌而不仅仅是单个品牌。可以由系统的该独特特征而产生其它好处。

一些实施例可以包括用于对域的整个注册机构（例如，整个 TLD 注册机构，例如，“.com”或“.org”或“.net”或“.uk”或“.de”或“.trade”或“.best”或“.pink”）进行扫描的模块，以便对该注册机构中的 (A) 不遵守指示该注册机构上这样的网站中哪些内容被允许或者不允许的规则和/或 (B) 滥用品牌名称的多个域和/或网站进行检测。在第一示例中，可以针对品牌名称（例如，混合类型的或者诸如时尚品牌、计算机品牌之类的具体的品牌类型的）的列表来检查整个注册机构的域和/或网站的整个列表，以便检测品牌侵权或滥用，并且可选地，针对疑似滥用的网站可以使用 RPID 算法，可以生成 RPID 分数。在另一示例中，可以根据本文中描述的分析方法对该注册机构上这样的网站的内容进行分析，以便检测可能在该注册机构的网站上存在的不符合的网站内容（例如，淫秽色情内容、非法赌博内容）。在两种情况中，可以例如根据 RPID 分数的降序或者根据其它分数将滥用网站或不符合网站的结果显示为优先表或排序表，该其它分数可以对品牌滥用和/或不符

合的严重程度进行测量或估算或指示。如本文中所描述的，网站的列表可以伴随着动作项，用户可以关于风险列表上的网站中的一些网站或全部网站来选择性地启动该动作项。

参照图 3，图 3 是根据本发明的一些说明性实施例的由评估模块显示的用户界面和屏幕 300 的示意图。工具栏 305-306 可以允许用户进行选择或采取行动或显示数据部分，按钮 307-310 可以允许用户采取行动，例如协商、按参数排序、按参数过滤、开始评估等。

品牌选择器界面 301 可以允许用户从用户可以在系统上定义的多个品牌中选择品牌以用于评估和数据展示目的。基于等级的分布栏 302 可以指示在一定的评估等级（例如，“高”评估等级或“中等”评估等级或“低”评估等级）中属于该品牌的域的分布，例如，指示在“高”评估等级中 26 个域是“.com”，11 个域是“.co.uk”以及 9 个域是“.net”。

类似地，基于 TLD 的分布栏 303 可以指示与该品牌相关的 TLD 的分布，例如，如果选择 TLD “.com”，那么基于 TLD 的分布栏 303 可以显示在该品牌的所有“.com”域中，37 个域具有高评估等级，72 个域具有中等评估等级，91 个域具有低评估等级。

此外，可以在屏幕上表示所选品牌的多个域或网站，例如，第一网站或域 311 以及第二网站或域 312，每个与显示的分数 321-322 以及与针对每个网站的特定的 RPID 值 331-332（或者，如果该项目是由品牌拥有者所拥有的，则只有 RPI 值而没有损害分数）相关联。可选地，具有两个单独的图线 351-352（或其它适当的制图组件）的图形 350 可以展示随时间变化的以及相对于其它网站的分数的每个网站的分数。

汇集器数据栏 360 可以附加地指示关于与该品牌相关的多个域的汇集的数据，例如，这些域多少具有高（或中等或低）评估等级，多少是“新”的并且还没有被评估的，多少是完全没被货币化的等。可以通过使用用于排序、过滤和 / 或搜索的适当的界面组件来对屏幕 300 上展示的列表和项目进行排序、过滤和 / 或搜索。

在评估模块中，客户端拥有的多个网站同时展示在屏幕上。向下滚动可以按用户查看的评估等级显示接下来的网站。每个被评估网站的行包括基本信息、分数部分以及显示随着时间变化网站的评估分数的图形。

切换机制 (switch) 使得用户能够改变具体网站的评估等级。系统是学习系统并且该切换机制给系统提供用户输入以便教导系统。系统的算法将从具体网站的评估等级的这种改变中学习并且将相应地被更新。

分数部分包括基于每个 RPID 算法计算的总分数和每个 RPID 算法的分数。可以针对每个被评估网站单独采取动作，或者通过选择多个评估行并且使用总的“动作”按钮来针对组采取动作。在屏幕的底部，展示了示出评估分数随着时间变化的更详细图形的部分。当用户对被评估的网站中的一个做标记时，该网站被添加到图。可以同时展示多个网站的多个图。可以通过针对每个等级使用不同色调的绿色或者通过使用其它适合的配色方案来表示评估等级。应当指出的是关于由品牌拥有者拥有的域或网站，“损害”组分或损害分数可以被省略或忽略或不计算，或者，可以使用“RPI”算法而不是上述的“RPID”算法。

参照图 4，图 4 是可以根据本发明的一些说明性实施例显示的屏幕上控制面板 400 的示意图。例如，品牌风险可以被分为多个等级，例如高、中以及低三个选项。用红色来表示高，橘色表示中等以及黄色表示低。可以使用其他颜色或指示，并且可以使用其他数目的等级。

也可以将机会（或可用域）分为多个（例如三个）重要性等级。用蓝色来表示机会，并且通过不同色调的蓝色来表示等级，其中深蓝色代表最重要或十分重要的机会。

按多个（例如，三个）等级：高、中以及低来展示评估数据。用绿色来表示机会，并且通过不同色调的绿色来表示等级，其中深绿色代表具有最高评估分数的站点。

GUI 可以被调整成按品牌以及按业务单元来展示数据。例如，如果业务单元有两个品牌，那么每个品牌的品牌管理者可以查看他负责的品牌的数据，而单元管理者可以单独查看每个品牌的数据，以及两个品牌的数据的累计视图。代表客户端的管理员可以定义系统中的组织结构，并且不同等级的管理者能够按单一品牌视图以及累计视图（单元视图）两者来查看他们的不同单元的数据。

主控制面板使得用户能够查看系统的所有（例如，三个）主要部分的总计数据，该系统的所有主要部分例如有包括风险和机会的保护部分、包括评估和货币化部分的优化部分以及包括域、托管 (hosting) 和 SSL 管理数据的管理部分。例如，可以在红色方框中通过表示消息的图标和表示通知的图标来展示新消息的数目和通知的数目。

在说明性实现中，例如，品牌选择器栏 401 可以使得用户能够选择要显示其数据的品牌。控制面板可以包括保护面板 410、优化面板 420 以及管理面板 430。

在保护面板 410 中，品牌风险栏 411 可以指示带来高风险、中度风险以及低风险的网站或网页，并且可用域栏 412 可以指示最重要的可用域、比较重要的可用域以及不重要的可用域。

在优化面板 420 中，被评估的域图 421 可以指示有多少品牌拥有者所拥有的域被评估（例如，每天或每周），站点评估栏 422 可以指示获得高评估分数、中等评估分数以及低评估分数的有多少域，以及非货币化域指示器 423 可以指示有多少域目前没有被货币化。

在管理面板 430 中，所有权栏 431 可以指示由组织拥有的域的总数，动作项栏 432 可以指示一个或多个到期的待办项或动作项，对紧急或高度重要的动作项以及与它们关联的域的数目特别强调（例如，紧急的域续约、紧急的 SSL 证书续约、安全动作、管理动作、具有不正确设置的域）。

参照图 5，图 5 是可以根据本发明的一些说明性实施例显示的品牌风险界面 500 的示意图。例如，可以在屏幕上同时展示多个风险网站或网页。向下滚动将按用户查看的风险等级显示接下来的风险网站或网页。每个风险网站或网页行包括基本信息、网站或网页的缩小比例的屏幕截图以及分数部分。

切换机制使得用户能够改变具体网站或网页的风险等级。系统是学习系统并且该切换机制给系统提供用户输入以便教导系统怎么去调整它的算法。系统的算法将从具体网站的风险等级的这种改变中学习并且将相应地被更新。

可以通过颜色来定义三个风险等级，例如，红色代表高，橘色代表中等，黄色代表低。分数部分包括基于 RPID 算法中的每个算法计算的风险分数以及 RPID 组分的每个组分的具体分数。如果网站或网页被认为是具有相似特征（风险模式）的一组网站或网页的一部分，那么指示它是该组的一部分的图标可以被添加到该风险网站或网页行中。可以针对每个风险网站或网页单独采取动作，或者通过选择多个风险行并且使用总的“动作”按钮来针对组采取动作，该总的“动作”按钮可以应用于所有被选择的网站或网页。这种动作可以包括，例如：“标记为我的”或者“标记为不是风险网站”或者“标记为附属”，以及例如，“发送停止侵权通知”或者“发送撤除通知”或者“提出 / 启动纠纷解决程序 /DRP”或者“启动协商购买”或者“标记该网站以用于额外的审阅或处理”（例如，出现在被标记网站的分组的子列

表中）。其它适合的动作也是可用的。

当用户点击展示的风险网站或网页中的一个时，用户会被重定向到风险细节页面。该页面可以包括例如以下元素或数据项：网站的 RPID 分数，网站的屏幕截图缩略图，域名查询数据，DNS 记录，诸如 IP 地址、起源国家之类的 GEO 信息，托管网站的 ISP 等。该页面可以包括关于对特定的网站或网页采取的强制动作的细节，包括停止侵权通知、DRP 投诉归档、协商、撤除请求等。该页面还可以包括与内容分析和关键词分析有关的细节，其中与内容分析有关的细节包括网站或网页的正文中的品牌突出、网站或网页中使用品牌的示例，与关键词分析有关的细节包括在网站的正文中发现的与品牌有关的顶级关键词、流量和统计信息、SEO 测量数据、定义网站或网页的使用结构的参数、是否在其上发现品牌的标志、是否网站的设计（诸如按钮或工具栏之类的具体的网站组件的设计）类似于由品牌使用的设计等。此外，可下载的网站或网页的全尺寸的屏幕截图、根据被捕捉或扫描的日期和时间的日期戳和时间戳、根据扫描的时间处网站或网页的 IP 地址的 IP 戳以及可下载的根据被扫描的时间的域名查询详细信息页面日期戳和时间戳将是可获得的。如果品牌决定针对与网站或网页的运营有关的各方中的任意方采取行动，那么这些日期戳和时间戳记录可以用作法律程序中或法庭中的证据。

参照图 6，图 6 是可以根据本发明的一些说明性实施例显示的品牌机会界面 600 的示意图。例如，可以在屏幕上同时展示多个可用域。向下滚动将按用户查看的机会等级显示接下来的域名。每个域行包括基本信息和机会分数部分。

切换机制使得用户能够改变具体域名的机会等级。系统是学习系统并且该切换机制给系统提供用户输入以便教导系统。系统的算法将从具体域名的机会等级的这种改变中学习并且将相应地被更新。

分数部分包括基于多个算法计算的总分数和这些算法中每个算法的单独的分数。可以针对每个被评估域名单独采取动作，或者通过选择多个机会行并且使用总的“动作”按钮来针对组采取动作。动作可以是：例如注册域、将域添加到购物车以用于购买、将域保持在“意愿清单”中等。通过针对每一等级使用不同色调的蓝色或通过使用其它适当的配色方案来展示机会等级。

参照图 7，图 7 是可以根据本发明的一些说明性实施例显示的管理模块界面 700 的示意图。管理部分的 GUI 意图展示用于管理客户端的域名组合、托管、SSL 证书等的重要信息。

管理模块的主页面使得能够基于紧急程度、基于行动的最后期限有多近（例如，现在或今天或这周或这月必须采取行动等）、基于每个动作中涉及的估计预算和 / 或其它分类或准则来快速访问数据及所需动作的组。

系统可以基于网站的评估分数来将不同的动作优先化（或降低优先等级），例如，用户可以定义当具有高评估分数的网站有待于续约时，那么该具有高评估分数的网站将被自动续约或标记为紧急（即使它处于低优先级，例如屏幕截图中显示的截止日期前 90 天）。可以以类似的方式将其它动作优先化（或降低优先等级），例如，基于评估分数将诸如名称锁定 (namelock) 或名称监视 (namewatch) 之类的安全解决方案的使用优先化。例如，具有高评估分数的网站在安全部分中表示为“需要”，具有中等评估分数的网站表示为“推荐”等。

参照图 8，图 8 是可以根据本发明的一些说明性实施例显示的管理模块子部分界面 800 的示意图。例如，通过点击诸如“续约”、“安全”、“注册”之类的具体行的右侧的箭头来从管

理模块的主页面中的行进行移动。页面的中心部位滑出到左边并且同时细节部分从右边滑进。具有在管理部分的主页面中展示的数据的行被展示为细节部分的顶部的标题，并且细节信息展示在它下方。点击标题中的箭头将会把中心部位滑回成主页面。

按天数以及 30 个点围绕的圆圈来显示采取行动（例如续约）的剩余时间。基于剩余的天数，相同数量的点将被涂色。例如，如果续约还剩余 21 天，那么 21 个点将有颜色，而剩余的 9 个点将似乎无色。可以使用其它适当的方法来指示任务的紧急或非紧急，或者来指示每个截止期限之前剩余的时间范围。

结合本发明的一些说明性实施例，本文的讨论中可以使用以下定义和术语。

域名系统 (DNS) 是用于计算机、服务或连接到互联网的任何资源的分级分布式命名系统。它将信息与分配给每个参与实体的域名相关联，并且它将对人类有意义的域名翻译成与网络设备关联的数字标识符，以便在世界范围内对这些设备定位和寻址。

域名是网站的互联网协议 (IP) 地址的名称。因为 IP 地址由数字的组合构成，因此域名是用于人们去记住在哪里可以找到网站而不需要熟记数字和句点的组合的一种方式。一些实施例可以将域名的两个部分区分开，例如“www.example.com”，包括标签和 TLD（顶级域名）。

标签是域名拥有者选择的名称，它以“.”（句点）结尾。在上述示例中，标签是词语“example”。

TLD 是通过“.”（句点）与标签分开并且将标签与世界上的区域关联的跟随标签的后缀。在上述示例中，TLD 是“com”。

原始的顶级域名被称为“通用”TLD(gTLD)。“.com”是最期望的因为大多数公司在早期采用它，并且它成为最著名且最相关的。然而，如果“.com”名称已经被注册，那么替选是使用诸如“.net”或“.biz”的另一个 gTLD。

以下是目前可用的 gTLD 的一些示例 :用于商业的“.com”、用于面向网络的实体（过去）或用于其它实体（目前）的“.net”、用于非赢利性组织的“.org”、用于国际条约或实体的“.int”、用于企业实体的“.biz”、用于日常使用的“.info”、用于移动网站的“.mobi”、用于组织的电话号码的目录的“.tel”、用于工作招聘网站的“.jobs”、用于博物馆的“.musem”、用于旅游业的“.travel”、用于诸如律师和医生之类的专业人才的“.pro”、用于面向成人的网站或色情网站的“.xxx”、用于高校的“.edu”、用于政府主管部门的“.gov”、用于军事的“.mil”。此外，每个国家可以拥有它自己的 ccTLD 或国家代码 TLD。

域名劫持是当有人非法地或用欺骗手段将你的域从你这里拿走。通常通过伪造转让授权来完成域名劫持。也可以通过某人临时地篡改你的域的关键记录（例如管理 DNS 服务器记录、A 记录等）来完成域名劫持。

域名投机是识别并且注册或者获取互联网域名以意图以后为了利益出售它们的行为。域名投机的主要目标是可能对输入流量 (type-in traffic) 以及对由于它们的描述性而在任何领域中都将具有的支配地位有用的通用词。因此，通用词、它们的组合以及诸如保险、旅行、鞋子、信用卡之类的短语等都是任何顶级域中域投机的有吸引力的目标。域名的投机特性可以被链接到新闻报道或时事。然而，期间存在这样的机会的有效周期可能是有限的。域名转售中的快速周转被称作域名炒卖。

可扩展供应协议 (EPP) 是设计为用于通过互联网在注册机构之中分配对象的弹性协

议。创建 EPP 的动机是创建一个能够在域名注册机构与域名注册商之间提供通信的健壮且弹性的协议。每当要注册域名或者将域名续约时都需要这些交易。EPP 协议是基于 XML(结构化的、基于文本的格式)的。尽管目前独特指定的方法是通过 TCP,但底层网络传输是不固定的。该协议被灵活地设计成允许使用诸如 BEEP、SMTP 或 SOAP 之类的其他传输协议。不是所有的注册机构都使用 EPP,并且那些使用 EPP 的注册机构针对他们自己的注册机构进行不同的改变,消除了协议的标准化。

域名投资者 (Domainer) 是注册 / 购买域名以便从暴露于广告 (通常是按点击付费广告或其它类型的线上广告) 的用户的流量或为了利益通过出售它们来产生收入的人。通常,在这些域名被出售以前,它们被用于广告,并且被称作“停放的域名”。

名称锁定是系统的产品或特征,在名称锁定中不能在线改变域的设置,包括 DNS 服务器、DNS 记录以及所有域拥有者数据。防止域被劫持的适当的方式是使用名称锁定或其它适当的锁定机制或非修改机制。

当域被锁定时,域的注册商锁定状态出现,另一个注册商甚至不能开始域转让。处于注册商锁定状态的域意味着该域的注册商已经锁定了域以防止任何未授权的域转让。通常真实的注册人在他的账户中具有下述设置 :例如,允许他通过联机界面或控制面板随意锁定或者解锁他的域。

停放域名 (反之称为域名停放) 意为将域名指向告诉访客该域已经被采用的占位网页。多数人使用该特征来提供一个临时页面给访客看,同时他们决定如何处理他们的域。通常,注册商可以提供该页面并且可以使用将在页面上展示 PPC(按点击付费) 广告 (或其它广告) 的域停放系统。在“已停放的域”的情形下,系统和页面的结构是类似的,并且这些是其中“域名投资者”等指望从对不同的域名产生的流量中获益的情形。

当域名自动将访客重定向到另一网站 (可以使用 HTML 或脚本以进行重定向或者通过域名本身的 DNS 记录来完成) 时域转址出现。当域被设置成将访客转址到另一页面时,域的名称不会留在网页浏览器的 URL 栏中。代替地,显示新页面的 URL,除非使用“定制 (Framing)”脚本或页面。

