US 20130212045A1

(19) United States

(12) Patent Application Publication

(10) Pub. No.: US 2013/0212045 A1

(43) Pub. Date: Aug. 15, 2013

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(54) **METHOD FOR IMPLEMENTING A VIRTUAL COMMUNITY OF INVESTORS HAVING INVESTMENT PORTFOLIOS**

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(21) Appl. No.: **13/846,521**

(22) Filed: **Mar. 18, 2013**

Related U.S. Application Data

(63) Continuation of application No. 12/173,365, filed on Jul. 15, 2008, now Pat. No. 8,401,948, which is a continuation of application No. 09/739,565, filed on Dec. 15, 2000, now Pat. No. 7,401,039.

Publication Classification

(51) **Int. Cl.**

G06Q 50/00 (2006.01)

G06Q 40/06 (2006.01)

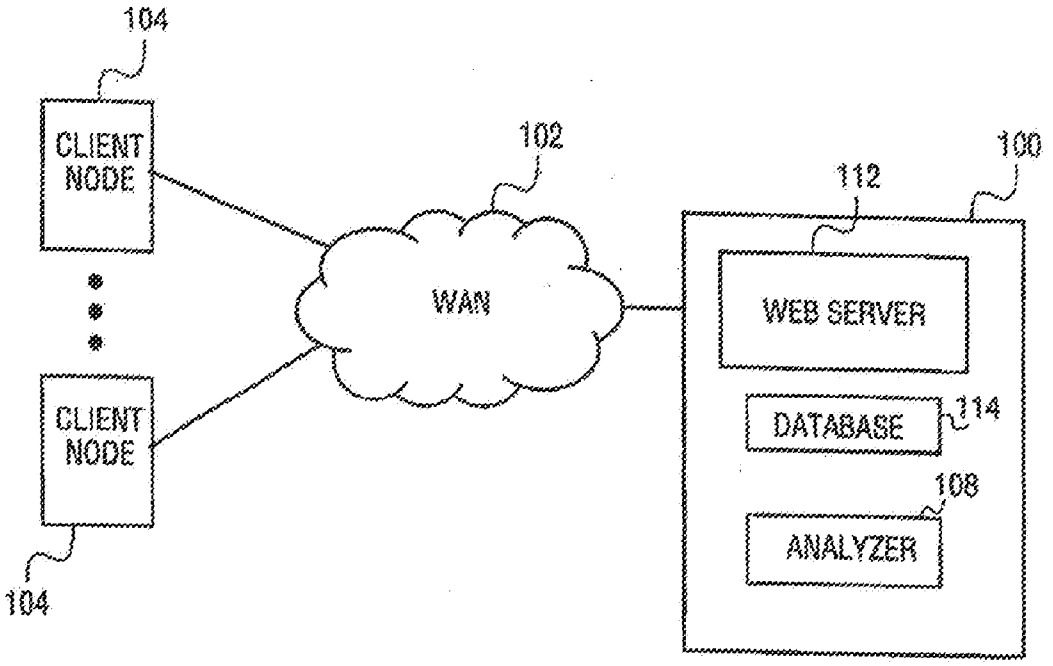
(52) **U.S. Cl.**

CPC ***G06Q 50/01*** (2013.01); ***G06Q 40/06*** (2013.01)

USPC ..... **705/36 R**

(57) **ABSTRACT**

A system and method for providing analytical tools for a community of investors having investment portfolios. A first tool provides an indication of a user's selection effectiveness regarding the user's choice of investments relative to those sectors in which the investment resides, and relative to a broader market. A second tool allows the user to evaluate the effectiveness of community stimuli on the user's portfolio. A third tool provides the user the capability to view relationships among a plurality of preferred analysts. With a fourth tool, a user may view a plurality of other analysts the user referred to the community.



