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#### (54) SYSTEM AND METHOD TO PROCESS INFORMATION CONTRIBUTED BY MEMBERS OF A VIRTUAL COMMUNITY

(75) Inventors: Michael J. Witz, Los Angeles, CA (US); Brian A. Levy, Los Angeles,

CA (US); Brian N. Sawyer, Santa Monica, CA (US); Dan Lin, Culver City, CA (US); Gordon K.

Gustafson, Encino, CA (US)

Correspondence Address:

SCHWEGMAN, LUNDBERG & WOESSNER/ EBAY P.O. BOX 2938 MINNEAPOLIS, MN 55402 (US)

(73) Assignee: **eBay Inc.** 

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#### Related U.S. Application Data

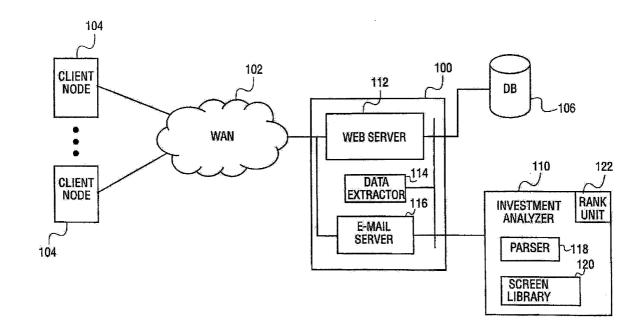
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#### (57) ABSTRACT

A method of creating a financial product. A virtual community is established. Members of the community submit preferences to a server. The preferences are aggregated and manipulated to identify characteristics of the preferences. From the population of preferences submitted, a small subset is identified to be part of the financial product.



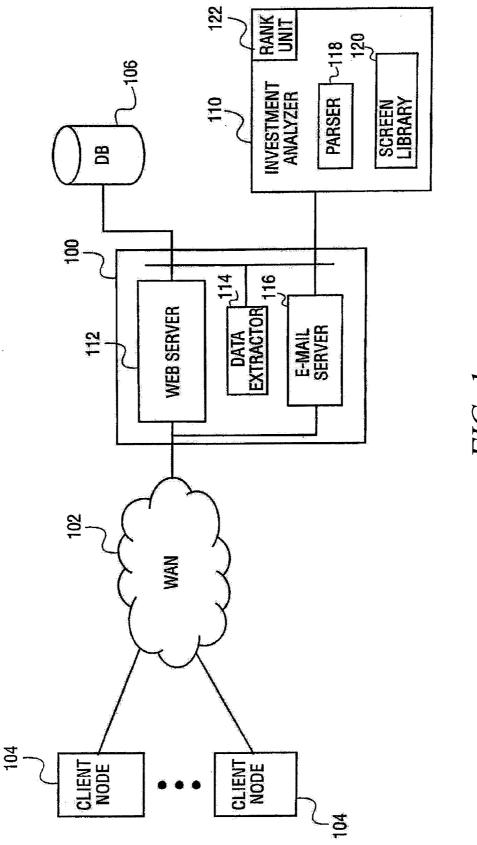
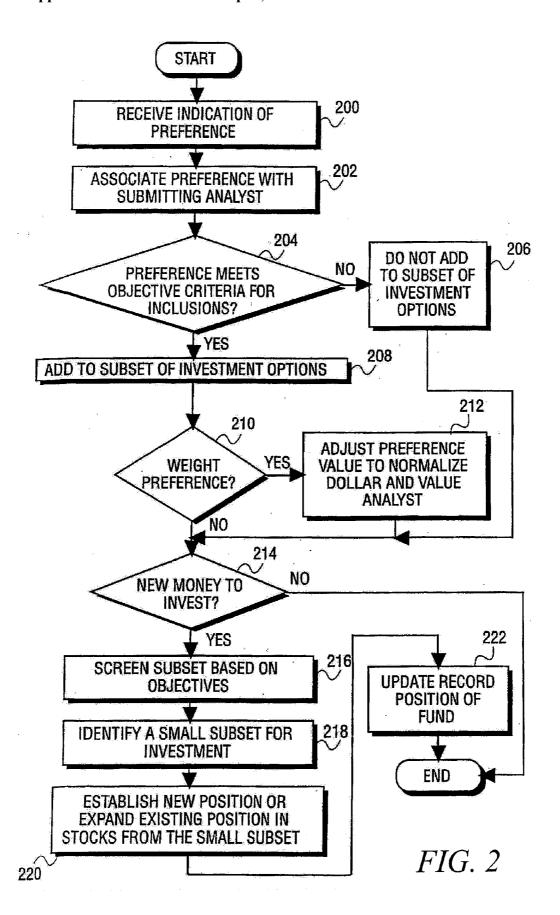