WHOIS(域名查询)(发音为短语“who is”) 是查询和响应协议,该协议被广泛用于查询对诸如域名、IP 地址块或自治系统之类的互联网资源的注册用户或代理人进行存储的数据库,但是该协议也被用于更广范围的其它信息。该协议将数据库内容按人可读的格式进行存储并传递。

DNS 服务器或名称服务器当给出域名时返回 IP 地址的服务器。该 IP 地址是互联网上域的位置。

名称监视是通过接触相关注册机构的数据库和授权的 DNS 服务器、寻找域设置中的任何变化来定期对域设置进行扫描的系统的产品或特征。一旦发现变化则给出警报。因为有时候 DNS 服务器或注册机构短时间内是不可访问的,因此时不时会有假警报。针对设置中的任何变化,和客户进行联系以查明是否是他做了改变。

上文已经讨论了风险分析,除了其它操作和特征之外,还可以包括在所有相关国家对与组织的品牌、产品以及商标 / 服务商标 (已注册和 / 或申请中) 关联的所有数字化品牌风险的完全分析,包括它的域名组合的详细审计报告。在风险分析中,系统可以关于具体的品牌名称对来自不是由组织所拥有的域名的目前风险以及潜在风险进行分析,并且可以确

定对品牌收益或者对品牌价值的目前和/或潜在的损害。可以针对与品牌名称相关的一组网站来完成该分析。

机会分析确定域名(不是由组织所拥有的)对品牌的潜在价值可能是什么。

当新品牌被发布或者转移到系统,并且被周期性地自动更新时进行风险和机会分析(ROA)。

域名组合管理员(DPA)是对由法律决策和品牌管理者决策造成的所有管理程序进行处理的角色,该法律决策和品牌管理者决策例如有注册商域名转让、注册人域名转让、域名注册、DNS 设置等。

在品牌监控的情况下,一些实施例可以:(a)通过使用域数据收集(例如,从 IDN)以及语音内容扫描(例如,包括多语言内容)来进行识别;(b)进行分析,包括数据挖掘模式识别以及优先化;(c)通过自动响应和/或后续动作以及对活动的持续监控来进行主动操纵。

先进的数据分析和相关能力可以包括:基于算法的风险和违规行为的自动优先级排序,用于排序功能以定位违规或侵权或疑似侵权的模式(根据不同的可获得数据定位主要的域名抢注者)的算法,数据综合(例如,对站点中侵犯品牌的所有域进行定位,以便请求 Google 或 Yahoo ! 或 Bing 或其它搜索引擎来将违规的域从它们的搜索结果中删除或隐藏)。如本文中所描述的那样,可以作为风险分析的一部分来执行其它操作。

多语言内容分析可以使得能够:定位钓鱼式攻击或网域嫁接攻击、定位违规网站中的品牌违规、定位诽谤网站、定位使用品牌来赚钱(通过广告、直销等)的网站。

根据分析的自动或“一键式”动作可以包括:高风险违规的自动警报;给域注册人以及给其它涉及到的各方的自动“停止侵权”通知;自动请求 ISP 以及托管公司以禁用违规网站;对回复进行监控,并且对请求自动跟进,所有在易于使用的管理系统中进行控制;自动控制域转让(将让出的那些的);IDN 和不同语言的全兼容性。

系统可以允许用户看见整个组合或者只是特定品牌或一组相关品牌或者特定国家/区域或一组国家的信息。简而言之任何过滤的信息。可以对特定品牌执行 ROA。

系统监控:(a)与品牌相关的域名,例如其中品牌名称和/或相关关键词出现的名称,包括“输入错误”、拼写错误、排字错误和/或其它语言的变化;(b)在它们的内容中提到品牌名称或相关关键词以意图出售相关产品和/或服务、出售假冒产品、欺诈或以其它方式滥用品牌的网站。

完整的品牌管理和保护可以包括:(a)对滥用品牌和/或侵犯商标的网站进行监控和打击;(b)明智地建立域组合以便防止他人窃取收入(或对由另一实体拥有的品牌货币化)以及防止品牌或商标/服务商标的稀释;(c)生成用于域名组合管理的策略,包括将可用名称的域注册优先化、放弃对品牌没有贡献的域名、将激活安全解决方案的域名优先化等。

因此,在说明性系统中,品牌保护平台可以包括:(a)组合/品牌概述展示模块(针对所有与受保护的品牌相关的域);(b)风险分析模块(针对违规域和/或违规网站);(c)数字化展示/线上展示加强模块(用于识别有潜在机会的可用域)以及与上述决策支持模块相结合的 ROA 处理,基于收集的数据分析来设置并监控以及支持新品牌发布。

在一些实施例中,品牌监控的主要焦点在被采用(已经注册、当前注册)的域名和网站上。被采用的域名被分成:附属网站、非活动网站、活动网站,活动网站可以包含以下中的一个或多个:(a)重定向到其它网站;(b)竞争使用;(c)出售冒牌货;(d)含有诽谤或诋毁或

中伤信息或者虚假或不准确信息；(e) 欺诈、网络钓鱼、网域嫁接；(f) 正当的（或合法的）不相关的使用；(g) 包含不同产品和服务（包括竞争产品和服务）的广告（例如 PPC 广告）的停放的域。

在系统对品牌进行监控之前，系统可以收集与品牌相关的数据并且对其进行分析。该过程可以被称为风险和机会分析 (ROA)。数据研究将产生以下结果：(a) 所有被采用的域以及它们的目前使用特性（即，活动的网站、品牌利用网站、欺诈、PPC 停放、重定向到其它网站等）的列表；(b) 每个网站的内容分析以及它与品牌的相关度等级；(c) 具有针对每个被采用的域的投资指数和投资分析的表格；(d) 公司拥有的域以及它们的目前使用（即，重定向到公司的活动网站之一、不活动的、重定向到 PPC 停放页面等）的列表；(e) 公司拥有的具有不正确的联系人数据的域的列表；(e) 公司拥有的没有更新的 DNS 服务器的定义的域的列表；(f) 具有主要品牌在不同国家中的搜索趋向索引的表格；(g) 被采用的域的屏幕截图（截屏或屏幕捕捉）示例，按全尺寸和 / 或按缩小版本或缩略图。可以作为风险分析、机会分析或者风险和机会分析的一部分来执行其它适当的操作。

基于研究中发现的结果，可以由系统自动进行全面分析以便：(a) 根据不同的视角推断被研究域的可用性分布，该不同的视角有：整体视角、优先域名以及高风险的域；该分析使得能够从不同的视角来评估用公司的品牌的可选注册的什么部分是由公司拥有的、被他人采用的或可用的。(b) 域组合使用，公司的域组合的使用的分布。该分析提供了根据公司的网络营销策略的公司的当前域组合的利用水平的视图。(c) 通过他人的品牌利用，包含滥用品牌的内容的被采用的域以及其它网站的使用的分布。该分析提供了对第三方利用或使用公司的品牌的水平的理解。(d) 公司在不同国家的曝光，根据搜索趋势和当前拥有的域对公司在不同的国家的曝光水平进行分析。(e) 品牌安全风险，基于研究结果对公司面临的不同的数字化品牌安全风险的总结分析。

系统可以区分以下域名列表：已拥有的、可用的、被采用的。使用不同的评分函数对每个列表进行分析，按优先级排序，单独监控每个列表并且展示相关信息。

例如，所拥有的域名信息可以包括：目前使用（域组合利用）、目前未使用、被推荐自身货币化、目前使用安全措施、指示具有不正确的联系人数据（域联系人准确性）、指示没有更新的 DNS 服务器的定义 (DNS 准确性)。基于评估算法的所拥有域名分析结果可以帮助做以下决策：(a) 处于风险的域名，需要增强的安全措施；(b) 对品牌的相对贡献，帮助决定怎么更好地利用域名以及要放弃哪些域名。

被采用的域名信息（它们被一直地或连续地或定期地监控使用的变化）可以包括：目前的使用特性、投资指数、它们中的哪一些在域中或者在内容中侵犯商标。基于评估算法的被采用域名分析结果可以帮助做以下决策：(a) 对其采取法律行动的域名；(b) 要购买的域名。

基于评估算法的可用域名分析结果可以帮助做以下决策：要注册哪些可用域。

可以使用 ROA 来建立公司的域组合管理策略：(a) 根据可用性和品牌优先级来创建要注册的域列表的注册策略；(b) 根据被采用的域的目前的使用情况和投资指数以及品牌优先级来创建要协商来收购的域名列表的收购策略；(c) 在充足的品牌或不必要的域注册的情况下创建可以从当前组合删除或者可以废弃（例如，通过使得域注册过期而没有续约来被动地）的名称列表的删除策略。

品牌数据收集可以包括收集可能需要的数据以便对于特定品牌执行风险分析处理：(a) 与商标和口号关联的品牌名称；(b) 活动的国家（例如，其中公司拥有当地的分支机构和/或当地的子公司或者当地的附属公司或者客户或者公司意图建立当地知名度或进行营销活动的目标市场的国家；或其中该品牌被销售的国家；针对每个国家，品牌的当地相关的变体以及它们的优先级；以及客户正在寻找该品牌的国家，尽管事实是公司在那里不存在）；(c) 与特定品牌相关的域名（例如，以下可能对没有由系统操作员所管理的域名是必需的：目前已知的公司的域名的列表；公司的主要活动网站的列表；应当被公司用于它的活动网站的 DNS 服务器的细节；用于电子邮件帐户的域名的列表；用于公司的域的期望的联系细节，包括（如果适用的话）子公司和国家的分支机构的细节）；(d) 与品牌相关的关键词，例如作为在品牌推广它自己的搜索引擎中使用的搜索项的关键词；(e) 竞争对手的网站列表。

在研究范围定义阶段，基于收集的数据，将通过系统来执行初始分析以便确定计划研究的范围，包括：品牌相关的域名、品牌相关的网站。

在识别品牌相关的域名时，可以考虑：(a) 命名变体，列出要被审查的名称的不同变体，其中主要包括拼写错误、输入错误、词互换、使用连字符；(b) 研究的 TLD，定义要在分析中使用的相关顶级域。函数将基于由客户提供的国家列表以及基于系统中定义的规则（例如，gTLD 应该被研究）来定义应该研究哪些 TLD；(c) 更确切地说，系统可以基于下述处理来建议一组要被搜索的附加的 TLD，该处理找出品牌的用户没有定义的相关国家（例如，利用谷歌趋势）；(d) 附加的 TLD，系统将具有一组规则并且将使用工具以提供用户可能漏掉的相关的 TLD；(e) 可以针对所有名称变体对研究的 TLD（系统可以将所有的 TLD 定义为与分析相关）的完整列表进行 ROA。

在识别品牌相关的网站时，可以考虑：(a) 违规/侵权以及竞争网站，还进行搜索来找出其中域名不包含品牌或品牌的变体的相关网站；(b) 主要品牌的搜索趋势的分析；(c) 分析主要品牌作为搜索项在不同的语言和国家中的搜索趋势，以便评估对这些品牌感兴趣的程度以及以便找出可能的侵权网站。

可以每隔 T 天进行相关网站的搜索。该搜索将基于品牌名称、相关关键词以及由用户提供给系统的其它数据。系统将使用算法对得到的网站列表进行过滤，以便优先考虑网站的风险等级。相关网站将被展示给用户，并且用户将能够对风险等级提供自己的输入。

系统可以知道哪个域名是由组织所拥有的。如果系统对组织的域组合进行管理，那么系统具有该信息，否则用户将提供列表并且系统可以通过验证注册人确实是该组织来对其进行检查。

对于不是由组织所拥有的、由分支机构进行操作的、但是具有品牌作为名称的一部分的域名：用户将能够针对每个网站来标记它是否属于已知的分支机构，并且如果是，可以选择标记以下选项之一：(a) 该分支机构有权使用品牌相关的域名和/或品牌相关的内容；(b) 公司想要接管域名，标记优选动作，即，让系统操作员负责转让处理。可以代表品牌拥有者的品牌管理者和/或其他用户（例如，法律顾问、法律部、信息技术经理、市场销售经理、知识产权 (IP) 经理、项目经理、CFO（首席财务官）等）可以做出类似的决定。例如，法律部寻找商标违规和商标违规预防措施，而品牌管理者为了公司利益指望更好地利用网络（例如，保护不受或阻止或防止商标违规、商标滥用、或者，存在可疑的商标违规的情况下或

不存在可疑的商标违规的情况下的流量窃取）。

系统可以建立它自己的“域名数据库”，以便建立并且持续地更新系统自己的与受保护的品牌相关的域名数据库。系统将拥有全球范围内注册的域的数据库，该数据库将被用于查找域名或者域名的变体是否被注册。数据库将提供用部分名称进行搜索，例如，对数据库进行搜索以找出包含品牌名称“雅虎”的域名是否存在，例如“12YahooABC.com”，以及它的变体和输入错误，例如“Yaho.com”。对于具体的 TLD，存在包含已注册域名的列表的公共数据库，但是这些数据库不提供需要的在域名之中进行搜索的搜索功能。

系统可以用抓取器在搜索网络时碰到的每个域名对该数据库不断进行更新。为此系统可以启动故意的抓取器扫描。系统可以使用递归或迭代抓取。系统可以利用学习算法来更好地按优先顺序排列列表。可以从属于同一行业的所有组织进行学习（例如，零售不同于非零售、销售不同于服务）。系统可以基于由来自同一公司的员工进行的交互来调整学习。在被采用的域名列表中，系统可以区分违规和非违规的域名。

为了打击“违规”域名、网站和网页，系统可以寻找违规域名、网站和网页之中的模式。系统追踪“违规”域名、网站和网页活动中的变化，对该变化进行分析。一旦动作是针对被采用的域名网站和网页来进行的，则系统将更频繁地对其进行监控。

系统可以启动或采用的自动化或半自动化动作的示例有：(a) 给注册人发送“停止侵权”通知；(b) 自动请求 ISP 和托管公司将“违规”域名、网站和网页禁用（关闭、脱机）；(c) 生成法律材料，生成显示或证明违规或侵权的证据。

系统将可用域的优先顺序列表展示给用户。用户从该列表中决定他想要注册哪些域。由于预算限制他可能只注册列表的一部分，然后他可以将剩余的添加到待购买域名的优先化愿望列表。系统可以对用户没有购买的可用域名进行跟踪，并且一旦其他人购买了它并且它处于使用中的话可以通知用户。

系统可以使能一个或多个进程，该一个或多个进程可以由品牌管理者、系统的操作员、法律顾问、自动或半自动的计算机化模块或者它们的组合来启动和 / 或执行。这样的进程（或“使用实例”）可以包括，例如：

(a) 建立 / 更新品牌 ROA 范围，用户提供品牌名称和相关的关键词以及相关的国家和 / 或 TLD、竞争对手数据、活动的行业、由组织所拥有的域名的列表等，用户可以在任何时候添加或改变数据，一旦 ROA 设置已完成或被更新时，系统激活 ROA 进程。

(b) 新品牌发布：系统可以帮助用户对组织打算或考虑发布的新的品牌名称的现状进行评估；系统可以为有意向的品牌创建 ROA；一旦 ROA 可用，系统可以支持用户做出品牌决策；由于结果是逐渐累积的，因此可以分成几部分来提供 ROA（例如即时结果、中间结果和最终结果）。

(c) 执行 ROA：系统可以收集相关数据、对数据进行处理以及组织以便提供详细报告、展示和警报，并协助对网站、网页和域名做决策。

(d) 持续地监控 ROA 并且对其进行更新。

(e) 作出基于 ROA 的决策，协助用户基于 ROA 结果来作决策，例如 (1) 要注册哪些可用域名，(2) 对哪些网站或网页启动法律行为，(3) 要购买哪些被采用的域名以及要分配多少预算，(4) 要增加哪些已拥有域名的安全措施，(5) 要自货币化哪些已拥有域名以及要丢弃哪些已拥有域名。

(f) 关于不同的问题或需要的动作与另一组员协商。

(g) 批准或提供意见：允许任何员工，即使是那些不是系统的直接用户的员工接收请求以批准或协商决策，并以高效的方式提供批准或协商（例如，给这样的员工展示用于快速决策的批准/拒绝界面）。

(h) 针对先前的事件检索批准/协商文件。

(i) 开始域协商，用户可以分配预算并且激活由系统进行的协商处理。

(j) 操纵购买协商，一旦客户给出命令并且分配了预算，系统可以开始协商并且用文件证明所采用的动作以及协商的当前状态，系统可以给用户发送提醒、更新和报告。

(k) 生成/更新登录页面模板，根据由系统提供的多个可能页面来生成具体品牌的登录页面，该页面可以被用于自货币化。

(l) 翻译登录页面，一旦以一种语言生成登录页面，系统可以翻译它并且生成其它语言的登录页面。

(m) 监控法律行为，对发出通知的响应和域状态进行监控，对请求提供自动跟进以及监控让出的那些人的域转让。

(n) 检测违规网站或网页中的模式，找到侵犯了品牌商标或以任何其它方式对品牌造成损害的网站或网页中的通用模式。

(o) 发现即将变成可用的域，系统每日进行检查以找出与品牌相关的即将变成可用的域，这样的域可以被优先化并且向用户展示以使得他能够在域名抢注者注册之前将这些域注册。

(p) 被采用的域的预订，随后，为了品牌拥有者的利益系统可以自动注册被预订的域。

在说明性实现中，系统可以进行品牌ROA范围的建立/更新。系统可以定义ROA处理所需的数据，其中包括行业、品牌名称、语言、变体列表、相关国家、主要公司网站和竞争对手。处理可以与现有品牌、新品牌和/或组织打算或考虑推出或采用的品牌相关。