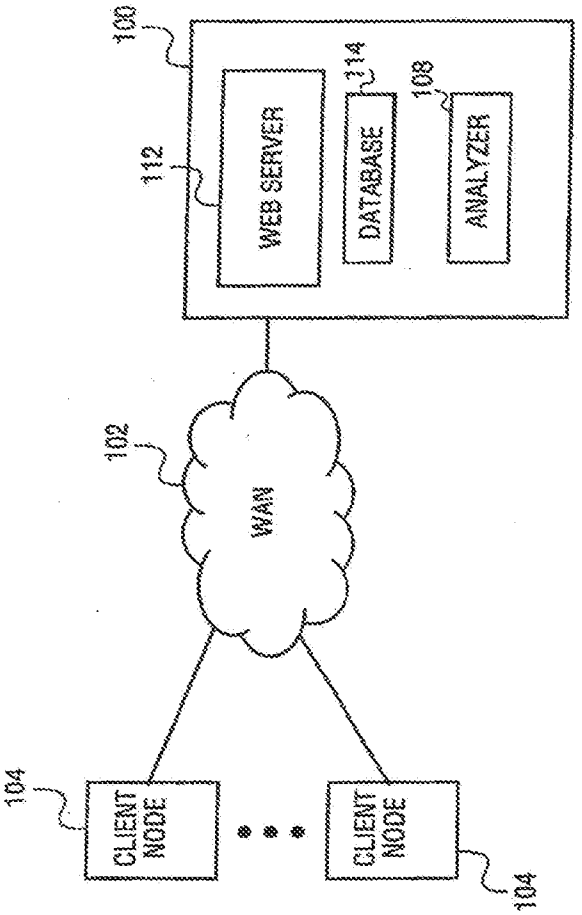

100
WEB SERVER
112
DATABASE
114
ANALYZER
108
WAN
102
CLIENT NODE
104
CLIENT NODE
104

FIG. 1

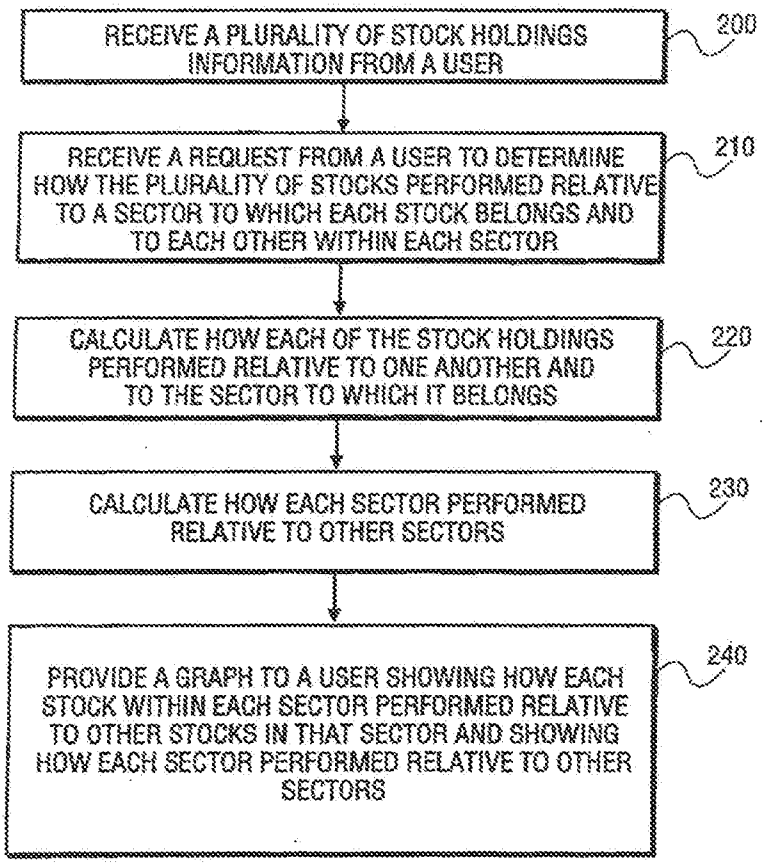

RECEIVE A PLURALITY OF STOCK HOLDINGS INFORMATION FROM A USER
200
RECEIVE A REQUEST FROM A USER TO DETERMINE HOW THE PLURALITY OF STOCKS PERFORMED RELATIVE TO A SECTOR TO WHICH EACH STOCK BELONGS AND TO EACH OTHER WITHIN EACH SECTOR
210
CALCULATE HOW EACH OF THE STOCK HOLDINGS PERFORMED RELATIVE TO ONE ANOTHER AND TO THE SECTOR TO WHICH IT BELONGS
220
CALCULATE HOW EACH SECTOR PERFORMED RELATIVE TO OTHER SECTORS
230
PROVIDE A GRAPH TO A USER SHOWING HOW EACH STOCK WITHIN EACH SECTOR PERFORMED RELATIVE TO OTHER STOCKS IN THAT SECTOR AND SHOWING HOW EACH SECTOR PERFORMED RELATIVE TO OTHER SECTORS
240

FIG. 2A

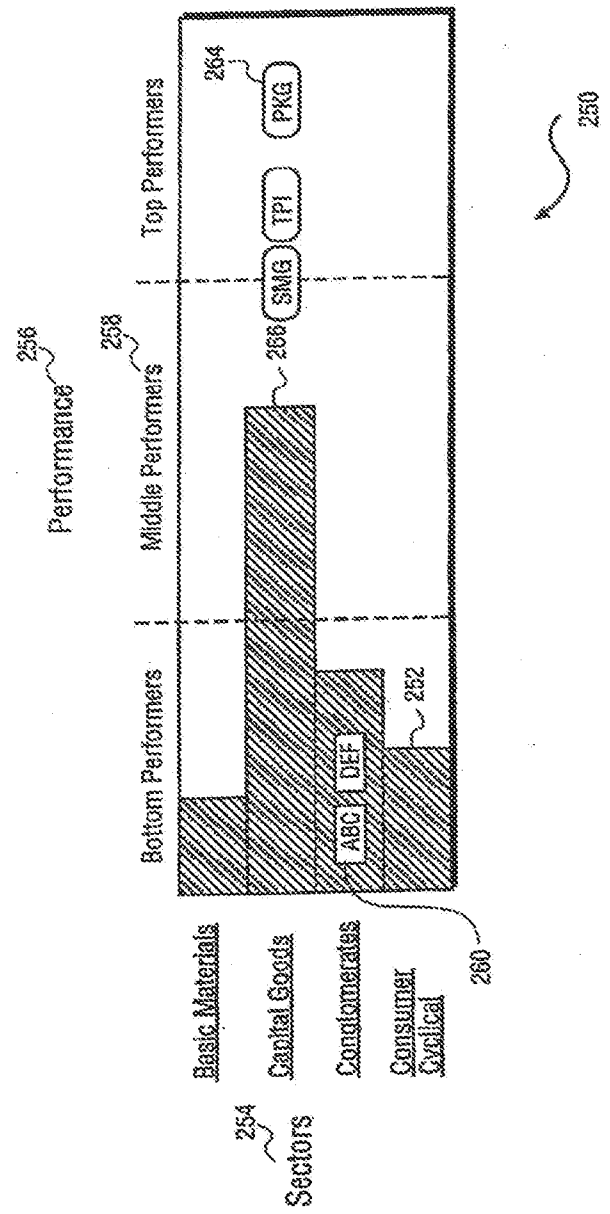

Performance
256
Bottom Performers
Middle Performers
258
Top Performers
264
PKG
TPI
SMG
266
ABC
DEF
252
Basic Materials
Capital Goods
Conglomerates
Consumer Cyclical
260
254
Sectors
250