FIG. 1



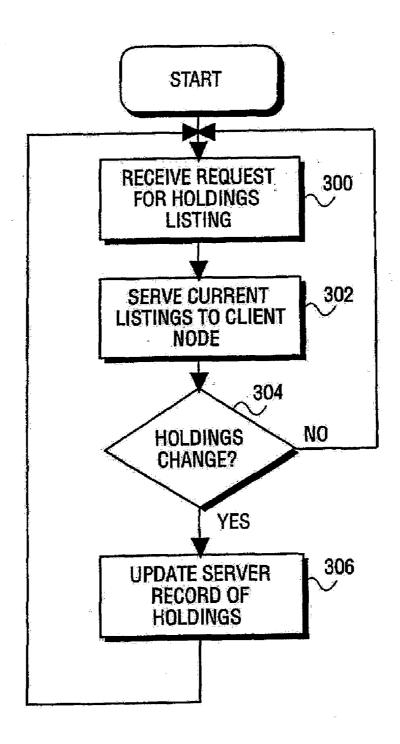
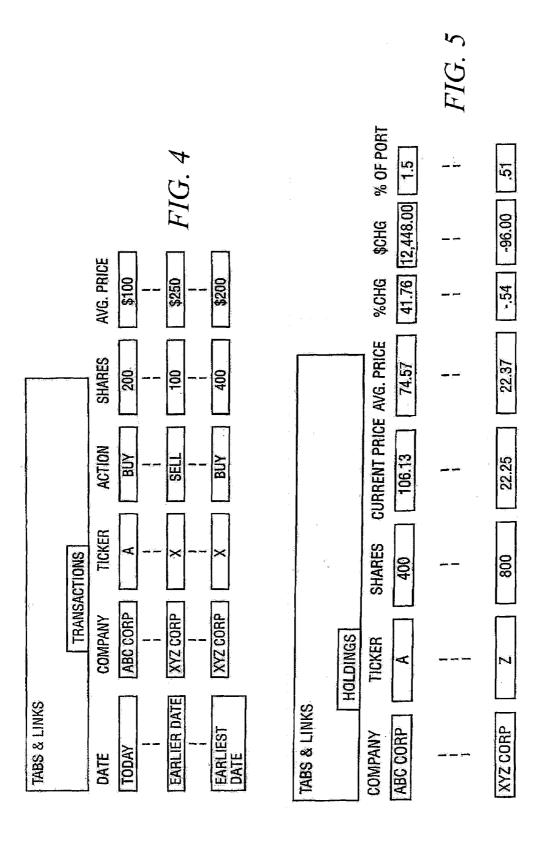