例如，用户选择建立品牌ROA。系统请求：行业、品牌名称、相关的关键词/短语、相关语言、活动的国家或地区、其它相关的主要公司网站以及竞争对手名称、他们的品牌名称和他们的主要网站。如果品牌名称是由一个以上的词组成的，那么用户可以提供品牌名称。如果域名没有在系统中注册，那么系统请求与该品牌相关的所拥有域名的列表。用户提供他/她具有的数据。系统可以使用算法以及基于互联网的资源来建议品牌/行业相关关键词/短语/标签。系统可以展示关键词/短语的组合列表。用户可以根据建议的列表进行添加来编辑列表，并且他/她可以删除他/她之前输入的关键词。

然后，系统生成品牌名称变体的列表和要在违规网站的搜索中使用的关键词的列表。系统基于定义的规则（例如，应该被搜索的TLD、国家与TLD之间的联系等）和由用户输入的国家来生成要在分析中使用的TLD的列表。系统可以定义要被搜索的所有TLD。系统针对每个TLD来联想将搜索哪些名称变体。系统可以展示ROA设置数据的摘要。系统可以估算ROA准备好之前将花费的时间。用户选择开始ROA，并且作为响应，系统开始“执行ROA”处理。

该处理的成功标准包括，例如存储以下数据：行业、品牌名称及其结构（品牌名称由多于一个的词组成的情况下）；用于搜索违规网站的搜索关键词；品牌主要网站；语言；活动的国家；其它相关国家；竞争对手，他们的品牌名称和关联的主要网站；对于列表中的每个

TLD,要分析哪些名称变体(例如,针对所有 TLD 搜索所有变体)。然后可以开始数据收集的处理。用户可以接收用于得到 ROA 结果的时间估计。使用变体的列表来找出通过使用域名与品牌竞争的域名,而使用关键词的列表来找出违规的网站(例如,特别是关于品牌名称是诸如“Gap”之类的通用的词典词语时)。

“品牌核查”处理可以帮助用户来发布对于其组织还没有已注册的域名的新品牌。系统将帮助用户理解品牌的目前状况(即,品牌是否被广泛使用),如果需要的话找出品牌的适当的可用变体,使得可以用足够的相关的可用域名来推出品牌,以避免竞争对手或第三方将来利用品牌的风险,或者避免对已经被采用并且已经使用所考虑品牌的多个域名购买的需要。一旦选定名称,处理继续设置 / 更新品牌 ROA 范围。

例如,用户选择“新品牌推出”。系统请求以下细节 :品牌名称或多种可能变体、行业、相关关键词。用户输入细节 ;用户可能需要帮助生成关键词、帮助找出可能的名称。如果用户不能选定品牌或者选定相关关键词,那么系统将基于搜索趋势和字典生成关键词的列表。用户选择多个他 / 她想要核查的可选的品牌名称和相关关键词。系统关于所提供的品牌名称来提供以下相关信息 :可用的 / 被采用的域。用户决定品牌名称。处理继续“设置 / 更新品牌 ROA 范围”。基于上述或其它参数,品牌的列表可以按优先级排序。函数将优先考虑可用性更高的品牌,或者如果域被采用,优先考虑用于广告并且不是活动网站的那些。该处理的成功标准可以是 :品牌名称被选定。可选地,用户可能在寻找具有可用域名的品牌并且没有找到任何他喜欢的具有足够可用域的品牌,用户可以更新可选品牌、关键词等,使得系统将提供更新的排名,直到他找到适合的品牌为止。

“执行 ROA”的处理可以收集关于域名变体和相关网站的所有可得到的所需信息,使用算法对数据进行处理,对分析后的数据进行整理以用于报告生成和决策支持。处理可以利用抓取器、注册机构、注册商,并且可以有前提 :(a) 通过系统生成相关域名或由品牌所拥有的域名的列表 ;(b) 由用户生成并审核用于找出包括品牌的竞争网站的相关关键词的列表。

一旦系统中设置了执行 ROA 所需要的数据,则用户将启动 ROA 处理。提供的数据的完整性会影响分析的结果。系统应该把这一点说清楚并且在数据收集中支持用户尽可能多的输入。系统使用一组抓取器来从网页收集所需要的数据。这些抓取器需要找到相关网站和域、扫描所有内容、利用智能算法来分析它们的内容。数据收集工具可以包括 :域名注册机构 /TLD 根服务器的扫描 ;域名查询数据库的扫描 ;DNS 服务器(区域文件)的扫描 ;垂直网络抓取器和直接查询,以检索关于在相关域名的列表中的域名下活动的网站的可得到的所有所需信息 ;具有生成的关键词列表的不同的网络抓取器,以找出不在第一个列表中并且很可能在他们的域名中不包含品牌名称的违规网站或网页 ;从第三方提供者收集的统计数据和其它排名数据。

跟随之前的分析步骤,系统可以利用不同的技术、工具和方法来执行以下研究 :(a) 域名可用性 ;(b) 被采用的域分析。在域名可用性分析中,处理可以搜索相关 TLD 中变体的组,以推断哪些域被注册并且哪些域可用于注册。例如,已注册的域识别可以包括 :(A) 在研究中收集所有已注册域名的完整的 WHOIS 数据 ;(B) 识别哪些域是由公司所拥有的,以及哪些域被其它方采用 ;即使用户提供了拥有的域名的列表,但系统可以再次验证哪些域名是由公司所拥有的并且发现原始数据输入中的错误 ;(C) 在由公司所拥有的域之中,执行 :(1)

检查域名查询数据中指定的联系人并且识别具有老数据或者不正确数据的域名；(2) 对域名查询数据进行扫描以识别哪些域没有更新的 DNS 服务器的定义；(3) 检查哪些域没有在使用中以及哪些域被不正确地重定向。

对被采用域以及网络抓取过程中发现的其它网站的分析可以包括：(a) 收集（例如下载）全部的或者部分的网站 / 网页内容；(b) 使用网站 / 网页内容来识别被他人采用的具有公司品牌的域名的使用特性，识别它们是否被用于活动的网站、品牌利用网站、欺诈、PPC 停放、重定向到其它网站，并且可选地基于这些和 / 或其它参数生成损害分数或估计；(C) 通过对诸如网页排名、内部的和外部的链接、流量排名之类的不同的搜索引擎优化 (SEO) 因素的分析来生成投资指数，以评估由每个被采用域的目前拥有者进行的投资的水平。

对被采用域以及网络抓取中发现的其它网站的分析可以使用以下信息：(a) 用于识别网站的使用的网站内容，它是否有诽谤内容、它是否出售任何类型的产品或服务（与品牌相关或者不相关的）；(b) 联系人信息；(c)DNS 服务器；(d) 域名查询域信息：注册商、域状态、有效日期以及名称服务器、域名或 IP 的拥有者的联系信息、IP 和 IP 位置信息、网页服务器信息、相关域可用性、溢价域列表、DNS 名称服务器、DNS 记录；(e) 分析数据：网页排名、流量数据、流量排名、SEO 指标、搜索引擎中已收录页面的数量、反向链接数、导出链接数、它在主要索引 (leading indices) 中被注册了吗、它在社交网络和标签网站中被注册了吗、域被注册了多长时间、它被注册到什么时候、注册商来源（黑帽 / 白帽）、该网站是用哪种技术建立的（快闪，HTML 等）、Alexa 排名、子域信息。

用相关的评分函数对每个域名变体进行评分（依赖于每个域名变体所属的列表）。根据评分对列表进行排序。数据被整理使得数据将准备好被用于报告和决策支持。

ROA 会周期性地运行。每次运行新的 ROA 时，将它的结果与先前的 ROA 进行比较。变化会影响域名的分数和报告。系统会提醒用户“有意义”的变化。系统会建议用户可能的动作并且使得能够立即采取行动。

处理可以识别和 / 或对以下变化做出反应：(a) 注册人的变化；(b) 域名的注册商转让；(c) 网站的主页的显著变化。例如，从停放的域结构到更加“活跃的”网站结构的变化可能是有意义的。此外，系统可以给用户给出选项以比其他人更密切地监控特定的域 / 网站，系统将比定期的 ROA 监控更频繁地监控变化的这些域。如果可用名称变成被采用，那么显示它的目前使用。如果被采用的域名变成可用，那么显示具有价值分析的这些名称的列表，该分析可以考虑域被采用时收集的数据。可选地，系统可以在可用名称中包括通知：特定的域被采用直到预定时间前为止。对于域名抢注中的域，如果系统能够捕捉它，或者如果它被删除但是被其他人采用时通知用户。对被采用的域名的注册人的变化进行监控并且通知。

处理可以监控使用的变化以及被采用域名、网站或网页的内容的变化：从未使用到用于广告或网站、从广告到网站、内容与品牌的相关性的变化程度。每个被采用域名、网站或网页可以被如下表征：(a) 被采用域名、网站或网页对品牌的影响的分类（某些分类可以共存）（例如，侵犯商标、竞争用途、出售假冒商品、含有诽谤、欺诈 / 钓鱼网站）；(b) 被采用域名、网站或网页使用的分类（例如，登录页面、将流量引到竞争对手的 PPC 页面、活动网站）。

一旦用户标记出他感兴趣的一组被采用域名、网站或网页，那么该用户可以请求对他感兴趣的那些域名、网站或网页进行更频繁的 ROA 更新。

“作出基于 ROA 的决策”的处理可以在用户关于他的投资组合、具体的品牌和它相关的

域名做决策时支持用户，并且开始相关处理，即注册、注册人转让、域名参数更新。前提可以是 ROA 完成或者被更新。该处理可以在用户作以下决策中的任何决策时支持用户，并且提供自动化系统推荐：要注册哪些可用域名；要与哪些被采用域名、网站或网页开始协商以便购买；要对哪些被采用的违规域名、网站或网页开始法律动作；哪些域名需要更好的安全措施；怎么将拥有的未使用域名自货币化（例如，使用哪个登录页面、或者转址到哪个网站）；将哪些拥有的域名丢弃（取消续约）。

处理可以，例如：(a) 根据被采用域名、网站或网页给品牌带来多大风险来将他们按优先顺序排列；(b) 生成高风险违规的自动警报；(c) 根据可用域的潜在风险或价值来将他们按优先顺序排列；(d) 显示每个域名的使用（目前使用和 / 或历史使用）和投资指数，这有助于预测将多么容易来购买域；(e) 提供关于品牌违规的所需数据和文件；(f) 通过找出显示共同行为的违规域名、网站或网页的组来帮助决定接下来要对哪些域名、网站或网页采取法律动作（例如，用处理“打击违规网站”）；(g) 定位对于其应该采取补充调查或者法律动作的主要的域名抢注者；(h) 显示关于可用动作的信息和其它指导信息；(i) 通过展示填有相关域、网站或网页细节的标准信件或模板并且一旦批准将其发送给所有相关实体来激活或触发法律动作，例如停止侵权通知。

一旦作了决策之后，该处理使得品牌管理者能够容易地激活任何所需的处理。例如，一旦品牌管理者决定对一组可用域名进行注册，那么他将经历可能的最短处理。系统可以使用单元默认参数集。品牌管理者可以决定经历处理并且注册域名。他还可以决定将结束处理的职责委托给可以利用系统或一些系统功能的其他用户或组员。

在一些实施例中，系统可以包括可以自动充当虚拟的品牌管理者的模块，并且可以基于现实的品牌管理者或管理员预先定义的预定义规则或条件来采用一个或多个决策。例如，规则可以是：“如果系统估计可以以 240 美元以下的价格收购风险域，那么自动进行至以估算的收购价格发出收购要约”。

“协商”处理可以使得品牌管理者（或其他适合的人）能够关于可能会或者可能不会导致由系统管理的活动的任何问题与另一员工或组员进行协商。用户可以使用系统与其他员工进行协商。协商的流程不一定会导致具体的决策，例如，将名称的列表按优先级排序、对具体名称进行评估等。用户可以与是或者不是系统的用户的另一人进行协商。系统可以生成电子邮件消息，并且使得能够容易地将屏幕上显示的信息添加为报告或者图片。该消息将包含到下述页面的链接，该页面使得他能够输入简单的多选择回答和文本。系统将发送该消息。当响应被提供时系统将进行追踪并且警报通知用户该响应。如果用户选择的话系统可以发送提醒。协商流程被用文档记录并且可以根据请求被检索。

可以使用模板来完成协商请求。用户书写他想要协商什么；选择他想要与谁协商；添加 / 指向相关信息以及添加用于批准或提供意见的选项。该处理可以使得任何员工，即使是那些不是系统的用户的人也都能够接收请求来批准或协商决策并且以简单的方式来提供批准或协商。接收者可以通过邮件得到请求。消息将包含所有需要的信息。消息将包含对系统的受限访问的链接，通过该链接员工将签署他的批准或提供一些文本。签署或文本将被存储在系统中，并且系统将跟随业务流程并且生成所需的警报。

处理可以使得能够对决策批准和协商文件进行检索，例如，能够对按日期排序并且包括所有输入的备注的决策批准和所有相关协商的文件进行检索。用户可以通过决策的类型

和 / 或时间跨度和 / 或涉及的个人的 / 组织的角色和 / 或品牌和 / 或域名来进行检索。

系统可以使用处理来开始域购买协商、分配用于购买被采用的域的预算以及开始协商（自动或半自动或手动地）。用户决定购买被采用的域名，用户可以分配预算，或者可以在没有分配预算的情况下请求开始协商。通过用户、系统操作员工或通过自动模块来完成实际的协商。系统可以用文件记录动作的日期和当前状态，系统可以将自动生成的或由系统操作员工生成的提醒、更新和报告发送给用户。

系统可以针对具体语言的具体品牌或针对具体国家生成登录页面模板。登录页面可以是基于由系统提供的具有有限的应变能力的多个页面的。用户将会把与组织相关的细节放置在相关的占位符中，这些相关的细节例如品牌名称、描述、联系方式等。

系统可以翻译登录页面；一旦生成一种语言的登录页面，系统（例如，具有自动或半自动的翻译模块）可以对其进行翻译并且生成其它语言的登录页面。

系统可以监控法律动作；监控发送的通知的回复和域状态，提供自动的后续跟进请求以及监控那些让出者的域转让，支持多种语言。

处理可以检测违规网站或违规域之中的模式，可以找出侵犯品牌或商标或者以任何其它方式对品牌造成损害的网站和域名之中的通用模式。这通常可以在 ROA 被执行或者被更新之后来执行。例如，基于 ROA 中收集的数据，处理可以：找出下述域名，这些域名具有相同的（或相似的）联系人信息，或者在域名查询中类似的或反复出现的细节，或者类似的或相同的电话号码、DNS 服务器、DNS 记录、网站和 / 或 DNS 服务器的 IP 地址。处理可以检查：A 记录、MX 记录、c 名称、SOA。处理可以寻找下述域或网站，这些域或网站具有位于同一托管场 (hosting farm) 中的相同的托管服务供应商、相同的注册商（例如通常是很便宜的注册商）、相近的注册时间、相似的网站、具有不同内容的相似的页面结构，检查哪些域名被注册在相同的 ccTLD 中，检查违规域名的拥有者是否可以使用代理，即，掩盖真正拥有域名的人。处理可以将具有这些相似之处的域名归并到一起。为了进一步识别可疑的线索，收集关于国家、注册商、托管供应和 / 或 DNS 服务器的统计资料。

系统可以支持由系统管理员、品牌管理者、法律部门、IP 部门或其他适合的用户的品牌管理（或经营）。品牌管理模块可以使能够，例如：(1) 分配责任、定义 / 更新组织结构、将品牌的责任指定 / 更新给组织中特定的单元、指定 / 更新该单元中的责任人。(2) 委派品牌责任，单元的品牌管理者可以将属于该单元的一组品牌的责任委派给另一品牌管理者，该处理与分配品牌责任的处理中的相关部分类似。(3) 将品牌责任从一个单元转让给另一单元。(4) 定义 / 更新单元默认参数，单元具有针对属于该单元的所有域名的一组默认参数集，可能存在特定于 ccTLD 的默认参数，定义该组参数，例如，联系方式、DNS 服务器定义、DNS 记录。(5) 定义警报参数；给每个警报定义默认接收者、警报没有被处理的情况下所需的动作；警报将被推出在 UI 中的相关位置中，并且还将通过邮件被发送，以及根据用户的定义通过 SMS 或语音消息被发送。(6) 给单元和 / 或品牌分配预算。(7) 生成业务流程，或者定义决策 / 批准的流程；定义处理商标侵权和品牌侵权或者来自各种域或网站的对品牌的其它威胁时的业务流程。(8) 监控业务流程，一旦被激活之后监控所有定义的业务流程，给相关用户发送警报以在预定时间间隔进行他的那部分。

系统可以支持由系统管理员、品牌管理者、法律部门、IP 部门或其他适合的用户的域管理（或经营）。域管理模块可以使能够，例如：(1) 监控 / 更新 DNS 服务器记录，包括：邮件、