FIG. 2B

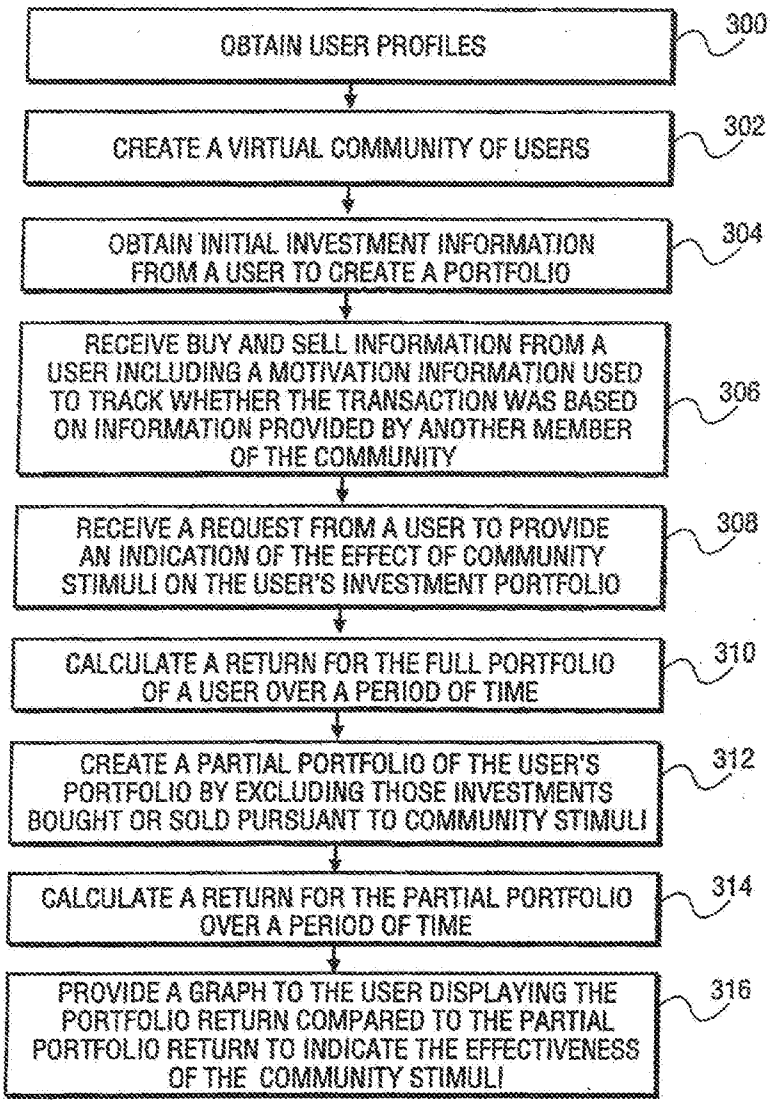

OBTAIN USER PROFILES
300
CREATE A VIRTUAL COMMUNITY OF USERS
302
OBTAIN INITIAL INVESTMENT INFORMATION FROM A USER TO CREATE A PORTFOLIO
304
RECEIVE BUY AND SELL INFORMATION FROM A USER INCLUDING A MOTIVATION INFORMATION USED TO TRACK WHETHER THE TRANSACTION WAS BASED ON INFORMATION PROVIDED BY ANOTHER MEMBER OF THE COMMUNITY
306
RECEIVE A REQUEST FROM A USER TO PROVIDE AN INDICATION OF THE EFFECT OF COMMUNITY STIMULI ON THE USER'S INVESTMENT PORTFOLIO
308
CALCULATE A RETURN FOR THE FULL PORTFOLIO OF A USER OVER A PERIOD OF TIME
310
CREATE A PARTIAL PORTFOLIO OF THE USER'S PORTFOLIO BY EXCLUDING THOSE INVESTMENTS BOUGHT OR SOLD PURSUANT TO COMMUNITY STIMULI
312
CALCULATE A RETURN FOR THE PARTIAL PORTFOLIO OVER A PERIOD OF TIME
314
PROVIDE A GRAPH TO THE USER DISPLAYING THE PORTFOLIO RETURN COMPARED TO THE PARTIAL PORTFOLIO RETURN TO INDICATE THE EFFECTIVENESS OF THE COMMUNITY STIMULI
316