FIG. 3



NEWS   ABOUT   I	HELP					
COMMUNITY MUTUAL FUNDS	$\overline{}$					
MAIN   MY PROFILE   EXPLORE   MESSAGE BOARDS   HOT HANDS   JUNGLE WEEKLY   RULES	┯'					
ALREADY HAVE A SCREEN NAME? LOG ON						
WELCOME TO THE STOCKJUNGLE.COM COMMUNITY						
1. YOU'LL NEED A UNIQUE NAME TO IDENTIFY YOU IN THE COMMUNITY						
SELECT A SCREEN NAME:						
SELECT A PASSWORD:						
RE-ENTER PASSWORD:						
E-MAIL:						
REFERRED BY:						
(ENTER YOUR FRIEND'S SCREEN NAME)						
2. WE NEED THIS INFORMATION TO SEND YOU ANY HOT HANDS REWARDS YOU EARN (CONCERNED ABOUT YOUR PRIVACY? SO ARE WE, READ OUR <u>PRIVACY STATEMENT</u> )						
FIRST NAME:						
LAST NAME:						
ADDRESS:						
CITY:						
STATE:						
ZIP CODE:						
3. PLEASE TELL US A LITTLE BIT MORE ABOUT YOURSELF WE'RE THE CURIOUS TYPE						
AGE:						
4. PLEASE PROVIDE US WITH A FEW WORDS ABOUT YOUR INVESTMENT APPROACH, BACKGROUND, AND						
GOALS (BE PRUDENT THOUGH THIS PERSONAL PROFILE WILL BE VISIBLE FOR ALL TO SEE)						
CHECK THE BOX FOR SIGN UP FOR THE FREE JUNGLE WEEKLY E-MAIL NEWSLETTER	· · · · · · · · · · · · · · · · · · ·					
BY CLICKING SUBMIT BELOW AND REGISTERING FOR OUR COMMUNITY INTELLIGENCE ARENA. YOU ARE AGRE TO BE BOUND BY OUR TERMS OF SERVICE. IN ORDER TO PARTICIPATE IN THE HOT HANDS REWARDS PRO	IGRAM.					
YOU MUST BE A US CITIZEN OVER THE AGE OF 18. PLEASE REVIEW THE FULL INSTRUCTIONS AND RULES MORE INFORMATION. WE ARE COMMITTED TO PROTECTING THE PRIVACY OF OUR COMMUNITY MEMBERS, PLE	FOR					
READ OUR <u>PRIVACY STATEMENT</u> FOR MORE INFORMATION	1 (OL					
SUBMIT						

FIG. 6

( <b>\$</b> )					NEWS   AE	BOUT   HELP
	<b>®</b> —	COMMUNITY		MUTUAL FUNDS		
MAIN EMY PRO	OFILE 3 EXPLORE	MESSAGE	BOARDS   HOT HA	NDS JUNGLE	WEEKLY   RU	TEZ ]
muni pan 110	37 ICE 3	. ] [111200/102				SUBMIT
	_		Lu	OOK-UP STOCK	\	[ JUDMIT ]
RIVA		HOT HANDS	ROMETHEUS DE RATING: 11 REWARDS: \$0.00 CE: 3/13/00			
TECHNOLOGY GROWTH						<u>EDIT</u>
MY PICKS						
COMPANY	TICKER	GOING	CTIVE PICKS PICK STYLE	DATE IN	% CHG	CLOSE?
COMPANY	TICKER	WENT	OSED PICKS PICK STYLE	DATE IN	CLOSED	% CHG
		SUE	BMIT A PICK		VIEW COMP	LETE HISTORY
MY MESSAGE	BOARD					
SUBJECT			ANALYS	ST	DATE & TIME	(PST)
		POST TO M	Y MESSAGE BOARD	)		MESSAGE LIST
MY PREFEREI	NCES					WESSING LIST
FAVO	ORITE ANALYSTS		.:-	SE	TTINGS	
ANALYST	PERF. RATING	REMOVE?	POSTS	D LIKE TO BE N TO MY MESSAGE	BOARD	
			REPLIES	D LIKE TO BE N 3 TO MY POSTS		
MY REFERRAL	S		□ I WOUL TRANSA	D LIKE TO BE N CTIONS BY MY I	iotified by e- favorite analy	MAIL OF NEW STS
ANALYSTS I'VE RE	eferred Perf. Rating	WE'VE MADE IT THEIR E-MAIL BEHALF INVITIN HOW MANY PE	ND AND WIN \$25 EASY TO GET YO ADDRESS BELOW G THEM TO JOIN OPLE YOU CAN RE DRESS HERE	NUR FRIENDS IN AND WE'LL SENI OUR COMMUNITY	/OLVED. SIMPLY ) AN E-MAIL O	TYPE IN N YOUR