转发、URL、网站的IP，能够批量更新多个域或所有域。(2) 监控/更新一个或多个域名参数，例如，联系方式（行政、技术、账单）、DNS服务器定义、密码等，可选地，允许改变默认设置，或者允许不根据默认设置来改变参数，并且可选地允许对一批或一组（选择的）域进行批量动作或批处理动作。(3) 将DNS服务器数据收集器添加到属于组织并且使用系统的DNS服务器的每个域名，这可以被自动完成，对于使用消费者拥有的DNS服务器的域，系统可以允许安装DNS服务器数据收集器。(4) 隐蔽或者隐藏域细节；改变联系方式，使得它们不暴露域的实际拥有者；可选地使用域代理持有者或拥有者。(5) 域注册；激活可用域的注册；系统将使用针对单元存储的默认参数；取决于名称所属的国家开始所需的程序。(6) 激活/取消针对域名的自动域续约；在一些情况下系统可以能够自动地将域续约；在其他情况下可能不能自动将域续约，因此可以将警报发送给用户并且可以将警报显示在系统的控制面板中。(7) 生成并且操纵域续约提醒；提醒负责人对自动续约设置为“关闭”的域注册进行续约；提醒相关用户或管理者。(8) 域续约；手动地开始域名续约过程。(9) 自动域续约；系统将开始域名续约的过程。(10) 域注册商转让到系统的注册商（向内转让）；用户开始将域从另一注册商转让到新的注册商的处理；用户可能需要签署纸质文件，该纸质文件可能是以电子方式提供给他的。(11) 从系统向外的域名的向外转让；用户委托给系统（关于特定的域）；到客户帐户管理者的警报被发送；释放域名，并且根据程序提供所需的项目。(12) 域注册人转让；用户开始改变域名拥有者的处理；用户可能需要签署纸质文件。(13) 监控管理过程；取决于可能需要的国家文书，对与域名的注册、续约、注册人转让以及域名参数的改变有关的过程进行监控；确保完成了所有文书，提醒客户他们需要执行的动作。(14) 操纵管理过程；提醒并且对需要手工作业或来自用户的输入的管理过程提供帮助。(15) 生成关于组合管理过程的警报；根据在相关时间对相关用户的预先设置的定义来生成关于组合管理过程的警报。(16) 监控组合安全；系统显示根据所拥有的域名的易损性排序的所拥有域名的列表，通过下述特征来标记它们：“必须做”、“建议做”和“可有可无”；系统显示活动中的域名安全措施；用户可以决定激活/禁用服务，例如域名锁定、域名监视。(17) 执行名称监视；在注册机构和授权的DNS服务器上定期检查针对其已经激活名称监视的域名的参数的变化。(18) 查看账单信息；使得客户能够使用各种过滤和视图来查看费用，包括：订金、续约、注册、转让、一次性支付、定期支付等。

取决于特定国家中所需的程序，一些处理可能需要人工反馈或作业。用户可以启动对一个或多个域名的处理，监控处理的进展，获得提醒的警报以及获得报告。可以对一组或一批域批量进行一些处理，该一组或一批域可以是手动选择的或者可以是通过过滤或排序来选择的（例如，选择某一gTLD或某一ccTLD的所有域、或者选择将在接下来的90天到期的所有域、或者选择在过去的120天收购的所有域）。

一些程序一直需要文书工作并且取决于国家一些其它程序也需要文书工作，系统将支持所需的文书工作，包括：(a) 存储和提供空的，部分填充的表格；(b) 只要有可能，为用户填写尽可能多的细节；(c) 如果系统不能填写表格，提供选项（例如，系统会指定一个用户或系统操作员来打印表格，填写他/她可以填的，扫描并把它上传到系统，然后系统会提醒客户有表格正等着他签字以及可能有一些其它缺失的字段他/她需要填写；客户将打印该部分填充的表格、签字、扫描并上传到系统中；或者可替选的，用户将处理表格而不需要来自系统管理员的帮助）；(c) 不管怎样客户都需要打印表格、签字、扫描并上传；(d) 系统将

提供提醒直到该程序完成为止；(e) 系统将保留处理中完成的所有动作的历史并且提供检索该历史和已填好表格的功能；(f) 在一些情况下，组织中一个或多个管理者可能需要再确认或重新审批，这可以使用预定义的业务流程来完成。

系统可以分配品牌责任，可以将品牌的品牌责任分配或者更新给单元以及单元中默认的责任人，能够针对具体品牌定义负责人。每个单元可能有一个默认的参数集。

系统能够定义 / 更新组织层级的一部分，该部分与负责包括域名相关的动作的一个或多个品牌的单元相关。系统能够定义：组织中的单元、组织角色、员工和他们的组织角色以及在系统中的职责、品牌名称、权限、谁负责哪些品牌。组织可以被划分为多个单元，一个单元负责一个或多个品牌。用户将品牌的责任分配给品牌管理者。应该在组织层级中定义该品牌管理者。管理员可以定义分配给品牌管理者的权限。

系统可以使得能够将品牌责任从一个组织单元转让给另一个组织单元或者从同一单元中的一个人转让给另一个人。系统可以使得能够将品牌责任从同一单元中的第一品牌管理者委派给第二品牌管理者。可选地，组织层级编辑模块可以用于上述处理，以操纵、生成或修改：单元的层级、组织角色、组织员工（他们中的一些可能是系统用户，并且他们中的一些可能不是系统用户）、品牌以及它们与单元的关联、权限、负责品牌的人。

系统可以使得能够定义 / 更新单元默认参数集，使得能够定义 / 更新单元的所需的默认参数的集合。在理想情况下，单元负责的每个域名都将具有相同的参数集。许多组织都对不再为该组织工作的员工注册了域名，并且他们无法追踪那些人，系统防止组织做多个动作，以避免将来的问题，并且系统使得能够使用默认的域名参数以有序的方式来管理域。建议使属于具体单元的所有域名具有相同的参数集。特定的 ccTLD 可以具有不同于单元默认设置的默认的参数集。域的所有权应该属于组织，而不是属于员工或组织所有者。

当在具体的单元下注册新域名时，将使用该具体单元和 TLD 的默认参数集。用户可以改变参数。当组织开始使用系统时，用户定义默认的参数集。一旦品牌被添加到组合，执行 ROA。重要结果是把一些或全部参数与默认设置不同的那些域名标记出来。

负责域名的每个单元将具有一组默认参数。默认参数包括以下多组：(a) 联系方式、注册人姓名（拥有者）、管理联系人、技术联系人和账单联系人；(b)DNS 服务器定义；(c)DNS 记录、A 记录、MX 记录、别名记录、SOA、邮件、URL 转发、网站的 IP 等。在一些实现中，状态默认参数被锁定，并且可能不允许用户去改变它。

大部分情况下 DNS 记录定义不是基于默认值的，但是可能存在用户会想要使用主网站的 DNS 记录定义或用户注册了一批域名时的情形。用户可以选择使一些域名具有不同的参数集。用户将标记出像这样用户故意想要与默认设置不同的每个参数。一旦默认参数的列表被设置或被更新，系统将更新那些使用默认值的域名参数。在做出改变之前，所有改变都将显示给用户。用户可以决定对一些或全部域名不应用域参数的检查。注册人的变更可能需要签署表格，其它联系人的变更需要通过提供域的密码或通过点击进行改变之后从系统发送的邮件中的验证链接来额外验证。系统可以有其中定义了每个联系人的“电话本”。该联系人的所有使用指向电话本中的相关条目 (nic)。任何联系人参数的变化都将影响对该联系人的所有引用。

系统可以定义警报参数，当要发送另一个警报时，可以为每个警报定义默认接收者。

系统可以在层级的任何级中给更低的级分配预算，在一些组织中，每个用户能够定义

他的预算，在其他组织中，特定级中的管理者可以给他们的下属分配预算。系统可以允许两种方式，将预算分配给一个或多个品牌管理者或者法务人员。基于组织层级，被分配的预算用于一组特定的品牌。

系统可以生成业务流程或一连串的决策和/或批准需求来做一个具体动作。客户组织可以定义所需的程序以便执行某些决策和/或动作。该程序涉及组织角色的排序列表的批准。组织角色需要被定义在系统中，但是持有他们的员工可以不需要是系统的注册用户。系统可以支持该程序。它可以是一系列所需的数字签名（批准），或者可以涉及作决策之前的协商。系统通过提供所需的程序，警报通知和提醒员工待处理任务以及用文档记录完成的实际动作来进行支持。组织可以为由系统完成的任何动作定义任何程序。

客户管理员和/或系统管理员可以定义业务流程。协商和批准流程被用文档记录并且可以根据请求被检索。可能的决策包括，例如：域名注册；域名续约；域名丢弃（即取消续约）；包括最高金额成交的域名购买；分配来购买域名的预算；包括违规的/所拥有的/可用域名的域名和网站列表的优先级的变化；“停止侵权”动作；DRP 起诉立案；其它法律动作；新品牌推出，是否基于系统提供的 ROA 来推出具体的品牌；决定域名的自货币化。

业务流程可以具有附属于它的条件。在这种情况下只有当条件为真时才会激活业务流程。一旦业务流程被定义，相关的用例将支持该业务流程。例如，如果业务流程定义了域名的注册需要单元品牌管理者的批准，那么域名注册的激活将包括该批准。系统将支持由不是系统的用户的某人来批准。将使用组织层级来将那个人的详细信息（包括名称和电子邮件地址）定义在系统中。一旦该人的详细信息被输入，那么该人可以是任何业务流程的一部分。将以与和不是用户的某人协商类似的方式来完成非用户的批准请求。作出或批准决策的每个用户可以给该决策添加注释。处理可以利用组织层级。用户选择：哪个决策、针对哪个单元，可选地设置条件并且选择组织角色的列表。可以针对不止一个业务流程或者针对不止一个决策来设置条件。可以为多个决策定义相同的业务流程。一旦被激活，该处理可以与监控业务流程的处理相关联，并且给相关用户发送警报以在预定时间间隔或时间表进行他的/她的部分。

系统可以监控/更新由组织所拥有的域的 DNS 记录，包括：邮件、转发、URL、网站的 IP。允许批量更新。系统可以监控/更新域名参数，例如，通常为了改正域名的注册参数中发现的错误，如果需要的话检查并且更新授权的 DNS 服务器的定义以及一个或一批域名的管理联系人、技术联系人、账单联系人。这可以使得能够将域名的联系人和授权的 DNS 服务器的定义变成单元默认设置，这是可取的并且防止以后可能出现的许多问题，但是具体的组织可以决定以不同方式来行动。

对于上述处理，例如，系统显示当前的参数，标记出错误并且如果可能的话提供到默认值的改变，系统使得用户能够接受默认值并且在需要时提示用户手动操作，然后，系统使得用户能够编辑参数或者让它们保持现状以及能够将它们标记为正确。在这种情况下，将不再针对默认设置对这些参数进行核查，并且默认设置的改变不会影响它们。

系统可以允许添加 DNS 服务器数据收集器。评估域名的一部分是该名称生成的流量。对由组织所拥有的域名可以通过收集统计数据来完成这一点。用户可以允许安装统计收集器，该统计收集器可以驻留在 DNS 服务器上或者对网站进行托管的网页服务器上。这可以由于用户动作而自动完成，使得能够对流量和/或 DNS 请求收集统计数据，并且可以允许作

为自货币化的一部分来放置统计数据收集器。

掩蔽域细节的处理可以使得能够改变联系人细节，使得他们不显示真实的域拥有者。组织可能期望隐藏它与某些域名的关系。域可以被注册在代理服务提供商细节下，该代理服务提供商作为“代理”来代表真实的拥有者。这可以在允许它的 TLD 中进行。将在公共的域名查询数据中更新的细节是代理拥有者的细节，而真实拥有者的数据被单独存储。

域注册的处理可以注册可用的域名。前提条件可以包括 :单元的默认参数被设置，已经做了决策要注册哪些可用域名，所有需要的批准已经被签名。该处理的特殊情况可以是，例如由受托人注册以及掩蔽域的注册。

例如，用户搜索可用域，或者系统展示以前决定要注册的并且在需要批准的情况下被批准的域名的列表。如果在此期间一些域名不再是可用的（其他人已经注册了他们），那么这将标记给用户。用户将标记哪些域名需要被掩蔽。如果可能的话，系统将提供默认值。

用户批准默认值或者生成新的参数，或者针对以下各项选择不同的参数 :从可用的联系人列表选择联系人、从可用的 DNS 服务器选择授权的 DNS 服务器、选择 DNS 记录。系统展示关于处理的信息。如果需要填写表格，那么系统指导用户他需要做什么。系统按照该客户具有的协议来处理账单。用户决定是否要自动续约。该处理的成功标准可以包括 :域注册的管理过程已经开始，用户打印了所有所需的表格，注册开账单给客户，注册处理的状态被更新。

系统可以激活 / 取消自动域续约，或者可以改变自动续约参数。如果域拥有者希望废弃域名，那么用户将确保自动续约为“关闭”。如果用户想要确保注册将被续约，那么用户将会把自动续约设置为“打开”。在某些情况下，系统将能够自动地将域续约。在其他情况下这是不可能的，因此可以从系统发送警报给用户以处理所需的文书工作，或者发送给系统操作员，使得从客户的视角来看这将被自动完成。

续约提醒处理可以提醒责任人对自动续约被设置为“关闭”的域注册进行续约。组织定义谁将得到提醒警报。可选地，处理可以使续约提醒消息看起来像是来自组织管理者。处理还可以使得能够对自动续约被设置为“关闭”的域注册进行手动续约。

自动域续约可以使得系统能够在可能的情况下执行域名续约。这可以不需要任何客户参与。当需要手动操作时，系统可以发送邮件提醒以及控制面板警报来执行续约。

系统可以支持将域注册商转让为对本发明的系统进行操作的注册商。前提条件可以包括 :做了决策将哪些由组织所拥有并且由另一个注册商注册的域名转让给目标注册商。

域注册商转让的处理从一个 TLD 变化到另一个 TLD，因此开始处理需要什么也变化。针对每个域名单独对处理进行操纵。以清晰且简明的方式展示与对于具有相似程序的每组域名用户需要做什么有关的信息。系统可以尽可能的使处理自动化。需要被填写或者被签署的必需的表格将被展示。用户将决定他 / 她是否现在想处理它们，如果现在不想处理的话系统将稍后提醒用户这些表格。可以触发另一个处理，用于监控所有管理程序的状态并且提醒用户做他们的任务。系统将存储转让日期以及排序的客户的组织角色。

程序可能需要来自客户的一个或多个输入，例如 :提供用当前注册商的用户名称和密码、签署表格、通过他自己 / 她自己来处理它。系统可以使得用户能够阅读用于转让的指令，并且使得任务能够被用户添加和 / 或完成。

系统可以支持将域注册商从当前注册商转让出去，以将这样的域释放给不同的（外部

的）注册商。前提条件可以是：域名是由组织所拥有的并且注册到运行本发明的系统的注册商，以及已经做了决策将该域名转移给另一个注册商。

取决于国家，存在关于注册商转让的定义好的程序。系统将警报通知系统操作员，系统操作员会首先询问以查明这是组织所做的决策还是另一实体正试图劫持域名。如果这是组织决策，那么可能会询问原因。如果他／她确信组织想要将域名转移给另一个注册商，那么系统会解锁域以允许注册商转让。处理还可以允许域注册人转让，能够开始域注册人转让处理，即，将组织是当前所有者的域的所有者进行变更。

系统可以使得能够对不是即时的组合管理程序进行监控。相关程序包括域注册、域续约、注册商转让、域收购协商。系统可以针对所需的步骤提供指导、提供所需的表格、显示转让状态以及提醒客户和管理员需要采取的动作。

存在多个可能要花费几小时、几天或者几周来完成的管理程序。系统给用户提供简单的访问来看正在进行的程序的状态并且给相关用户生成警报／提醒，这些相关用户可以修改提醒的频率。警报可以包括给组织中其他员工／管理者的警报和／或当程序“卡住”时给系统管理员的警报。

这样的管理程序可以包括：用于收购被采用域的协商、包括注册在托管下的域注册、到运行系统的当前注册商的转让、域续约、DNS 定义的更新、更新联系人的更新。系统可以操纵组合管理程序，并且可以给需要人工输入或动作的管理程序进行提醒以及提供帮助。系统可以使得能够生成关于组合管理程序的警报，并且可以根据在相关时间对相关用户的预先设置的定义来发送关于组合管理程序的警报。

系统可以监控组合安全，并且可以显示所拥有的域名的安全状态以及决定需要保护措施的哪些变化。可用的保护措施可以包括，例如，名称锁定和名称监视。关于保护措施的决策基于品牌优先级、域使用（即，与重定向相对的活动的网站）以及被第三方利用的程度。对于在名称安全下被扫描的域名，系统可以显示：域名的数目、被扫描的 DNS 服务器的数目、地理分区、关于攻击的新闻、增加安全性的解释和技巧。名称监视模块可以定期检查关键域参数中没有变化并且如果出现这样的变化可以通知用户。

账单信息模块可以使得客户能够使用各种过滤和视图来查看花费的钱，包括订金和一次性支付。

系统可以包括品牌优化模块，该模块可以使能或者执行：(a) 域组合评估，用于给组织提供它的数字化组合和它的价值的总体视图；以及 (b) 自货币化模块，能够通过将拥有的未使用的或者误用的域名投入使用来使它们开始产生收入。

域组合评估模块可以给组织提供它的数字化组合和它的价值的总体视图。系统可以显示按照其对品牌的贡献值以优先级顺序排列的所拥有的域名。系统使得用户能够看见哪些域提供最大的价值以及哪些几乎没有贡献。用户可以对这些数据应用过滤。

自货币化模块使得能够利用拥有但未使用的域名，并且可选地给这些域名添加统计数据收集器。前提条件可以包括：存在已拥有未使用或者误用的域名的列表。系统可以显示分数递减的未使用域名的列表。用户将针对每个域名来决定怎么最好的使用它。选项有：例如设置登录页面（选择可用的模板或者生成新的模板并且添加相关的参数）或者转址到现有的品牌网站。

设置登录页面可能需要用户输入具体品牌和语言／国家的默认登录页面，或者从登录

页面的模板的预定义设置中进行选择。如果没有可用的登录页面，那么用户将得到消息并且可以生成一个登录页面。模板可能有以下适当位置：联系信息；产品/服务简短描述和好处；“关于我们”页面；标志；可选地，产品的照片。用户可以选择进入模板编辑器并且编辑模板或模板中的数据。

或者系统可以将域转址到目标网站，如果转址地址被定义，那么它将被使用。否则，用户会被提示输入转址地址并且被询问这是否应该是默认的。

系统可以包括历史模块，用于保持并且跟踪数据库中的所有数据以利用历史数据。该功能的一个实现是随着时间的推移保持关于风险网站的信息，使得可以提供下述报告，该报告提供关于网站的演化的信息，包括但不限于随着时间推移网站的内容中不同的关键词的使用、随着时间推移网站的主页或其它页面的带时间戳的屏幕截图、带时间戳的域名查询数据和随着时间推移域名查询中的变化、随着时间的推移在搜索引擎中的位置、随着时间的推移外部链接的数目、不同的分数时间等。在域名被删除（并且因此网站操作被终止）的情况下网站的信息也被保存在历史数据库中。稍后可以通过系统的算法来使用这样的信息，例如以确定该网站是否具有更高的机会分数，因为它之前被使用了。这样的功能在系统的所有模块中都可以是可用的，例如风险模块、机会模块、评估模块、货币化模块、分支机构模块、域管理模块等。