FIG. 3A

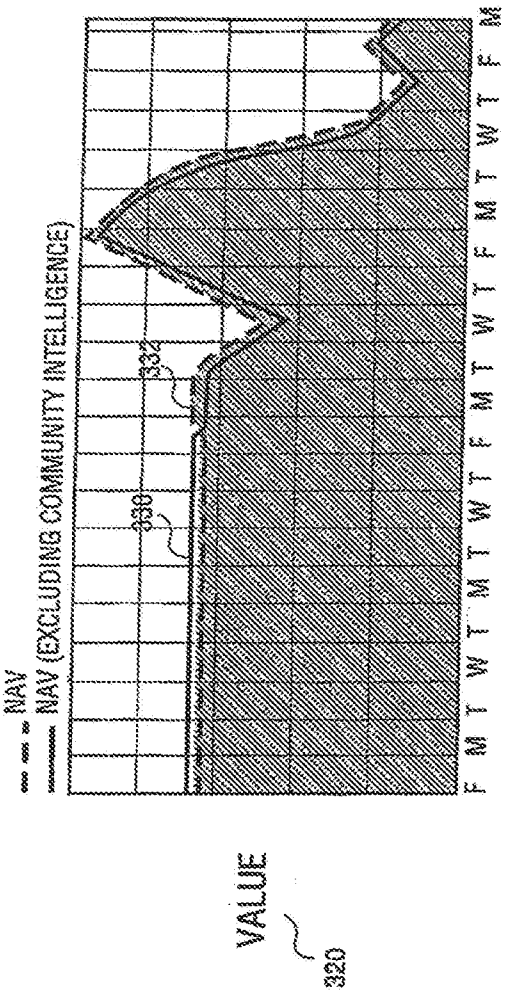

NAV
NAV (EXCLUDING COMMUNITY INTELLIGENCE)
330
332
VALUE
320
TIME
322
318
F M T W T M T W T F M T W T F M T W T F M

FIG. 3B

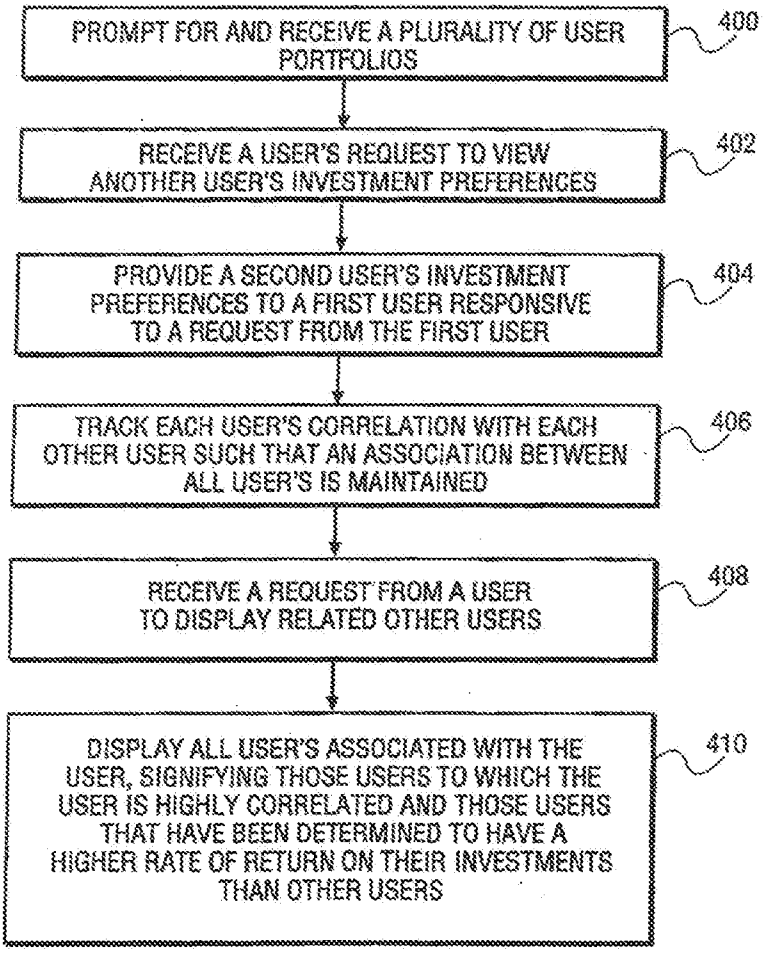

PROMPT FOR AND RECEIVE A PLURALITY OF USER PORTFOLIOS
400
RECEIVE A USER'S REQUEST TO VIEW ANOTHER USER'S INVESTMENT PREFERENCES
402
PROVIDE A SECOND USER'S INVESTMENT PREFERENCES TO A FIRST USER RESPONSIVE TO A REQUEST FROM THE FIRST USER
404
TRACK EACH USER'S CORRELATION WITH EACH OTHER USER SUCH THAT AN ASSOCIATION BETWEEN ALL USER'S IS MAINTAINED
406
RECEIVE A REQUEST FROM A USER TO DISPLAY RELATED OTHER USERS
408
DISPLAY ALL USER'S ASSOCIATED WITH THE USER, SIGNIFYING THOSE USERS TO WHICH THE USER IS HIGHLY CORRELATED AND THOSE USERS THAT HAVE BEEN DETERMINED TO HAVE A HIGHER RATE OF RETURN ON THEIR INVESTMENTS THAN OTHER USERS
410