FIG. 7

			NEWS   ABOUT   HELP
COMMUNITY	<del></del>	MUTUAL FUNDS	
COMMONT		<u> </u>	
MAIN MY PROFILE EXPLORE MESSAGE	BOARDS HOT HA	NDS JUNGLE	WEEKLY   RULES
MANA MITTOTILE EN CONE MILESPISE			<u> </u>
COMPANY NAME:			
TICKER SYMBOL:			
THIS TRADE IS A:			
BUY - LONG			
O SELL - SHORT			
THIS STYLE THAT BEST DESCRIBES THIS PICK IS:			
O FUNDAMENTAL			
○ TECHNICAL			
○ MOMENTUM			
○ VALUE			
○ COCKTAIL PARTY TIP			
THE EXPECTED TIME FRAME FOR THIS STOCK PICK IS	:		
OLESS THAN ONE WEEK			
○ LESS THAN ONE MONTH			
OBETWEEN ONE AND SIX MONTHS			
O BETWEEN SIX MONTHS AND ONE YEAR			
○ MORE THAN ONE YEAR			
ANALYSIS:			

FIG. 8

SUBMIT

# SYSTEM AND METHOD TO PROCESS INFORMATION CONTRIBUTED BY MEMBERS OF A VIRTUAL COMMUNITY

#### BACKGROUND

[0001] (1) Field of the Invention

[0002] The invention relates to financial products. More specifically, the invention relates to financial products derived from the input of a virtual community.

[0003] (2) Background

[0004] Mutual funds of various types are ubiquitous within the investment community. Typical mutual fund companies employ a fund manager to establish and manage the portfolio securities that constitute the fund. Investment decisions for the fund are made by that fund manager, while investors at large are relegated to a passive or a non-participatory function. Moreover, such funds typically release information on fund holdings and transactions on a quarterly basis with only limited detail regarding the transactions conducted during that quarter. Moreover, by the time these quarterly reports actually reach investors in the fund, information contained in the report is largely obsolete.

[0005] While the long bull market of recent years has lead to a proliferation of mutual funds, it has also 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.

#### BRIEF DESCRIPTION OF THE DRAWINGS

[0006] 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.

[0007] FIG. 1 is a block diagram of a system of one embodiment of invention

[0008] FIG. 2 is a flow diagram of operation in the investment analyzer in one embodiment of the invention.

[0009] FIG. 3 is a flow diagram of operation of the server node responsive to a request for a holdings listing

[0010] FIG. 4 is a schematic diagram of a transaction listing that might be served by the server node of one embodiment of the invention.

[0011] FIG. 5 is a schematic diagram of a holdings listing in one embodiment of the invention.

[0012] FIG. 6 is an example template used to join the community in one embodiment of the invention.

[0013] FIG. 7 is a an example page reflecting a personal profile established.

[0014] FIG. 8 shows a template through which an analyst may submit a preference in one embodiment of the invention.

### DETAILED DESCRIPTION

[0015] FIG. 1 is a block diagram of a system of one embodiment of invention. A server node 100 is coupled to a wide area network (WAN) 102 such as the Internet. Also coupled to WAN 102 are plurality of client nodes 104. Client node 104 may be a personal computer (PC), a web enabled phone, a set top box, or any other conventional manner in which a user may connect to a WAN. Server node 100 is also coupled to a

database 106 and an investment analyzer 110. The server node 100 includes a web server to serve web pages, and receive completed templates from client nodes 104. The server node 100 tracks preferences submitted by a virtual community made of a population of users which connect from client nodes 104 through WAN 102 to the server node 100. The virtual community is based around securities investment, and one embodiment equities investment.