系统可以利用安排好的多个算法和模块来支持关于以下各项的决策：(a) 哪些被采用的域、网站和网页正在侵犯品牌或商标；(b) 要对哪些违规的域名、网站和网页开始法律动作；(c) 要注册哪些可用的域名；(d) 哪些被采用的域名要进入收购协商；(e) 怎么将未使用的已拥有域自货币化；(f) 要丢弃哪些已拥有的域名（即，它们将不被续约）；(g) 怎么处理商标违规（或品牌滥用）网站、网页和域名。

在 ROA 设置模块中，例如：用户提供品牌名称、关键词、口号、标志和其它商标。用户提供用于这些品牌的主网站。那些网站以及从那些网站指向的网站可以属于肯定列表。系统可以通过建议相关关键词或标签来提供帮助。系统生成品牌名称变体的列表（列表可以不展示给用户），使用这些品牌名称变体可以被认为是品牌名称商标侵权。

在用于发现潜在的违规域名、网站和网页并且提取他们的内容的模块中，例如：系统维护域名数据库，该域名数据库被不断更新（不同的算法）。系统将使用之前提到的域名 DB 和其它方式来找出潜在地侵犯商标和品牌的所有域名、网站和网页。在通用 TLD 中找出的所有域名将在所有其它 TLD 中被搜索。可以将这些网站展示给用户，用户可能剔除这些网站中的一些网站并且帮助系统学习“商标和品牌违规规则”。系统将使用垂直抓取器来得到违规域名、网站和网页的网站内容。可选地，系统可以从主网站内容获得关键词。系统将使用另外一个网络抓取器，该网络抓取器将使用品牌名称和关键词来搜索潜在地侵犯品牌名称和商标的网站（例如，通过对搜索引擎进行查询）。系统将使用垂直抓取器来得到潜在地违规的网站的网站内容。

在用于发现违规域名、网站和网页并且将它们按优先级排列的模块中，例如：(1) 先前步骤中提取的页面将经历以下分类：包含商标违规和品牌滥用，其中包括包含诽谤；出售假冒商品；欺诈/钓鱼网站；货币化品牌名称；基于使用类型的分类。系统可以区分合法的分支机构与违规的域名、网站和网页。对于每个违规的域名、网站或网页，系统可以区分两个方面：“从品牌偷走了”多少流量以及对品牌造成了多大损害。系统将从被分类为违规的

每个页面提取包含该违规的页面组件。这将被展示给用户，用户可以接受或者拒绝或者改变评估的风险水平。页面组件将与所有相关的数据一起被存储为一项证据。将使用评分函数对包含商标违规的网站（在域名中和/或在他们的内容中）进行评分。分数将被用于展示违规网站、网页和域名的优先化列表。系统可以识别违规的域名、网站和网页之间的模式。这将有助于对投入以打击他们的努力进行优化。

风险模块可以具有以下特性：(a) 它的输入是由品牌拥有者所拥有的域名的列表和相关数据；(b) 每个域名的排名是与域名的具体列表相关的一组评分函数（指数）的加权函数。本文中进一步讨论了评分函数。风险模块可以利用关键词建议，使得给出品牌名称以及可选地与品牌相关的附加的关键词，系统将建议更多的关键词。模块还可以使用名称变体生成器，给出品牌名称和相关关键词，将以两种方式生成相关域名：(a) 使用谷歌（或其它搜索引擎）从搜索结果生成的名称；(b) 从品牌名称和相关关键词直接生成的名称，例如，使用连字符、主要的错拼错误、“错别字”、拼写错误、诸如字母顺序变更之类的排字错误、词互换、拼写失误，找出从网络工具搜索中常见的错误，建议其它关键词，从英语音译成其他语言，将有意义的名称翻译成其他语言等。

类似地，可以进行 TLD 建议，给出由用户提供的 TLD 的列表，系统可以提供建议来添加 TLD，例如，系统可以具有关于要在 ROA 中使用的该组 TLD 的一组规则，和/或系统可以使用诸如谷歌趋势之类的工具。

风险模块还可以执行，例如：扫描网络以找出违规的网站和网页，对于每个疑似网站和网页，评估违规水平。扫描网站内容以找出该网站是否正在进行以下对客户品牌不利的任何事（竞争、销售假冒商品、含有诽谤、欺诈、网络钓鱼、网域嫁接、重定向到竞争对手、品牌的滥用等）。分析网站/网页内容以评估它的使用：活动的网站，PPC 等。分析网站/网页内容以确定 SEO 投资。比较所选择的网站页面的内容以发现它的使用中的变化。

关于域名的信息来源可以包括，例如：网络上收集的原始数据；系统的统计数据收集器，只关于驻留在利用系统的统计数据收集器的服务器上的页面和网站；例如通过使用谷歌分析从已拥有的网站生成的统计数据；基于学习的活动。当对特定用户、来自同一组织特定角色中的不同的用户、来自同一组织任何角色的不同的用户、来自属于同一国家中同一行业的不同组织的不同的用户相关时，将会收集上述的来源。

品牌名称评分函数可以帮助客户来选择新品牌名称或者注册用于目前品牌的域名。分数是基于为了注册目的相关域名的可用性或者可能被购买的域的可用性的。现有网站的评分函数的通用集可以包括，例如：(a) 域名指标；“通用名称”水平：名称与词典词语有多近，与品牌名称的“相似性度量”，与和品牌相关的关键词的预定义集合的“相似性度量”，品牌名称与变体之间的“相似性度量”，该函数测量名称变体与品牌名称有多接近。名称可能包含拼写错误、添加关键词、使用竞争对手的名字等。(b) 搜索中出现的数量；(c) 流量指标；(d)DNS 请求的数量；(e) 转换指标；(f) 使用类型指标：重定向到其他网站、PPC 停放、违规或者不相关的活动的网站；(g) 被采用的域名 -SEO 中的投资，基于：蜘蛛网视图指标，处理通过搜索引擎使用的字段：标题、描述、字数、关键词的数量；标题指标，标题与品牌及相关关键词之间的“相关性”；描述指标，描述与品牌及相关关键词之间的“相关性”；元标签指标，元标签与品牌及相关关键词之间的“相关性”;HTML 源代码指标，HTML 源代码结构适用于 SEO 需求的程度；停放指标，对于停放站点，页面结构适用于已有的停放站点结构的程度，

IP 地址是否在主要的停放站点之一的范围中 ;广告指标,基于广告的存在,数量和质量。

可以基于以下各项来确定可用域名的价值 :域名指标 ;例如“通用名称”水平,与品牌名称的“相似性度量”,以及与和品牌相关的关键词的预定义集合的“相似性度量”;过去的流量指标 ;过去的 DNS 请求的数量 ;转换指标 ;使用类型,例如在过去没有用于或用于转址或者活动的网站。可以利用使用上述评分函数的加权评分函数,以便将相关可用域名的列表按优先级排序。

网站和网页的分数可以基于 :(1) 名称指标 ;例如“通用名称”水平,与品牌名称的“相似性度量”,与和品牌相关的关键词的预定义集合的“相似性度量”;(2) 分析指标 (人气),流量排名、页面排名、在不同的搜索引擎中索引的页面的数量、外向链接和反向链接的数量、是否被注册在主要索引中、是否被注册在社交网络和标签网站中、网站被注册了多长时间并且当前注册到什么时候、黑帽 / 白帽注册商、网站使用的技术类型 (HTML,快闪等) ;(3) 基于网站结构的分析的投资指标,例如, (a) 蜘蛛网视图指标,标题、描述、关键词与元标签之间的相关性 ;(b) 字数、关键词的数量 ;(c)HTML 源代码指标,专为搜索引擎需求 ;(d) 停放指标,类似于停放的域结构,停放的域公司的范围中的 IP 地址 ;(4) 使用类型指标,例如,竞争 / 违规 / 不相关,或转址 / 登录页面 / 暂停的域 / 网站 ;(5) 广告指标,基于广告的数量以及他们与品牌和关键词的相似性。可以利用使用上述评分函数的加权评分函数,以便将被采用域名的列表按优先级排序。

除了网站和网页的上述分数之外,还可以处理以下各项 :(a) 检测并用文档记录网站内容中的商标违规和品牌滥用 ;(b) 找出违规的域名、网站和网页 (关于同一品牌以及系统中的所有品牌之间) 之间的模式,以便定位域名抢注者,找出使用侵犯品牌的一大批域名、网站和网页的一个实体 ;(c) 找出违规的域名、网站和网页的模式以便推测哪些域名在将来可能会违规并且作为“投标者”提前将它们购买。

可以基于以下各项来确定已拥有域名的价值 :组织网站中收集的流量 ;在可能的情况下使用安装在 DNS 服务器上的统计数据收集器的 DNS 请求 ;分析指标 ;“通用名称”水平 ;与品牌名称的“相似性度量”,与关键词的预定义集合的“相似性度量”;网站流传了多长时间 ;SEO 中的投资指标 ;使用类型指标 ;转化率指标。可以利用使用上述评分函数的加权评分函数,以便将相关的已拥有域名的列表按优先级排序。

为了帮助法务人员决定首先处理哪些域名、网站和网页,系统将试图找出一大批违规域名、网站和网页的拥有者 / 操作者。

一些实施例可以利用多步算法。首先,系统要求用户输入 :域、品牌、一些关键词、以及可能地它们之间的一些关系、以及可选地感兴趣的国家列表。

然后,系统可以搜索可能滥用品牌的可疑的域名 / 网站。从搜索中排除已知属于用户的站点 / 域。首先,对与输入具有最高相似性度量的域进行搜索 (由域列表管理模块提供的现有的域列表中) ;通过使用从用户收集的数据来设置 TLD ;该步骤的输出是域的已排序列表。然后,对与用户输入相关的网站进行搜索 (使用搜索引擎代理模块)。

然后,进行分数和指标计算,使用网站分析模块对在上述步骤中发现的域上驻留的网站设置分数。这些分数可以取决于之前计算的分数、网站数据 (从网站抓取模块获得的) 以及从第三方网站或其它外部资源接收的数据。

然后,可以进行排名计算和用户输出。发现的域、网站和网页将展示给用户,通过以上

确定的分数被排序，由用户在某种程度上可配置。

可选地，用户可以通过监督式学习技术来指导或协助系统。用户可以指定分类（例如，高、中、低）并且系统可以针对不同的分数来重新计算新的加权方案。对于每个域、网站和网页，用户可以获得详细信息，一些最相关分数，并且可以对他们留下反馈，然后系统可以使用这些反馈来教导不同的模块中使用的学习算法。

参照图 9，图 9 是根据本发明的一些说明性实施例的系统 900 的示意性框图图示。

系统 900 可以包括域列表管理模块 901，该模块生成并且不断刷新系统已知的所有注册的域的列表。来源可以包括区域文件、合作伙伴的数据或者自动化域名查询查询或客户定制的抓取器带来的数据。

系统 900 还可以包括相似性度量模块 902，该模块确定给定的字符串与品牌及其关键词有多“相似”；并且可以说明拼写错误、连字符、词序以及类似的扰乱。度量包括：已知的典型的输入错误、各种添加（例如添加字符或添加综合的或品牌关键词）、排列（例如内连字符）和 / 或排字错误。

系统 900 还可以包括搜索引擎代理模块 903，负责使用搜索引擎查询来找出关于品牌滥用的网站或其他相关信息。例如，产生文本语料库。文本被传递到自然语言处理分词器，该自然语言处理分词器可以删除所有“停止词”（仅用于句子结构的词语，像“这 (the)”和“和 (and)”）。从分词器的输出来计算关键词。代理包括多个谷歌和其它搜索引擎查询以及诸如谷歌趋势（或类似的）API 之类的服务的使用。

系统 900 还可以包括网站抓取模块 904，该模块从网站抓取并且取来或者阅读所有相关数据。从每个网站提取完整的 HTML 源代码。因为完整的 HTML 包含与内容不相关的不同的元素，例如样式和脚本标签等，因此这样的元素被解析并且被过滤。过滤后的内容被传递到自然语言处理分词器，该自然语言处理分词器用于删除所有“停止词”（仅用于句子结构的词语）。可选地使用网站文本直方图模块来针对每个网站生成相关词语的直方图。

系统 900 还可以包括网站分析器模块 905，该模块为给定的域 / 网站 / 网页生成一个或多个分数。这些分数可以取决于，例如：域属性（名称、TLD、域名查询、IP）；用户输入（品牌、域、关键词）；使用网站抓取模块从页面内容中提取的数据；使用搜索引擎代理模块从一些搜索引擎查询接收的数据；第三方网站通过 API 或其它接口提供有关域 / 网站 / 网页的数据；一些分数可以互相依赖。更具体的数据来源说明请参照下文。

分数可以是下列之一：抽象的整数或实数（如 158.34）、百分比 (61.5％）、现实世界中的单位（每小时 10 人次）、定性评估（高 / 中 / 低）、二进制（是 / 否）或者分类要素（停放 / 商业 / 其他）。

一些分数可能在随后的处理中具有特殊角色，例如：选择分数是用于从展示给用户的完整列表中选择最上面 N 个域的分数，默认排序分数是通过其将这 N 个域进行排序的分数（可能是同一个），UI 分数是所有要展示给用户的分数。

这些分数可以包括，例如：域相似性分数、使用免费的 MOZ API 获得的诸如 mozRank- 也被称为“域名权重”的 MOZ 数据、Alexa API、域名查询数据、主页数据、谷歌查询位置或排名、网站相关性分数。

可以用以下方式来产生网站相关性分数：(1) 网站抓取器产生基于内容的词语的直方图，每个网站被视为一个文本语料库；(2) 产生向量空间模型，即具有 TF-IDF（术语频

率－倒排文档频率）分数的术语文档矩阵；使用文档查询模型产生特征空间；用作特征的查询包括：例如，品牌名称查询和品牌关键词查询。

这些分数可以包括，例如：相关性分数、人气分数、投资分数、损害分数（“RPID”分数）。可以基于多个子分数来计算每个分数。

例如，可以基于以下各项来确定相关性分数：域的相似性、网站中关键词的出现（标题、标签和文本之间分离）、元标签、导入链接（基于搜索引擎数据）、关键词平衡。

可以基于以下各项来确定人气分数：来自流量测量网站的数据、来自流量估算网站的数据、网页排名数据、搜索引擎结果和/或排名、域的通用性如何、重要的导出链接、导出链接到品牌拥有者网站、用于投资者关系或其它适合的网站或页面的导出链接。

可以基于以下各项来确定投资分数：已知的拥有者身份、域在域名交易市场的价格、搜索引擎优化(SEO)中估算的投资、使用的技术（复杂且昂贵的、或简单且廉价的）、域注册日期、域有效日期、网站类型（例如静态、重定向、其他）。

可以基于以下各项来确定损害分数：否定词、竞争对手的名称或链接、拼写错误、在线商务、停放站点、存在广告、不当的业务、品牌利用、品牌滥用、存在MX（邮件服务器）记录、重定向到竞争对手的网站。

用于生成上述分数的数据源可以包括例如：来自相似性功能模块(SFM)的数据、来自搜索引擎代理模块(SEAM)的数据、来自网络抓取模块(WCM)的数据、来自相关网站的API或自动机器程序使用的数据、来自关于域名的相关注册机构的域名查询查询的数据、来自相关的词典文件（例如，美国英语）的数据。

抓取器可以针对每个TLD来创建域名数据库。域名的列表仅对新的TLD可用。对于发现的每个域名，系统将检查具有所有不同TLD的域名是否存在。对于具有与特定品牌相关的活动网站的被采用的域名，可以使用多个等级：得到主页、得到完整的网站内容、经由导出链接得到页面。可选地，注册机构接口可以负责与所有域注册机构自动连接。

系统可以被实现为提供高性能和可扩展性的网页服务的集合。使用SOA架构基础来部署服务。网页服务子系统的示例包括：任务管理器、搜索引擎门户、账单结算服务、域聚合器、排名收集器、域名查询和区域文件取回器。这些子系统或模块可以通过有担保的完全验证的网络服务调用来通信。展示层可以包括能够通过访问相同资源并且执行相同功能的相同的网络服务来与其它子系统进行通信的网络客户端、智能电话客户端和平板电脑客户端。

该架构通过提供在不同的网页服务器上部署服务的能力而使得能够性能改进。服务器组件本身也可以被部署在不同的服务器上。SOA架构提供了易于采用客户端的数据，并提供了高扩展性。例如，可以添加多个网页服务器来支持越来越多的用户。每个网络实例上可以使用粘滞会话(Sticky session)。

数据库被设计在分区架构中。每个分区将处理一组不同的ROA和使用字母规则的用户。该架构通过提供在相同的服务器上多次部署相同的服务的能力而使得能够性能改进。

数据恢复能力：系统可以具有用于数据恢复目的的等效数据中心。如果一级数据中心停止响应，负载均衡路由器可以将用户指向二级数据中心。两个数据中心的存储之间应该存在连续反响。

参照图10，图10是根据本发明的一些说明性实施例的系统1000的示意性框图图示。系

统 1000 可以包括多个客户端设备，例如，计算机 1001、平板电脑 1002 和智能电话 1003（可以使用其它适合的电子设备），其可以通过无线和 / 或有线通信链路（例如，通过互联网 1005，通过 HTTP 或 HTTPS 连接）与一个或多个网页服务器 1011-1012（或一批或一组网页服务器）进行通信，可选地利用负载平衡器 1015 来路由通信到特定的网页服务器。网页服务器 1011-1012 可以使用 API 1020 来与一个或多个平台服务 1030 接口，例如，业务逻辑模块 1040、应用服务 1050、数据服务 1060。可选地，可以使用对象关系映射 (ORM) 和 / 或直接访问层 (DAL) 框架 1070 来与应用程序数据库 1071 和 / 或数据仓库 1072 连接。