FIG. 4A

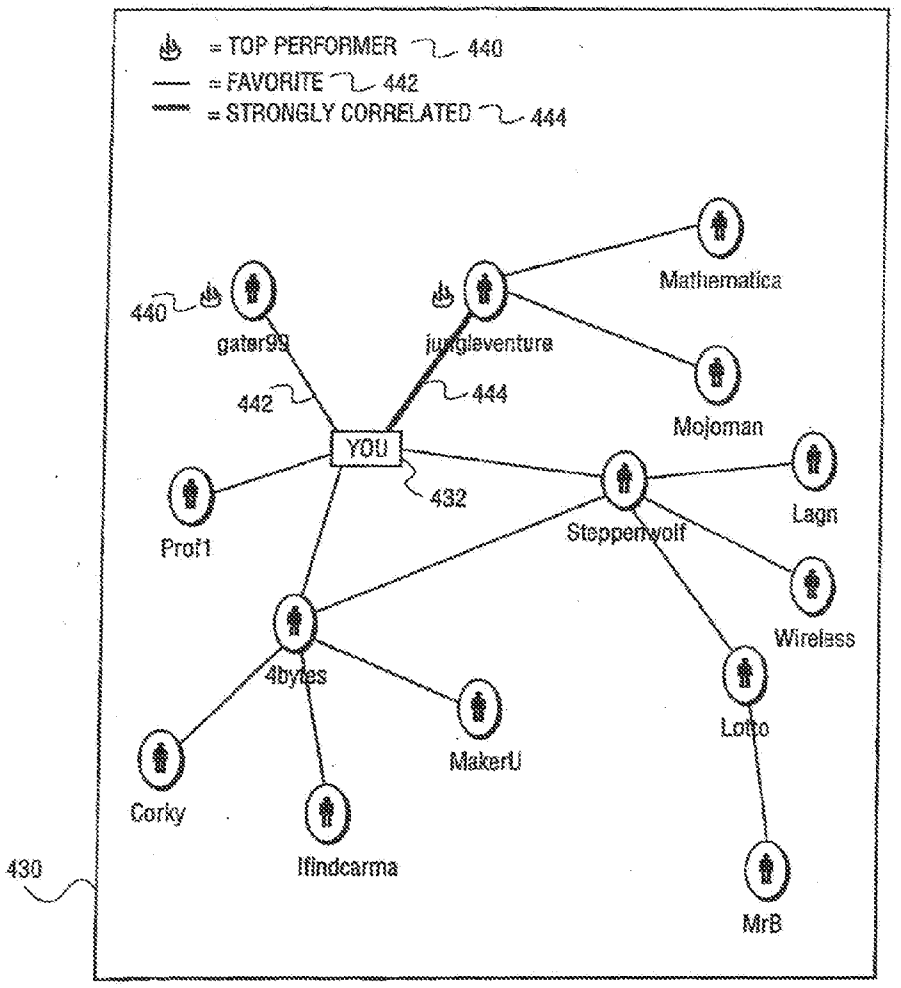

= TOP PERFORMER
440
= FAVORITE
442
= STRONGLY CORRELATED
444
Mathematica
440
gater99
jungleventure
442
444
Mojoman
YOU
Lagn
Prof1
432
Steppenwolf
Wireless
4bytes
Lotto
MakerU
Corky
Ifindcarma
MrB
430

FIG. 4B

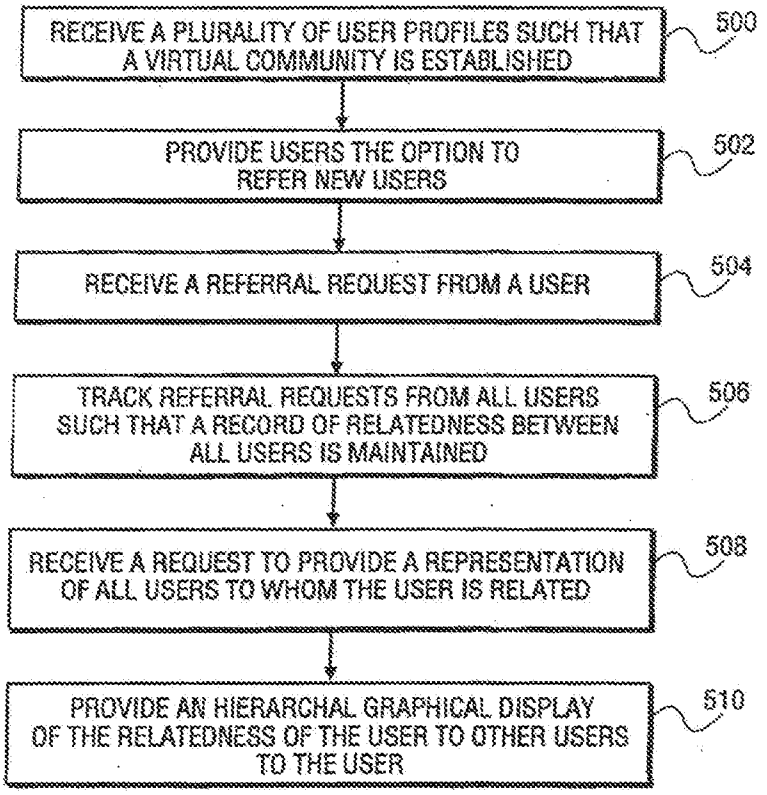

RECEIVE A PLURALITY OF USER PROFILES SUCH THAT A VIRTUAL COMMUNITY IS ESTABLISHED
500
PROVIDE USERS THE OPTION TO REFER NEW USERS
502
RECEIVE A REFERRAL REQUEST FROM A USER
504
TRACK REFERRAL REQUESTS FROM ALL USERS SUCH THAT A RECORD OF RELATEDNESS BETWEEN ALL USERS IS MAINTAINED
506
RECEIVE A REQUEST TO PROVIDE A REPRESENTATION OF ALL USERS TO WHOM THE USER IS RELATED
508
PROVIDE AN HIERARCHAL GRAPHICAL DISPLAY OF THE RELATEDNESS OF THE USER TO OTHER USERS TO THE USER
510

FIG. 5A

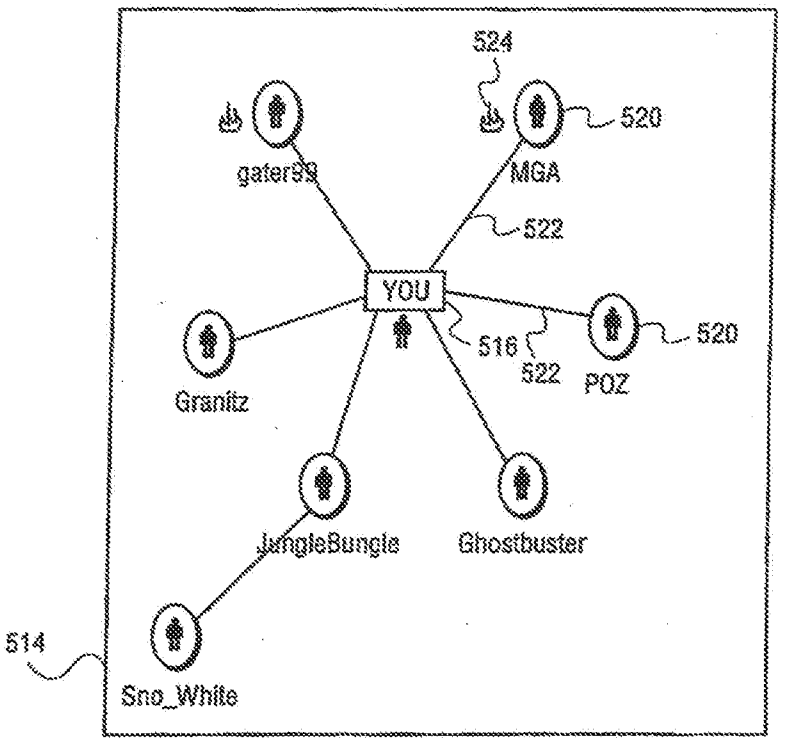

524
520
gater99
MGA
522
YOU
516
522
520
POZ
Granitz
JungleBungle
Ghostbuster
514
Sno_White