[0016] Each member of the population that makes up the virtual community initially creates a personal profile. When a new user first accesses server node 100, the server node 100 serves a web page, typically a hypertext mark up language (HTML) page, including a link to join the community. By accessing the link, the user causes a request to be sent from client node 104 across the WAN 102 or server node 100 to return a registration template that the user may fill out to become a member of the community. A typical registration template will include explanatory text, and a plurality of user modifiable fields to permit the users to enter information required to establish the user profile. Upon submission of the completed template, a data extractor 114 within the server node 100 extracts the data required to complete the user profile. In the event that one or more required fields are inadequately completed, the server node 100 may return the template with instructional messages regarding the inadequacy of the information provided. If the template has been appropriately completed, the user becomes a community member with a profile established and stored 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.

[0017] Once the user profile is established, the user may be offered the opportunity to submit user preferences. As used in this context, the user preferences refer to the user's security picks from the universe of possible securities available in the market. In some embodiments, certain restrictions may be placed on user preferences, such as limiting the preferences to a particular exchange or class of securities. Upon receipt of a preference, from a user, the data extractor 114 extracts the preference information and formats it as an e-mail. An e-mail server 116 within the server node 100 provides those preferences to the investment analyzer 110 which aggregates that preference with all the previously received preferences. The investment analyzer 110 may include a parser 118 to parse the incoming e-mail to retrieve specific information such as the submitting analyst and security can be identified. The investment analyzer may also include a plurality of automatic screens to screen the preferences for various objectively determinable characteristics. Then, the aggregated list of preferences may be used as a basis for the formation of the financial product such as a mutual fund or a newsletter.

[0018] In the case of a newsletter, the preferences may be aggregated and statistically manipulated based on such factors as ranking within the population of the analysts. Submitting users are referred to interchangeably herein as "analysts." In one embodiment, the statistical aggregation is combined with analyst reports from high-ranking analysts, which may include specific recommendations. It is envisioned that the newsletter may be distributed either as hard copy or electronically.

[0019] In the case of a mutual fund, the constituent positions of the fund are selected by a series of screenings of the aggregation of preferences. In this manner, a fund is established based on the intelligence of the community. The effective

tiveness of selecting mutual fund positions from the preferences of the community depends, in large part, on having a good pool of preferences submitted. To encourage community members to submit their best preferences, a reward structure may be established to incent those members submitting the best performing preferences over a predetermined period of time. The predetermined period may call for rewards daily, weekly or some other established time frame. In one embodiment, the reward structure further includes an incentive for referring those individuals who subsequently are identified as having selected the best performing picks. To that end, the investment analyzer may include a rank unit 122 that ranks 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 the other analysts preferences during a particular time window.

[0020] As previously noted, traditional mutual funds provide only limited information about fund holdings and fund transactions which by the time disseminated, is largely obsolete. By virtue of its origin in the virtual community, dissemination of fund information electronically for a fund such as described above, is both practical and efficient. This permits rapid, on-demand dissemination of current fund information. To that end, retained in database 106 and served by server 100 upon request to the respective users at the different client nodes 104 are current listings of fund holdings and listings of fund transactions. Funds providing access to such information are referred to herein as "naked" funds. Naked funds need not be community originated funds. Rather, funds managed in the traditional manner may be naked if current transactions and holdings information is posted and regularly updated to be available over the WAN. Typically, in one embodiment of the invention, the transaction and holdings listings are updated at the end of each business day. In another embodiment, the listings are updated in substantial real time, or several times per day. In any event, the timeliness of the listings should be substantially higher than that available in a typical mutual fund reporting in traditional quarterly reports.

[0021] FIG. 2 is a flow diagram of operation in the investment analyzer in one embodiment of the invention. A preference is received at functional block 200. At functional block 202, the preference is associated with the submitting user (analyst). This association may include associating the analyst current ranking within the community. Ranking of analysts is discussed in more detail below.