业务逻辑模块 1040 可以包括，例如 :任务管理器、算法调谐器、用户管理和角色模块、自货币化模块、通知和消息传送模块、管理模块、组合管理模块。

应用服务 1050 可以包括，例如 :域聚合器服务、算法服务、ROA 服务、HTML 分类器、结算服务。

数据服务 1060 可以包括，例如 :排名收集器服务、网络抓取器、域名查询服务、搜索引擎门户服务、区域文件取回器服务。

在说明性实现中，系统可以包括下述层 :(1) 展示 :从该层执行所有输入和数据处理。该层包括都使用主要由文件共享业务逻辑提供的同一 API 的网络客户端、手机客户端和平板电脑客户端。(2) 业务逻辑 :为客户端应用程序提供业务服务。展示层将从这一层消耗所有它的服务。(3) 应用服务 :提供系统的后端的一组服务。这些服务将主要被 ROA 服务消耗。(4) 数据服务 :主要从第三方和互联网将相关数据收集到系统中的一组服务。(5)DAL :与数据库接口的数据 ORM 服务器。大部分数据操作（插入、删除、更新和视图）应该在这一层完成。在某些情况下，这一层还将从数据库激活程序。(6) 存储 :代表平台的数据库，可能有多个数据库，例如，服务生产环境，以及用于商业智能 (BI) 的目的。可以通过使用报告服务模块将报告保持在生产数据库服务器上。

本发明的一些实施例可以包括用于查找、标记和分析由品牌拥有者的授权的分支机构经营的网站的方法、系统和 / 或模块。许多组织拥有大量的分支机构（有时也被定义为合作伙伴、业务合作伙伴、经销商、分销商等），这些分支机构可以被允许向公众或其他商家出售或提供该组织的产品和 / 或服务。考虑到这一点，这样的分支机构实体可能被给予权利来特定使用品牌，例如，在他们的网站的内容中使用品牌、使用标志以及有时甚至在域名中使用品牌。不同的组织对于他们的分支机构使用他们的品牌和商标有不同的政策。

当品牌监控和保护系统进行分析时，除非组织拥有所有分支机构的域名的列表并提前将其提供给系统，否则系统最初可能会将这些网站（分支机构实体的）看作是对品牌的潜在风险。由于分支机构的数量可能会很多，因此组织可能不容易检索关于他们的域名的信息，而且很多时候他们使用的域名可能会改变，这可能会对组织监控这些分支机构的使用造成问题。此外，分支机构可能被终止，但他们可能会继续进行未经许可的品牌的使用，从而给组织造成更大的问题。

为了解决这个问题，申请者已经确定本发明的系统可以提供下面的解决方案。组织可以利用系统来给每个分支机构创建和 / 或提供包括“证书”的验证包。该证书可以是基于由系统提供的需求编码的一段代码，其必须被结合在分支机构网站的主页（或不同的页面）中或者网页服务器上。每个编码的证书是针对每个分支机构创建的，并且每个编码的证书具有对该分支机构来说和 / 或对被该分支机构操作的具体网站来说是独特的代码（例如，

每个分支机构和/或每个由分支机构操作的网站和/或每个由分支机构使用的域的独特的证书)。如果分支机构有一个以上的网站,那么针对该分支机构的这种额外的网站可以生成额外的独特证书。

当系统发现一个网站是可疑的风险时,它会在该网站的代码中寻找证书。如果找到独特的代码,那么该网站被标记为分支机构网站。然后用户将能够通过分支机构模块来监控该网站。可以通过系统以与评估模块类似的方式对所有分支机构的网站进行分析,并且使得用户能够得到每个分支机构网站对品牌的相对贡献的分析。

用户(品牌拥有者)可以给分支机构定义限制条件。例如,用户可以定义不允许分支机构使用它操作的域名中的品牌名称。如果发现分支机构网站违反了限制,那么在分支机构模块中它将被标记在“违规的分支机构网站”部分下。该模块包括类似于系统的停止侵权工具的警告通知部分,致力于将警告和“停止侵权”通知发送给违规的分支机构。

如果系统在多于一个的网站中发现相同的代码,那么意味着代码被复制。系统将会把具有相同代码的网站标记为“疑似违规网站”。用户可以定义给相关分支机构的自动通知以检查和解决问题。如果分支机构报告网站之一不属于分支机构的组织,那么用户将能够将该网站标记为风险并且自动发送新的代码给分支机构以用于批准的网站中。如果分支机构报告对由分支机构的组织所拥有的第二网站请求额外的代码,那么用户可以请求给该分支机构自动发送额外的代码以用于额外的网站。

分支机构模块还包括初始实现部分,用户可以将分支机构的列表(包括他们的电子邮件地址)上传或者输入到该部分。用户能够自动生成并且通过电子邮件或普通邮件给多个分支机构发送“证书需求通知”。系统将为每个分支机构自动生成独特的证书,并且可以将该独特的证书附加到通知。用户能够编辑通知的文本。

在一些实施例中,可选地,每个独特的证书可以具有(或者可以关联有)有效期限(例如,从证书发放开始的365天或180天),这可以由品牌拥有者预先设置,并且可以被嵌入和/或编码到独特的证书中。发现并且分析这样的证书的分支机构模块可以考虑每个证书的有效期限。过期的证书可以被视为证书不存在,或者,可以以不同的方式处理(例如,通过给品牌拥有者示出过期证书的列表并且使得品牌拥有者能够采取进一步的措施)。在一些实施例中,系统可以以不同方式进行处理,例如,最近过期的证书(例如,一周以前,可能由于忘记更新证书)或者在较远的过去过期的证书(例如,两年前,可能是由不再是活动的或者不再是品牌拥有者的授权分支机构的实体)。

可以通过适当的硬件组件和/或软件模块的组合,使用服务器或多个服务器、计算机或计算机化设备、工作站等来实现本发明。

本发明可以被实现为计算机化系统,该计算机化系统可以包括:例如,处理器、CPU、内存单元、存储单元、数据库、输入单元(键盘、鼠标、小键盘、触摸屏、触摸板)、输出单元(屏幕、触摸屏)、有线和/或无线收发器或调制解调器或网络接口卡、电源、操作系统、驱动程序,一个或多个应用等。

可以通过使用硬件组件或者通过使用非“纯软件”实现或者通过不是“纯软件”且不是“本质上软件”的实现来实现一些实施例。一些实施例可以包括用于实现或实施本文中描述的操作的硬件组件(例如,计算机、服务器、存储设备、内存设备、处理器等)。一些实施例可能影响真实世界,和/或可能对真实世界产生影响,因为它们可以例如通过停止或减少假

冒商品或假货的出售或分发来使品牌拥有者能够保护其品牌不被滥用。一些实施例可以给技术问题提供技术解决方案，和/或可以给科学技术问题提供科学技术解决方案，例如，如何有效地和/或自动地检测、停止和/或减少品牌名称的滥用、在线和/或离线。

上述特征中的一些特征可以是可选的，并且不一定被包括在本发明的所有实施例中。特征可以被结合或修改以达到期望的结果。

利用诸如“处理”、“电脑运算”、“计算”、“确定”、“建立”、“分析”、“检查”等的术语的本文中的讨论可以指的是计算机的操作和/或处理、运算平台、计算系统或其它电子计算设备，它们将表示为计算机的寄存器和/或内存中的物理（例如电子）量的数据操纵和/或转换成类似地表示为计算机的寄存器和/或内存或可以存储指令以执行操作和/或处理的其它信息存储介质中的物理量的其它数据。

本发明的一些实施例可以采取完全硬件实施例的形式、完全软件实施例的形式或者包括硬件元件和软件元件的实施例的形式。本发明的一些实施例可在软件、固件、常驻软件、微码、可以由用户下载和/或安装的应用程序、可以在浏览器中运行的应用程序、客户端应用程序、服务器端应用程序、客户端-服务器应用程序等中来实现。本发明的一些实施例可以采取计算机程序产品的形式，该计算机程序产品从计算机可使用或计算机可读介质可访问，该计算机可使用或计算机可读介质提供用于通过或与计算机或任何指令执行系统连接来使用的程序代码。例如，计算机可用或计算机可读介质可以是或者可以包括下述任何装置，该装置可以包含、存储、通信、传播或传输用于通过或与指令执行系统或设备连接来使用的程序。例如，可以使用机器可读介质或制品来实现本发明的一些实施例，该计算机可读介质或制品可以存储指令或一组指令，如果通过机器来执行，该指令或一组指令使机器（例如，计算机或电子设备）执行本文中描述的方法和/或操作。

本发明的一些实施例可包括或可利用：例如，处理器、中央处理单元(CPU)、数字信号处理器(DSP)、控制器、集成电路(IC)、内存单元、存储单元、输入单元、输出单元、有线和/或无线通信单元、操作系统、以及其它适合的硬件组件和/或软件模块。

一些实施例可被实现为或者利用用于智能电话或平板电脑或便携式计算设备的应用程序或“app”，其可以从“应用商店”或应用的网上市场下载和/或安装到这样的电子设备上。

在一些实施例中，术语“网站”和“域”可以是可互换的，使得例如，本文中所描述的关于域的操作可以被应用到网站，和/或反之亦然，使得本文中描述的关于网站的操作也可以被应用到域。在一些实施例中，术语“网站”可以包括网页，并且可以可选地包括社交媒体网站或社交网络中的实体（例如，人、公司、法律实体）的简况或页面。

本文中参照本发明的一个或多个实施例所描述的功能、操作、组件和/或特征可以结合或者可以与本文中参照本发明的一个或多个其它实施例所描述的一个或多个其它功能、操作、组件和/或特征结合来使用。

虽然本文中已经说明和描述了本发明的某些特征，但对于本领域的技术人员而言可以出现许多修改、替换、变更和等同物。因此，权利要求意图覆盖所有这些修改、替换、变更和等同物。

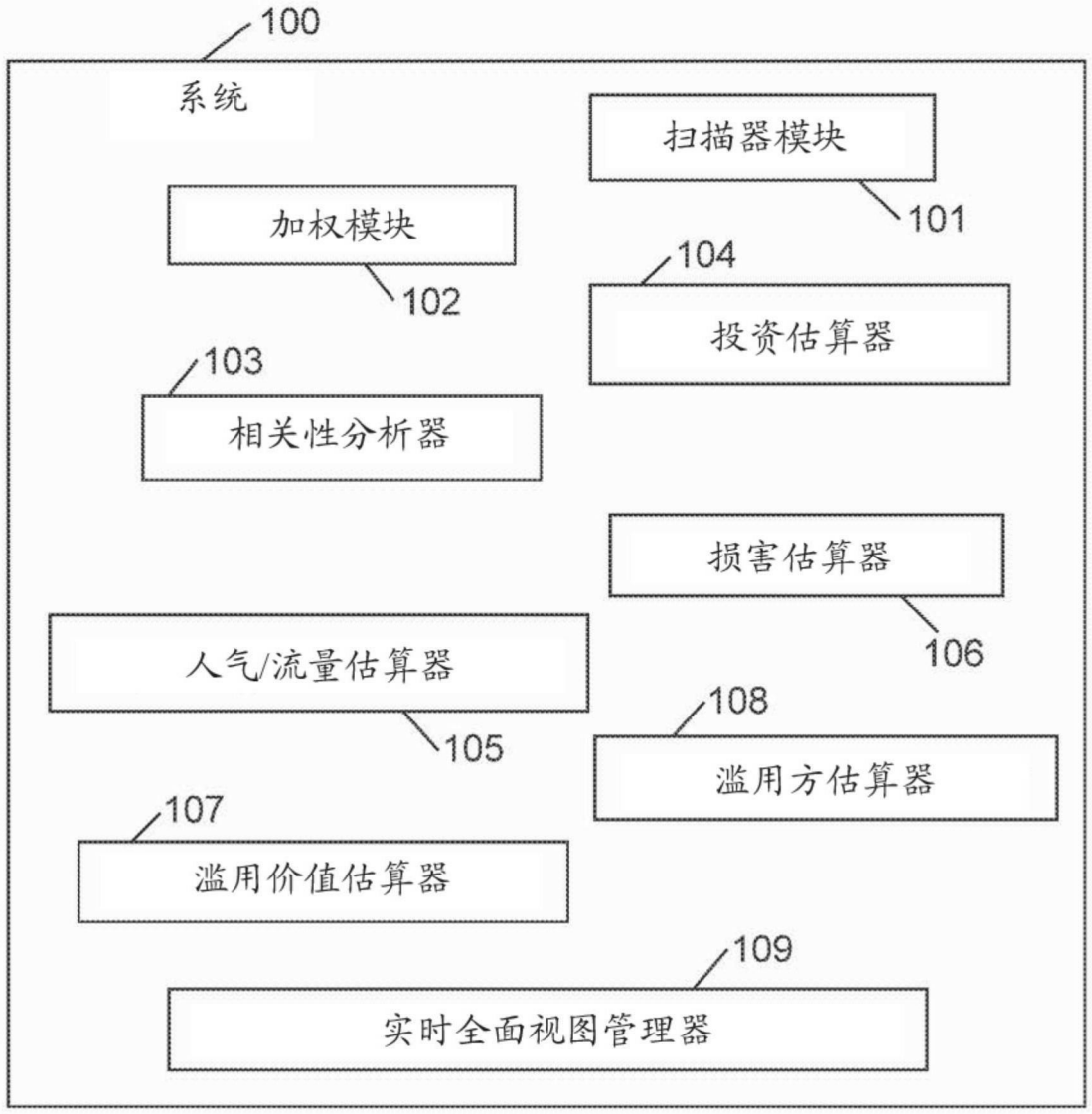

100
系统
扫描器模块
101
加权模块
102
104
投资估算器
103
相关性分析器
损害估算器
106
人气/流量估算器
105
108
滥用方估算器
107
滥用价值估算器
109
实时全面视图管理器

图 1

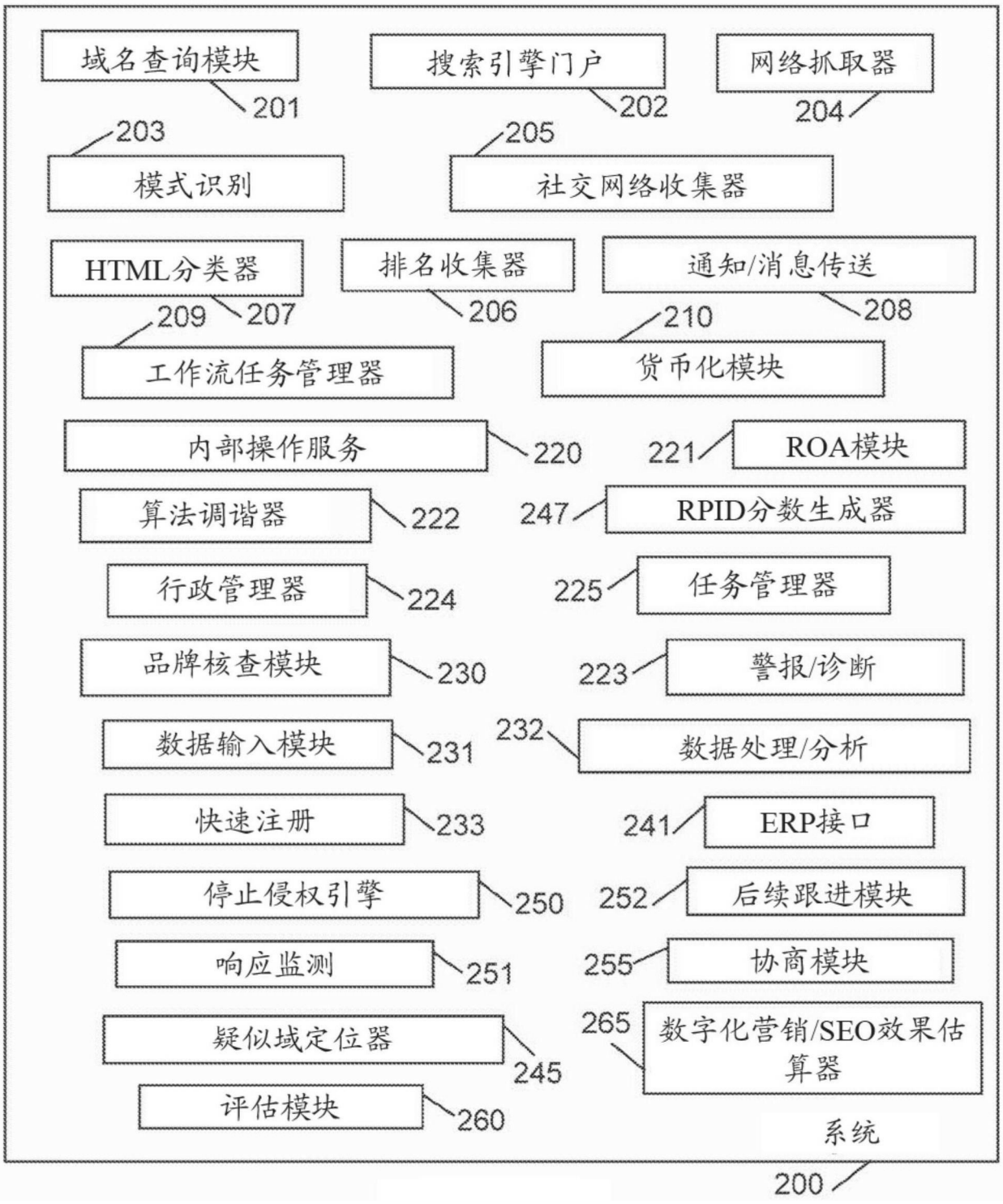

域名查询模块
201
搜索引擎门户
202
网络抓取器
204
203
模式识别
205
社交网络收集器
HTML分类器
209
207
排名收集器
206
通知/消息传送
208
210
工作流任务管理器
货币化模块
内部操作服务
220
221
ROA模块
算法调谐器
222
247
RPID分数生成器
行政管理器
224
225
任务管理器
品牌核查模块
230
223
警报/诊断
数据输入模块
231
232
数据处理/分析
快速注册
233
241
ERP接口
停止侵权引擎
250
252
后续跟进模块
响应监测
251
255
协商模块
疑似域定位器
245
265
数字化营销/SEO效果估算器
评估模块
260
系统
200