FIG. 5B

METHOD FOR IMPLEMENTING A VIRTUAL COMMUNITY OF INVESTORS HAVING INVESTMENT PORTFOLIOS

RELATED APPLICATIONS

[0001] This application is a continuation of U.S. patent application Ser. No. 12/173,365, entitled "METHOD FOR IMPLEMENTING A VIRTUAL COMMUNITY OF INVESTORS HAVING INVESTMENT PORTFOLIOS," filed Jul. 15, 2008, and patented as U.S. Pat. No. 8,401,948, which is a continuation of U.S. patent application Ser. No. 09/739,565, entitled "ANALYTICAL TOOLS FOR A COMMUNITY OF INVESTORS HAVING INVESTMENT PORTFOLIOS," filed on Dec. 15, 2000, and patented as U.S. Pat. No. 7,401,039, which applications are incorporated herein in their entirety.

BACKGROUND

[0002] The long bull market of recent years has lead to a proliferation of on-line investors that are technologically savvy and able to avail themselves of vast research resources that the Internet provides. This proliferation has been reflected in increasing ranks of day traders and overall security volume attributable to non-institutional investors. Various web sites allow on-line investors to trade securities. Some web sites provide investors tools to monitor their holdings. These tools are typically a pie chart showing the sector breakdown of stock or mutual fund holdings, a simple graph showing the historical performance or price of stocks and mutual funds over a period of time, and a simple graph showing the increase in a hypothetical investment of $10,000 in one or more stocks or mutual funds. As more investors are endeavoring to control their own investments, new and better tools are needed to allow investors to understand the performance of their investments.

SUMMARY

[0003] A system and method for providing analytical tools for a community of investors having investment portfolios. A first tool provides an indication of a user's selection effectiveness regarding the user's choice of investments relative to those sectors in which the investment resides, and relative to a broader market. A second tool allows the user to evaluate the effectiveness of community stimuli on the user's portfolio. A third tool provides the user the capability to view relationships among a plurality of preferred analysts. With a fourth tool, a user may view a plurality of other analysts the user referred to the community.

BRIEF DESCRIPTION OF THE DRAWINGS

[0004] The invention is illustrated by way of example and not by way of limitation in the figures of the accompanying drawings in which like references indicate similar elements. It should be noted that references to "an" or "one" embodiment in this disclosure are not necessarily to the same embodiment, and such references mean at least one.

[0005] FIG. **1** is a block diagram of a system of one embodiment of the invention.

[0006] FIG. **2**A is a flow diagram of operation of one embodiment of a tool to analyze the effectiveness of selecting investments relative to a sector and relative to a broader market according to an embodiment of the invention.

[0007] FIG. **2**B is an embodiment of a graph indicating the effectiveness of selecting investments relative to a sector and relative to a broader market.

[0008] FIG. **3**A is a flow diagram of operation of one embodiment of a tool to analyze the effectiveness of community stimuli in selecting investments according to an embodiment of the invention.

[0009] FIG. **3**B is an embodiment of a graph indicating the effectiveness of community stimuli in selecting investments.

[0010] FIG. **4**A is a flow diagram of operation of one embodiment of a tool to analyze the relationship between investors in a community of investors according to an embodiment of the invention.

[0011] FIG. **4**B is an embodiment of a graph indicating the relationship between investors in a community of investors.

[0012] FIG. **5**A is a flow diagram of operation of one embodiment of a tool to analyze the referral relationship between investors in a community of investors according to an embodiment of the invention.

[0013] FIG. **5**B is an embodiment of a graph indicating the referral relationship between investors in a community of investors.

DETAILED DESCRIPTION

[0014] To increase a user's understanding of how a portfolio of investments or single investments are performing, and to provide other useful information a set of analytical tools may be provided to an investor. The investor may be an Internet investor that connects to a server running analyzer software that provides the analytical tools.

[0015] FIG. **1** is a block diagram of a system of one embodiment of the invention. A server node **100** is coupled to a wide area network (WAN) **102** such as the Internet. Also coupled to WAN **102** are a plurality of client nodes **104**. Client nodes **104** may be a personal computer (PC), a WAN enabled phone, a personal digital assistant (PDA), a computer tablet, a set top box, or any other device with which a user may connect to a WAN. Server node **100** may include database **106** and analyzer **108**. The server node **100** includes web server software **112** to serve web pages and information to, and to receive information from client nodes **104**. The server node **100** receives information such as investment preferences, user profiles, real and virtual or hypothetical buy information, real and virtual or hypothetical sell information, referral information, and other information, including requests to view another user's investment preferences, submitted by a virtual community made of a population of users that connects from client nodes **104** through WAN **102** to the server node **100**. The virtual community is based around investments, including securities investment, equities investment, etc.

[0016] Each member of the population that makes up the virtual community initially creates a personal profile and becomes a member of the community via server node **100**. This may be achieved by the server node providing a web page or sequence of web pages in hypertext mark up language (HTML) that prompt the user to provide the appropriate information. Any references to prompting or providing web pages herein are achieved in this manner and may include a plurality of user interface items and user interface techniques, including, but limited to buttons, sliders, text entry fields, JAVA® applets, and the like.