[0022] A determination is made at decision block 204 if the preference meets objective criteria for inclusion. Such objective criteria may include, by way of example and not limitation, market capitalization, security class, current price, average daily trading volume, and any other easily ascertainable objective criterion. For example, if the mutual fund to be derived is to be a technology fund, a Hilton Hotels preference would be found at decision block 204, not to meet the objective criteria at decision block 204, it is not added to the subset of investment options at functional block 206. If the preference meets the objection criteria at decision block 204 is added to the subset investment options at a functional block 208.

[0023] A decision is made at decision block 210 if the preference should be weighted. If the preference should be weighted, the preference value is adjusted to normalize, e.g., dollar and analysts ranking at functional block 212. In one

embodiment, the weighting takes the form of compiling a list of unique ticker symbols submitted as preferences. Each unique ticker symbol is then equal dollar weighted. The resulting number of shares is multiplied by the frequency the preference was submitted by members of the community. The resulting value is termed a population weighted scale (PWS). The above described PWS provides an indication of the overall all community opinion. Some embodiments of the invention may factor in analyst ranking in generating the PWS. Other embodiments do not, but may subsequently screen out preferences of poorly performing analysts in determining what positions to establish.

[0024] At decision block 214, a determination is made if there is new money to invest. In this context, "new money" may be either from inflows of cash into the fund or prior sale of some fund holding. If there is new money to invest, the subset is screened based on objectives of the mutual fund. By way of example, a value fund may screen out high P/E stocks while a growth fund may screen out stocks that have not exhibited average annual growth rate and/or accelerating growth above a predetermined level. From this screening, a relatively small subset, for example, fifty stocks, down from, e.g., one thousand stocks is identified at functional block 218. Through the screening, this smaller subset may be automatically forced to have fundamental characteristics approximating the PWS. Fundamental characteristics may include a subset of, e.g., P/E ratio, market capitalization, beta price to book ratio, etc. By comparing the portfolio with a benchmark such as the S&P 500, and dollar weighting accordingly a determination can be made whether a particular area is underweighted or overweighted. At functional block 220, the subset is further reduced to identify a number of securities in which to establish new or expand existing positions consistent with the desired balance of the fund. Portfolio weighting may be factored into the determination of the reduced subset. At functional block 222, the database listing reflecting fund holdings and transactions are updated based on changes in positions at functional block 220.

[0025] If there is no new money to invest at decision block 214, the process terminates until resumed by additional preferences or cash inflows are received. Notwithstanding any implications to the contrary, there is no necessity that a new preference be received for a position to be established (or expanded), rather, as new money to invest arrives, or sales from the existing portfolio generate cash to be reinvested (treated herein as new money to invest), the foregoing analysis may be ran on the existing aggregation of preferences as retained and dynamically changing within the database. In this manner, the mutual fund is established and each position contained within the mutual fund necessarily originated as a preference from at least one member of the community. Periodically, the portfolio may need to be rebalanced. By comparing the existing portfolio with a target portfolio, the desirability of retaining current holding versus swapping out for some other security in the population is determined.

[0026] FIG. 3 shows operation of the server node responsive to a request for a holdings listing. At functional block 300, a request for a holdings listing is received at the server node. The server serves a current listing to client node at functional block 302. A decision block 304, if a determination is made, holdings have changed since the last current listing. If they have changed, the server updates the record of the holding at functional block 306. In this manner, the next requesting user receives the, then, most current holdings list-

ing. In some of the embodiments of the invention, such updates may occur in real time. In other embodiments, it may be updated at the end of each business day. In this manner, the server node leverages the ability of the WAN to disseminate information rapidly to permit the essentially current dissemination of mutual funds holding information to investors. An analogous order of operation is performed responsive to a request for current transactions. By permitting users substantially direct access to both holdings and transactions of the fund, the user is provided greater information on which to base investment decisions.