图 2

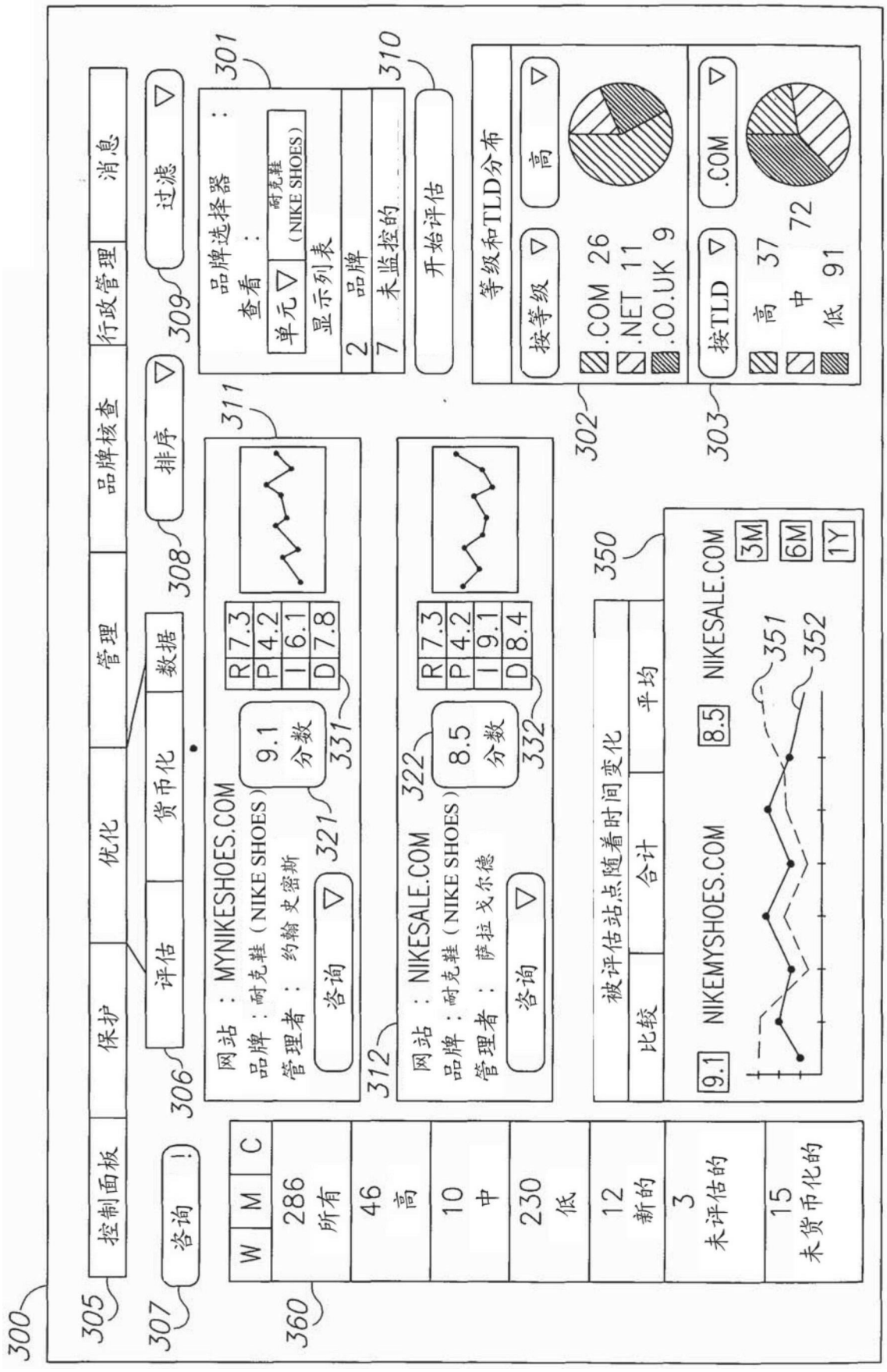

300
控制面板
保护
优化
管理
品牌核查
行政管理
消息
305
咨询 !
307
W M C
286 所有
46 高
10 中
230 低
12 新的
3 未评估的
15 未货币化的
360
评估
货币化
数据
306
网站 : MYNIKESHOES.COM
品牌 : 耐克鞋 (NIKE SHOES)
管理者 : 约翰 史密斯
咨询
321
9.1 分数
331
R 7.3
P 4.2
I 6.1
D 7.8
308
排序
311
网站 : NIKESALE.COM
品牌 : 耐克鞋 (NIKE SHOES)
管理者 : 萨拉 戈尔德
312
322
8.5 分数
332
R 7.3
P 4.2
I 9.1
D 8.4
咨询
309
过滤
品牌选择器 :
查看 :
单元
耐克鞋 (NIKE SHOES)
显示列表
2 品牌
7 未监控的
301
310
开始评估
等级和TLD分布
按等级
高
.COM 26
.NET 11
.CO.UK 9
302
按TLD
.COM
高 37
中 72
低 91
303
被评估站点随着时间变化
比较
合计
平均
350
9.1 NIKEMYSHOES.COM
8.5 NIKESALE.COM
3M
6M
1Y
351
352

图 3

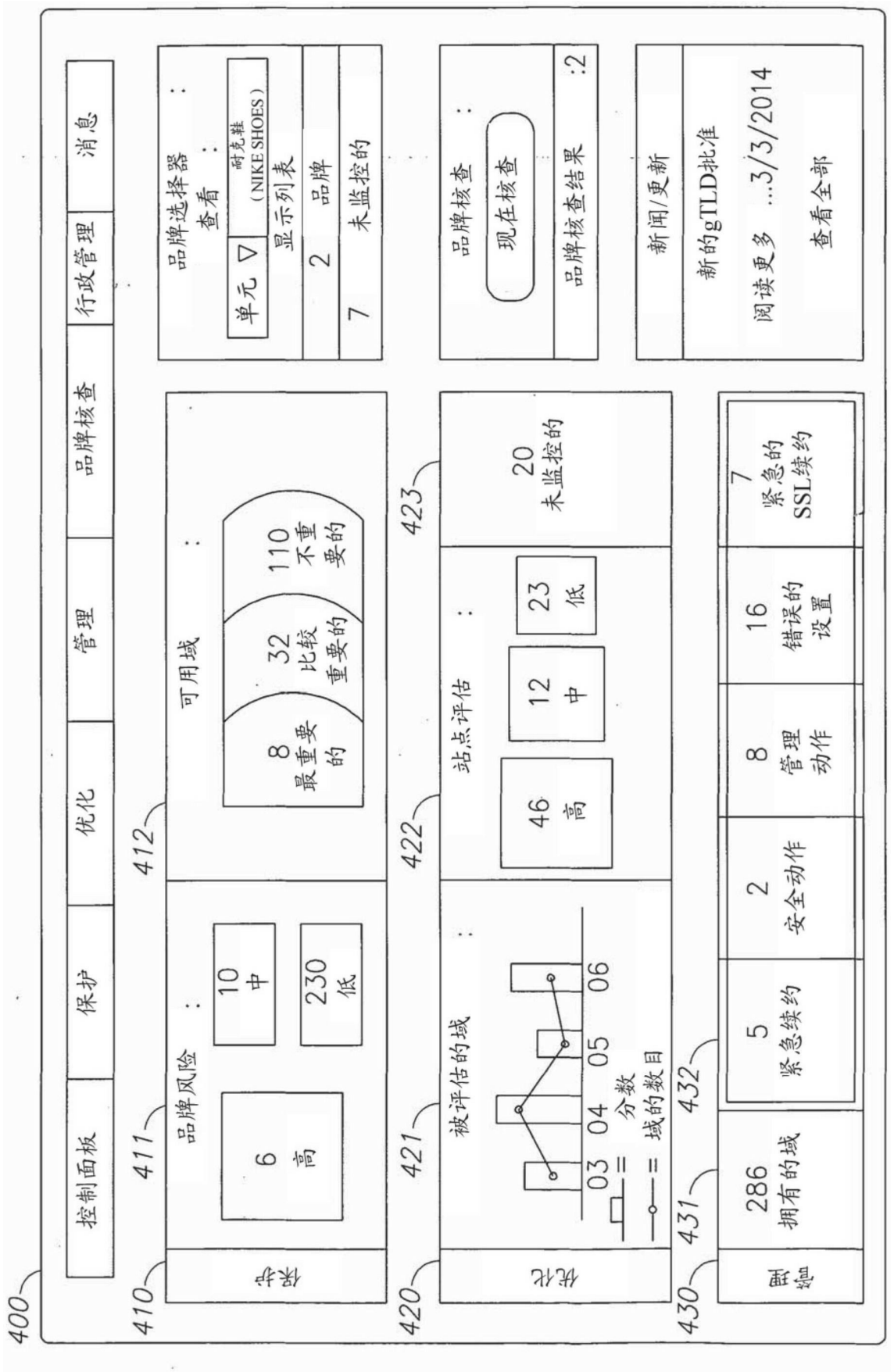

400
控制面板
保护
优化
管理
品牌核查
行政管理
消息
410
概述
411
品牌风险 :
6 高
10 中
230 低
412
可用域 :
8 最重要的
32 比较重要的
110 不重要的
420
状态
421
被评估的域 :
03 04 05 06
分数
域的数目
422
站点评估 :
46 高
12 中
23 低
423
20 未监控的
430
威胁
431
286 拥有的域
432
5 紧急续约
2 安全动作
8 管理动作
16 错误的设置
7 紧急的SSL续约
品牌选择器 :
查看 :
单元
耐克鞋 (NIKE SHOES)
显示列表
2 品牌
7 未监控的
品牌核查 :
现在核查
品牌核查结果 :2
新闻/更新
新的gTLD批准
阅读更多 ...3/3/2014
查看全部

图 4

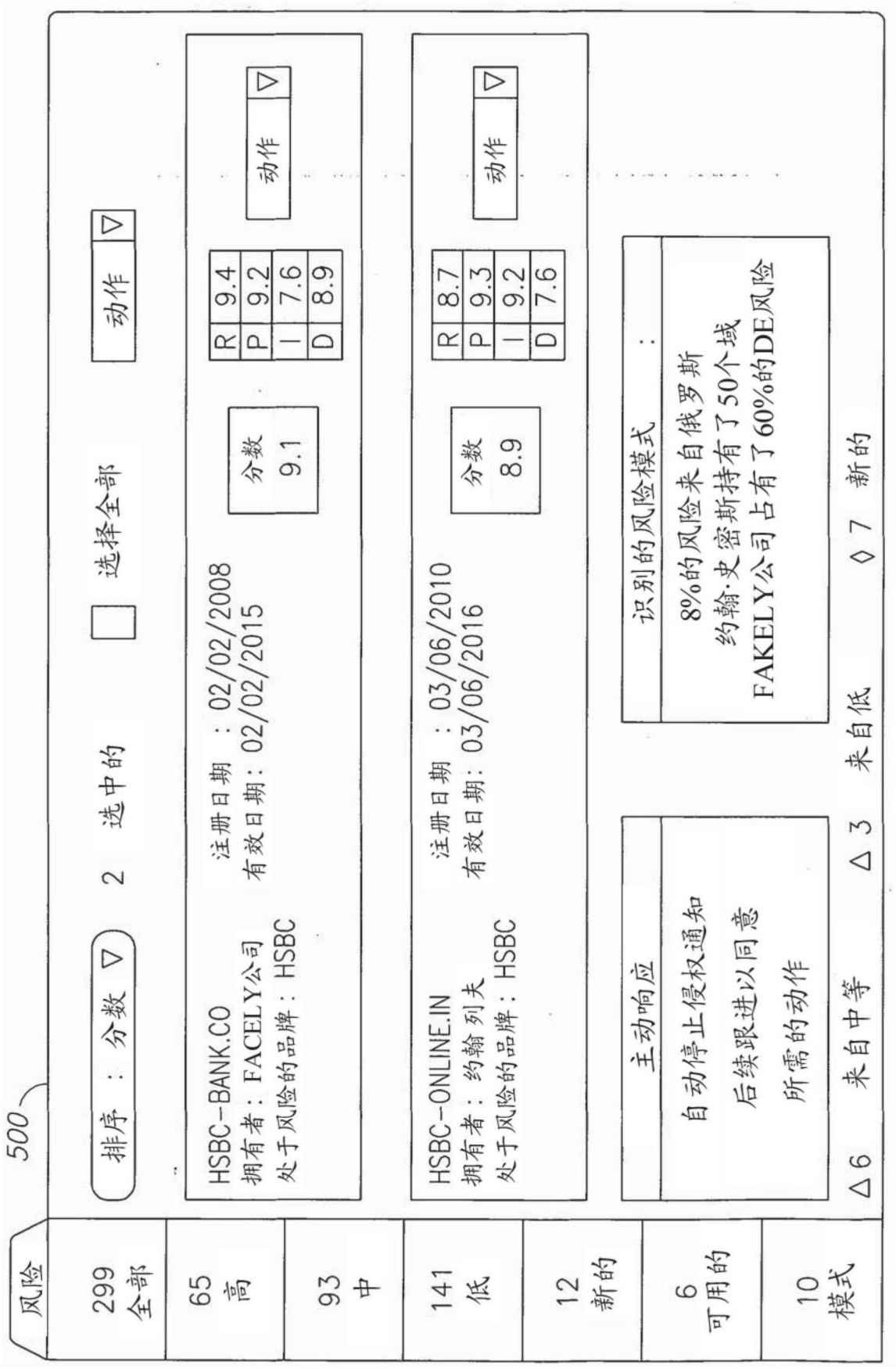

500
风险
299 全部
65 高
93 中
141 低
12 新的
6 可用的
10 模式
排序 ： 分数
2 选中的
选择全部
动作
HSBC-BANK.CO
拥有者： FACELY公司
处于风险的品牌： HSBC
注册日期 ： 02/02/2008
有效日期： 02/02/2015
分数 9.1
R 9.4
P 9.2
I 7.6
D 8.9
动作
HSBC-ONLINE.IN
拥有者： 约翰 列夫
处于风险的品牌： HSBC
注册日期 ： 03/06/2010
有效日期： 03/06/2016
分数 8.9
R 8.7
P 9.3
I 9.2
D 7.6
动作
主动响应
自动停止侵权通知
后续跟进以同意
所需的动作
识别的风险模式 ：
8%的风险来自俄罗斯
约翰·史密斯持有了50个域
FAKELY公司占有了60%的DE风险
Δ 6 来自中等 Δ 3 来自低 ◊ 7 新的

图 5

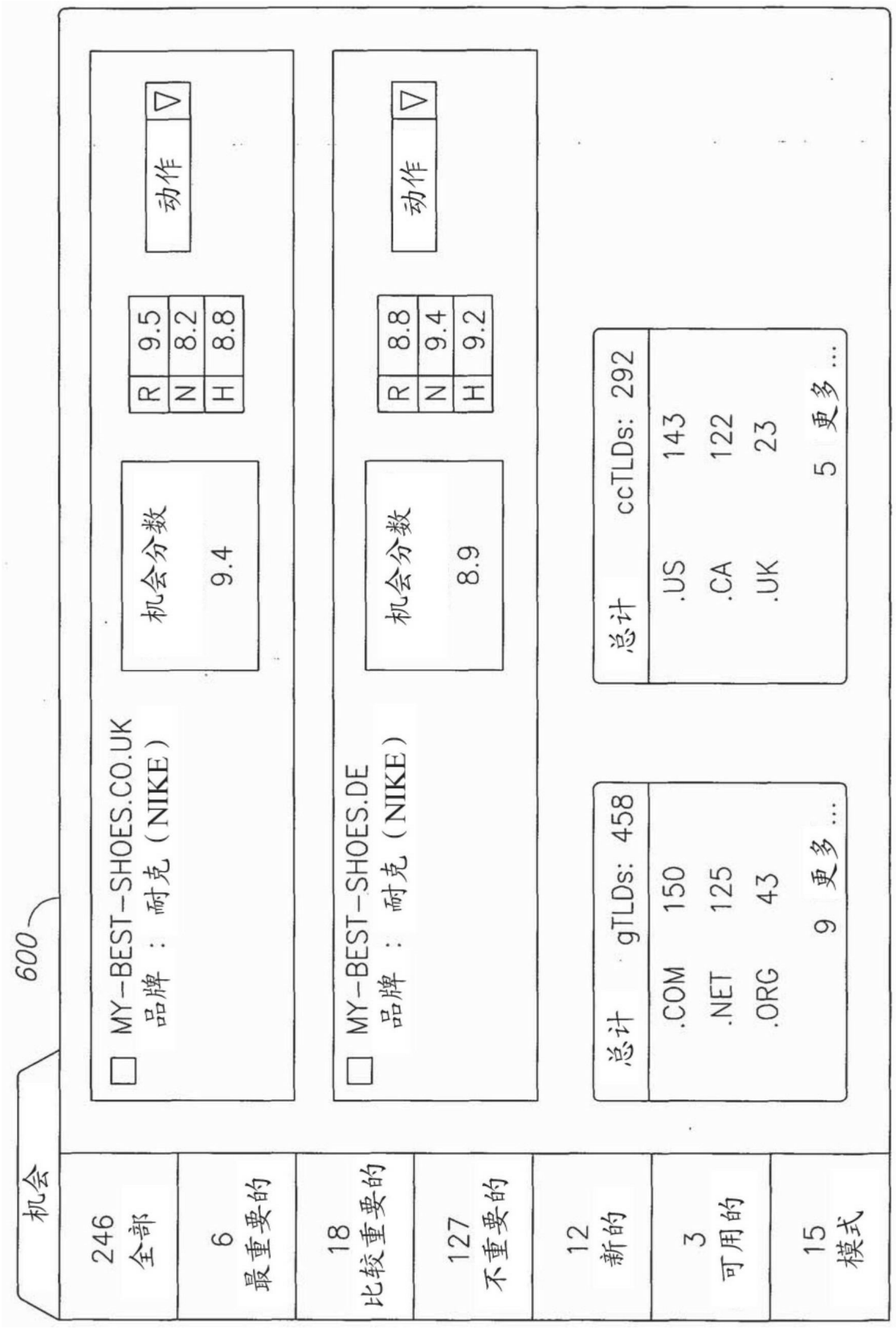

600
机会
246
全部
6
最重要的
18
比较重要的
127
不重要的
12
新的
3
可用的
15
模式
MY-BEST-SHOES.CO.UK
品牌 : 耐克（NIKE）
机会分数
9.4
R 9.5
N 8.2
H 8.8
动作
MY-BEST-SHOES.DE
品牌 : 耐克（NIKE）
机会分数
8.9
R 8.8
N 9.4
H 9.2
动作
总计 gTLDs: 458
.COM 150
.NET 125
.ORG 43
9 更多 ...
总计 ccTLDs: 292
.US 143
.CA 122
.UK 23
5 更多 ...