[0017] Server node **100** may store personal profiles, community information, buy information, sell information, referral information, investor preferences, and a plurality of secu-

rities information and equities information in the database **106**. Database **106** may be a relational database such as an Oracle-style database or may include one or more of such databases with or without links between them. To obtain values and other information concerning securities, equities, and other investments, server node **100** may communicate with third party databases (not shown) via WAN **102** or via a direct connection.

[0018] Users are referred to interchangeably herein as "analysts" and "members." Investments may include and may be referred to as securities, stocks, mutual funds, equities, and the like. In other embodiments, investments may also include any property, obligation, note, or ownership interest in anything. In one embodiment, the server node may provide for the formation of a mutual fund formed by screening the aggregation of member investment preferences. In this manner, a fund is established based on the intelligence of the community. Investment preferences are stocks or other investments the user prefers and actions the user wishes to have taken with regard to stocks or other investments such a buy, sell, hold, sell short, buy long, etc. Preferences may be thought of as recommendations for investing including associated actions to be taken concerning the particular investment.

[0019] In one embodiment, to encourage community members to submit their best investment preferences, a reward structure may be established to reward those members submitting the best performing investment preferences over a predetermined period of time such as daily, weekly or some other established time frame. In one embodiment, the reward structure further includes an incentive for referring members who subsequently are identified as having selected the best performing investment picks. To that end, the analyzer **108** may rank investment preferences submitted by each analyst to establish which analysts should receive the reward for each reward period. In one embodiment, the ranking is based on a comparison between the real world performance of all the analysts' preferences compared with the performance of all other analysts preferences during a particular time window. In this way, members may also be placed in a category of top performing investors. Analyzer **108** may also maintain a list of top performing investors made up of those investors whose preferences perform in a top range over a period of time. The range may be the top 1%, top 5%, top 10%, etc. The period of time may be quarterly, monthly, daily, weekly, past 30 days, past 60 days, etc.

[0020] In one embodiment, the server node includes analyzer software that provides the processing needed to achieve the analytical tools discussed below. The analyzer may interact with and communicate with one or more databases, one or more web servers, and other specialized servers (not shown) to provide web pages, receive and provide data, and provide graphics to achieve the analytical tools discussed below.

[0021] FIG. **2**A is a flow diagram of operation of one embodiment of a tool to analyze the effectiveness of selecting investments relative to a sector and relative to a broader market according to an embodiment of the invention. The server receives a plurality of stock holdings and/or other investments from a user, as shown in block **200**. The server may then receive a request from a user to determine how the plurality of stocks performed relative to a sector to which the stock belongs and relative to other stocks within the sector, as shown in block **210**. Sectors may be well known categories of stocks, or any variety and granularity of categories that may be applied to the particular investment type or class. The server then calculates how each of the stock holdings performed relative to each other and relative to the sector to which the stock belongs, as shown in block **220**. The server also calculates how each sector performed relative to other sectors, as shown in block **230**. In one embodiment, the calculating in blocks **220** and **230** may be accomplished by the analyzer in the server. In this embodiment, all pertinent data may be obtained from third party databases and/or from the server's local database(s). In another embodiment, the server may serve an applet to the client (user) to do the calculating on the user's computer. In this embodiment, all pertinent data is maintained by and obtained from the user's computer.

[0022] The server then provides an indication of the user's effectiveness at choosing stocks within a sector and relative to a broader market by providing a graph to the user showing how each stock within each sector performed relative to other stocks in that sector and showing how each sector performed relative to other sectors, as shown in block **240**. In another embodiment, the server may serve an applet to the client (user) to do display the graph on the user's computer. In one embodiment, the period of time for which these calculations are performed defaults to a server specified amount of time such as 30 days, 120 days, annually, etc. In another embodiment, the amount of time over which these calculations are made is user selectable. Sector performance may be computed according any well known methods.

[0023] FIG. **2**B is an embodiment of a graph indicating the effectiveness of selecting investments relative to a sector and relative to a broader market. In one embodiment, graph **250** is a horizontal bar graph that shows sectors **254** and their performance **256**. In various embodiments, performance may be denoted by text labels such as the trio of bottom, middle and high performers; the sextet of poor, fair, average, good, better, best; etc. In other embodiments, performance may be denoted by a percentage change in share price, or a star rating such as from one star to five stars. As can be seen in graph **250**, extremes are shown such as stock **260**, a bad performer in the bottom sector, and stock, **264**, a stock that outperformed other stocks in the sector and outperformed the sector. The graph also shows that sector **266** outperformed sector **252**. This graph shows an investor the performance of the investor's stocks relative to the sector in which the stock is categorized, relative to other stocks within the sector, and relative to other of the investor's stocks in the investor's portfolio, and also shows the investor the performance of sectors relative to each other. The graph also provides the user an indication of how each particular stock in the portfolio performed relative the broader market by showing the performance of the various sector. In another embodiment, one or more well known indices such as the Russell 2000 or the Dow Jones Industrial Average may be provided for additional comparison. In one embodiment, inclusion of averages may be user selectable. In one embodiment, the user may select whether all sectors will be displayed or only those sectors in which the user has invested.

[0024] FIG. **3**A is a flow diagram of operation of one embodiment of a tool to analyze the effectiveness of community stimuli in selecting investments according to an embodiment of the invention. The server first obtains user profiles, as shown in block **300**, and creates a virtual community of users, as shown in block **302**. The server then obtains initial investment information from a user to create a portfolio, as shown in block **304**. This initial investment information may be a

portfolio of securities or other investments designated by a ticker symbol, a purchase price, and may include a purchase date, a number of shares purchased, a commission paid and other information. In one embodiment, this initial investment information may include a motivation information by which a user specifies whether the purchase of the investment was made responsive to a community stimuli such as the preferences of a particular community member. The server then receives buy and sell information from a user including a motivation information used to track whether the transaction was based on information provided by another member of the community, as shown in block **306**. h one embodiment, the motivation information may be inferred by the server such that the server may recognize when a user buys or sells a particular investment after viewing the preferences of another member regarding that investment. That is, in various embodiments, the motivation information may be server determined or provided by a user.