图 6

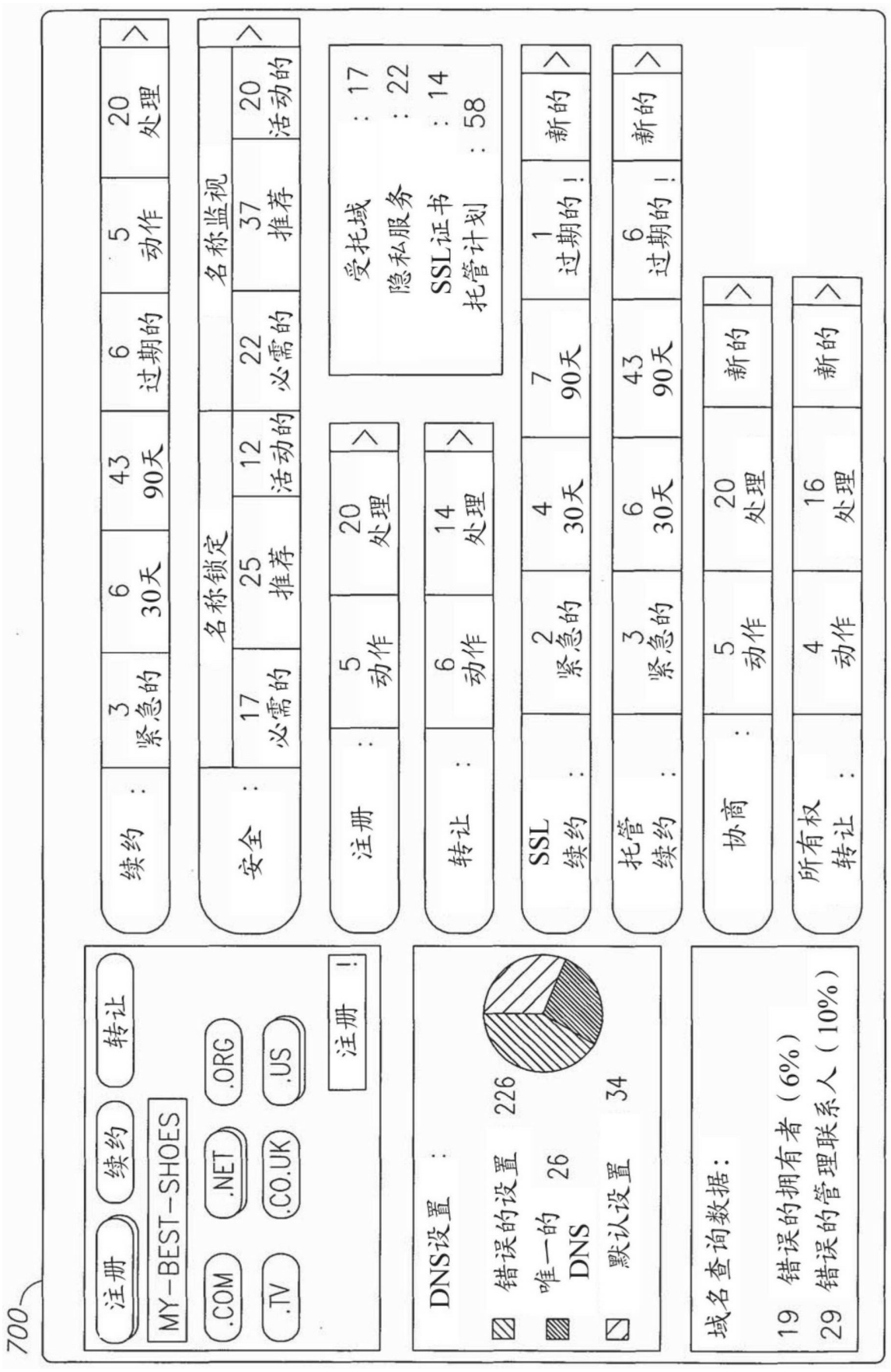

700
注册
续约
转让
MY-BEST-SHOES
.COM
.NET
.ORG
.TV
.CO.UK
.US
注册 !
DNS设置 :
错误的设置 226
唯一的 DNS 26
默认设置 34
域名查询数据:
19 错误的拥有者（6%）
29 错误的管理联系人（10%）
续约 : 3 紧急的 | 6 30天 | 43 90天 | 6 过期的 | 5 动作 | 20 处理
安全 : 17 必需的 | 名称锁定 25 推荐 | 12 活动的 | 名称监视 22 必需的 | 37 推荐 | 20 活动的
注册 : 5 动作 | 20 处理
转让 : 6 动作 | 14 处理
SSL 续约 : 2 紧急的 | 4 30天 | 7 90天 | 1 过期的 ! | 新的
托管 续约 : 3 紧急的 | 6 30天 | 43 90天 | 6 过期的 ! | 新的
协商 : 5 动作 | 20 处理 | 新的
所有权 转让 : 4 动作 | 16 处理 | 新的
受托域 : 17
隐私服务 : 22
SSL证书 : 14
托管计划 : 58

图 7

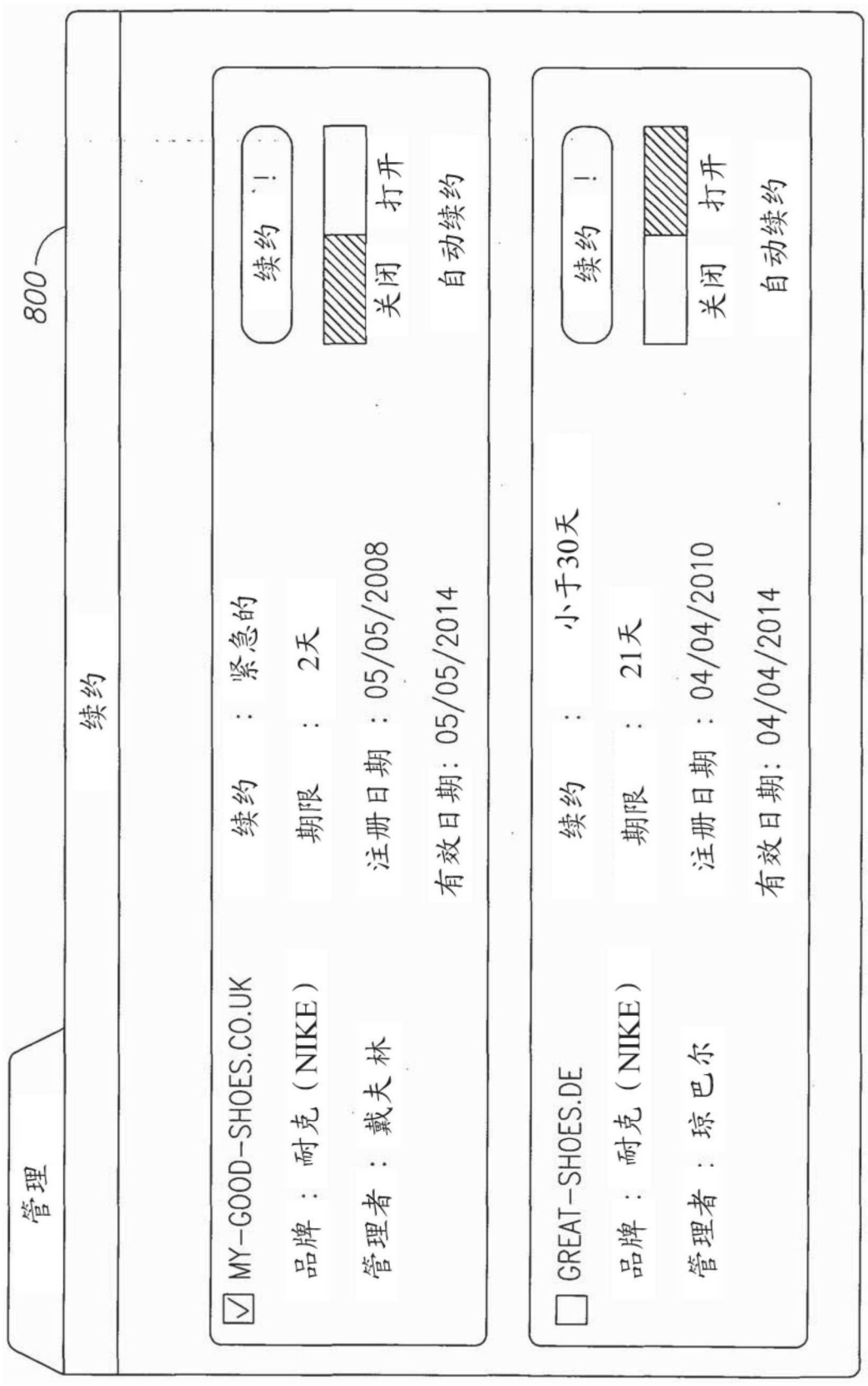

800
管理
续约
☑ MY-GOOD-SHOES.CO.UK
续约 : 紧急的
续约 !
品牌 : 耐克（NIKE）
期限 : 2天
关闭 打开
管理者 : 戴夫 林
注册日期 : 05/05/2008
自动续约
有效日期: 05/05/2014
☐ GREAT-SHOES.DE
续约 : 小于30天
续约 !
品牌 : 耐克（NIKE）
期限 : 21天
关闭 打开
管理者 : 琼 巴尔
注册日期 : 04/04/2010
自动续约
有效日期: 04/04/2014

图 8

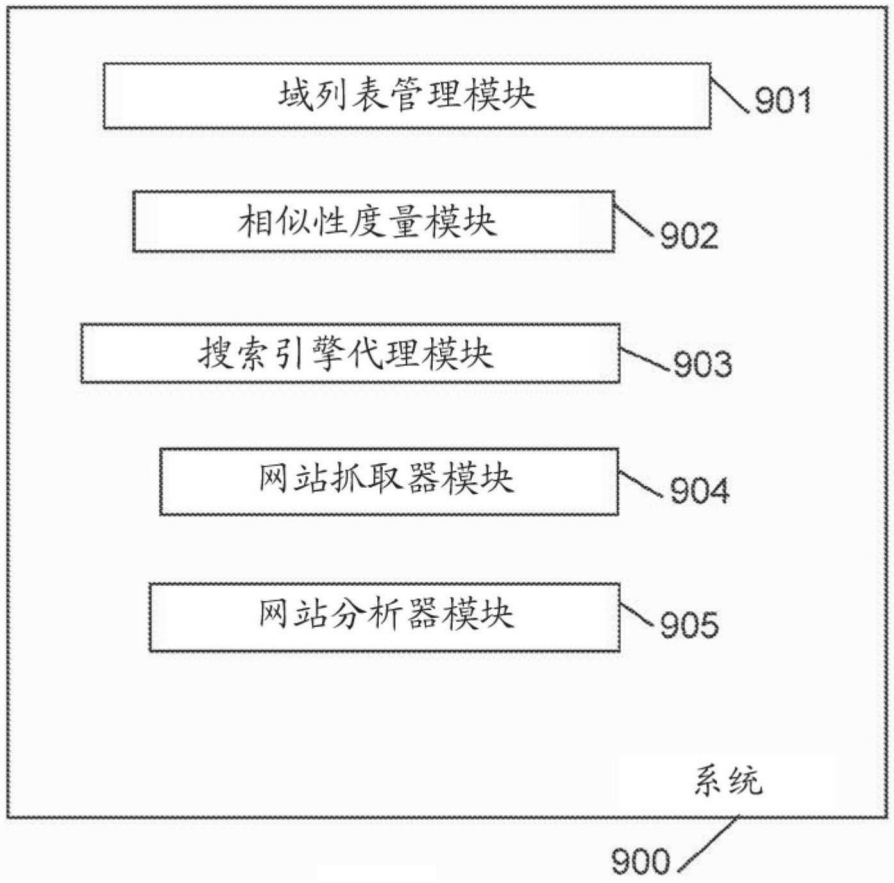

域列表管理模块
901
相似性度量模块
902
搜索引擎代理模块
903
网站抓取器模块
904
网站分析器模块
905
系统
900

图 9

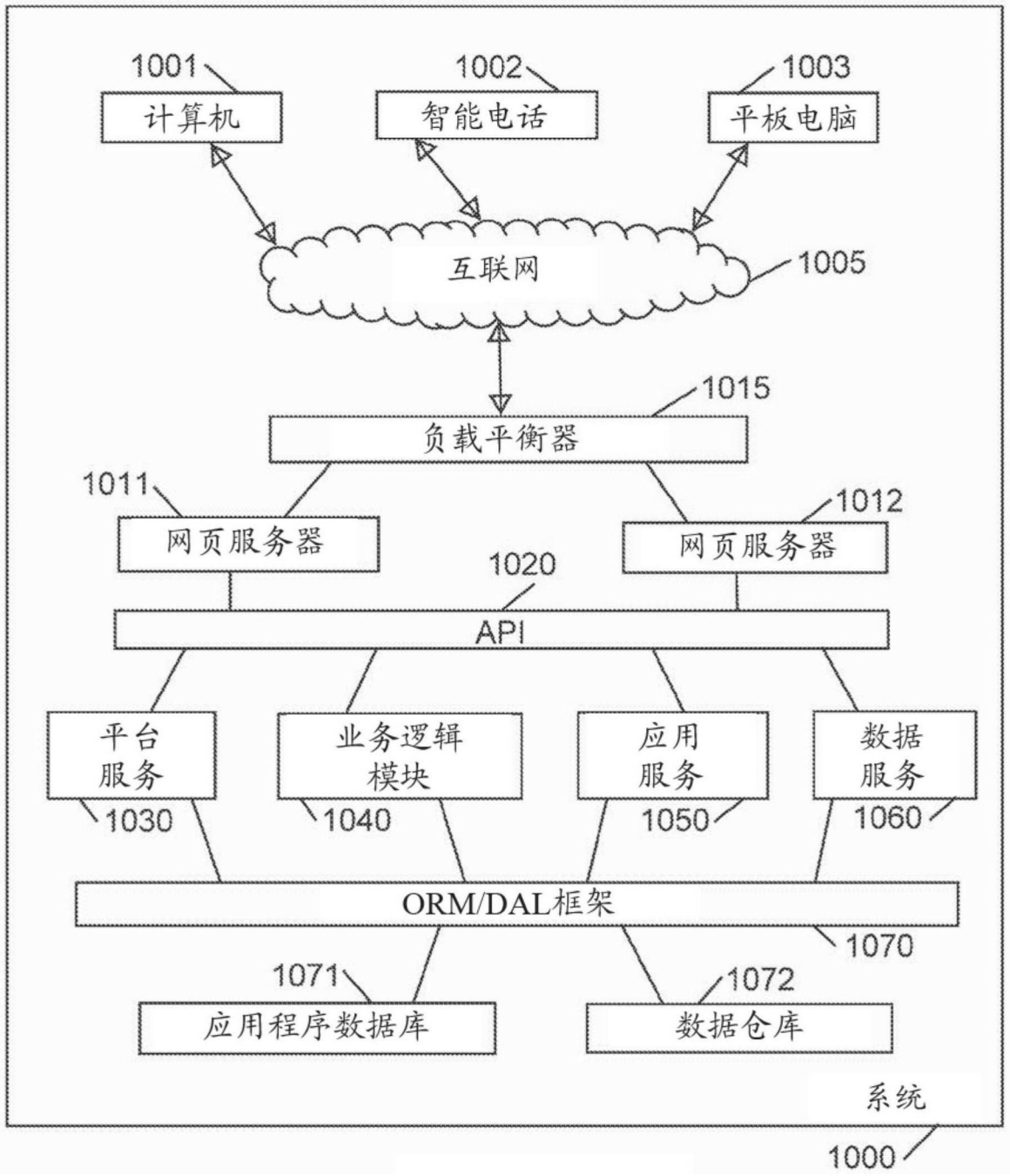

1001
计算机
1002
智能电话
1003
平板电脑
互联网
1005
1015
负载平衡器
1011
网页服务器
1012
网页服务器
1020
API
平台
服务
1030
业务逻辑
模块
1040
应用
服务
1050
数据
服务
1060
ORM/DAL框架
1070
1071
应用程序数据库
1072
数据仓库
系统
1000

图 10

Abstract

A computerized method of protecting a brand name of a brand owner, includes: (a) crawling a global communication network to identify and collect data about web-sites that possibly abuse the brand name; (b) for each web-site that possibly abuses the brand name, analyzing whether or not the web-site abuses the brand name by analyzing at least one of: (i) content of the web-site; and (ii) data about an owner of the web-site. The method further includes: for each web-site that possibly abuses the brand name, (A) generating an investment score indicating an estimated level of investment that was invested in development of the web-site; and (B) generating a damage score indicating a level of damage that the web-site is estimated to produce to the brand name.