[0025] The server may receive a request from a user to provide an indication of the effect of community stimuli on the user's investment portfolio, as shown in block **308**. The server then calculates a return for the user's investment over a period of time, as shown in block **310**. The server then creates a partial portfolio of the user's portfolio by excluding those investment bought or sold pursuant to community stimuli, as shown in block **312**. The server calculates a return for the partial portfolio over a period of time, as shown in block **314**. The server then provides a graph to the user showing the portfolio return compared to the partial portfolio return over a period of time to indicate the effectiveness of community stimuli on the investor's portfolio, as shown in block **316**.

[0026] FIG. **3**B is an embodiment of a graph indicating the effectiveness of community stimuli in selecting investments. Graph **318** depicts the net asset value **320** of a portfolio of securities over a period of time **322**. A first line **330** indicates the value of the user's portfolio, and a second line **332** indicates the value of a subset of the user's portfolio excluding those investments made based on community stimuli. In this way, the user may easily see whether the performance of the user's portfolio has been enhanced or degraded by the inclusion of investments made pursuant to community stimuli.

[0027] FIG. **4**A is a flow diagram of operation of one embodiment of a tool to analyze the relationship between investors in a community of investors according to an embodiment of the invention. After prompting for and receiving a plurality of user profiles, as shown in block **400**, the server may receive a user's request to view another user's investment preferences, as shown in block **402**. The server then provides a second user's investment preferences to the first user responsive to receiving the request from the first user, as shown in block **404**. The server tracks each user's correlation with each other user such that an association between all user's is maintained, as shown in block **406**. In one embodiment, this association may be server determined by the server maintaining a list of the users whose preferences a user visits. In another embodiment, the association may be maintained only if the user bases a trade on another user's preferences. In yet another embodiment, a user may be provided the ability to add other investors to a list of favorite investors which is maintained by the server. In this way, the association is based in the user selected favorites list.

[0028] The server may then receive a request from a user to display related other users, as shown in block **408**. In one embodiment, the user may select a degree of relationship so that only users within that degree of relationship will be displayed. In another embodiment, the server has a predefined degree of relationship that will limit the display. The server then displays user's associated with the user, as shown in block **410**. In the display, the serve may signify those users to which the user is highly correlated and those users that have been determined to have a higher rate of their return on investments than other users. In one embodiment, the server may allow the user to view the relationship between any one user and all other users, within a degree of relationship.

[0029] FIG. **4**B is an embodiment of a graph indicating the relationship between investors in a community of investors. Graph **430** shows the association between a user **432** and other users based on the association maintained by the server. In one embodiment, related users are denoted by a first style of line such as line **442**, and highly related users are denoted by a second style of line such as line **444**. In one embodiment, those users who are top performers may be denoted as such by a graphical accent such as a flame **440**. The result is what may be considered a constellation. The example depicted in graph **430** is limited to three levels of relatedness. In various embodiments, the levels or degrees of relatedness displayed may be system dependent or user selectable. In one embodiment, the graph represents the user's favorite other users and their favorites' favorites, etc. In this embodiment, an indication of whether the user's investing style is highly related may also be presented. In another embodiment, the graph may also indicate those user's to whom the user's investing style is related or highly related. In one embodiment, a user may view the degree of relationship of one user to all other users by clicking on the particular user displayed in the constellation, such as, for example, clicking on any user in graph **430** may cause a relationship graph of the particular user to be displayed.

[0030] FIG. **5**A is a flow diagram of operation of one embodiment of a tool to analyze the referral relationship between investors in a community of investors according to an embodiment of the invention. After prompting for and receiving a plurality of user profiles such that a virtual community is established, as shown in block **500**, the server may provide the user the option to refer new users to become members of the virtual community, as shown in block **502**. The server then receives this referral request from the user, as shown in block **504**. The server may then take appropriate action to respond to the referral request. The server tracks referral requests from all users such that a record of relatedness between all users is maintained, as shown in block **506**. The server may receive a request to provide a representation of all users to whom the user is related, as shown in block **508**. In response, the server provides an hierarchical graphical display of the relatedness of the user to other users to the user, as shown in block **510**.

[0031] FIG. **5**B is an embodiment of a graph indicating the referral relationship between investors in a community of investors. Graph **514** shows the association between a user **516** and other users based on the hierarchical record maintained by the server. Related users are denoted by a line such as line **522**. User **516** is shown to be related to various other users **520** via lines **522**. In one embodiment, those users that are top performers may be denoted as such by a graphical accent such as a flame **524**. The result is what may be considered a constellation. The example depicted in graph **514** is

limited to two levels of relatedness. In various embodiments, the levels or degrees of relatedness displayed may be system dependent or user selectable.

[0032] In the foregoing specification, the invention has been described with reference to specific embodiments thereof. It will, however, be evident that various modifications and changes can be made thereto without departing from the broader spirit and scope of the invention as set forth in the appended claims. The specification and drawings are, accordingly, to be regarded in an illustrative rather than a restrictive sense.

What is claimed is:

1. A computer-implemented method for a virtual community, said computer-implemented method comprising:

accepting a set of investment preferences from a plurality of community members;

receiving a first request from a first community member to view said set of investment preferences of a second community member, recording said first request, and displaying said set of investment preferences of said second community member to said first community member; and

receiving a second request from a third community member to display related other users and displaying a set of community members represented as nodes and a set of relationships between community members as connections between said nodes.

* * * * *