[0027] FIG. 4 is a schematic diagram of a transaction listing that might be served by the server node of one embodiment of the invention. In this embodiment, transaction information is available from inception to the current date. Moreover, it is envisioned that transaction data may be specified to be retrieved for a particular period of time such as one month, six months, or for user's specified date range. The listing provides date of transaction, company, ticker symbol, action taken, number of shares, and average price. In one embodiment, each column heading is a link reactivation of which causes the listing to be sorted by that column. For example, clicking on the "date" link would cause the listing to appear date ordered, as shown. However, clicking on the company link would result in, for example, an alphabetical listing rather than a date ordered listing. Typically, the sorting would occur one server node and a new page reflecting the listing with the specified sort would be served to the client nodes.

[0028] FIG. 5 is a schematic diagram of a holdings listing in one embodiment of the invention. The holdings is similar to the transaction listing, only providing different information. Specifically, the holdings listing provides the current holdings of the fund. The holdings listing may be updated in realtime, or on an intermittent basis, such as after the market closes on each business day. In this embodiment, the information provides in the holdings listing includes the company, the ticker symbols, the number of shares held, the current price, the average purchase price for the position, the percent change, the average purchase price dollar change, and the percent of the portfolio represented by the position. Also similar to the transaction listing, the various column headings may be instantiated as links, the activation of which causes the server node to serve a page sorted on that column.

[0029] FIG. 6 is an example template used to join the community in one embodiment of the invention. Base on the on the information provided in such a template, a personal profile is established.

[0030] FIG. 7 is a page reflecting a personal profile established. From this personal profile page, a link exists activation of which permits the user to submit a pick. Responsive to the activation of that link, the server serves a template through which the user may submit its preferences.

[0031] FIG. 8 shows a template through which an analyst may submit a preference in one embodiment of the invention. The information extracted from this template once returned to the server node may be forwarded on to the investment analyzer to aid in the creation of a mutual fund, or other than a financial product.

[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, comprising:
- providing a web page to enable a potential member to register with a virtual community capable of supporting multiple registered members, the web page including a link to display a registration form to enable the potential member to provide registration information to become a registered member, the virtual community based on a theme and configured to enable at least some of the registered members to contribute to the theme;
- responsive to receiving the registration information from the potential member, verifying if the registration information is complete; and
- notifying the potential member if the registration information is not complete; otherwise creating a member profile for the potential member and causing the potential member to become the registered member.
- 2. The method of claim 1, wherein the registered member contributes to the theme using a contribution form.
- 3. The method of claim 1, wherein restrictions may be placed on a contribution by the registered member.
- **4**. The method of claim **1**, further comprising determining if the contribution meets objective criteria for inclusion.
- **5**. The method of claim **1**, wherein a contribution of the registered member is ranked.
- **6**. The method of claim **5**, wherein a reward structure is used to encourage contributions from the registered member.
- 7. The method of claim 6, wherein the reward structure is associated with referrals.
- **8**. The method of claim **6**, wherein the reward structure is valid for a predetermined period of time.
- 9. The method of claim 1, wherein contributions of multiple registered members are aggregated.
- 10. The method of claim 9, wherein the aggregated contributions are distributed electronically.
- 11. The method of claim 1, wherein notifying the potential member if the information is not complete comprises providing instructional messages regarding inadequacy of the information provided.
- 12. The method of claim 1, wherein the registration form includes modifiable fields and explanatory text to permit the potential member to provide the information to become the registered member.
- **13**. The method of claim **1**, wherein the web page is a hypertext markup language (HTML) page.
- 14. A computer readable medium containing sequences of instructions which are executable by a system, and which, when executed by the system, causes the system to perform a computer implemented method as described in claim 1.
  - 15. A computer implemented method, comprising:
  - receiving information contributed by a first registered member of a virtual community, the information related to a theme based on which the virtual community is established:
  - screening the information for objectively determinable characteristics;
  - aggregating the information contributed by the first registered member with information contributed by a second registered member of the virtual community; and
  - enabling the aggregated information to become available electronically.

- 16. The method of claim 15, further comprising establishing a member profile for the first registered member based on information received from the first registered member via a registration process.
- 17. The method of claim 15, further comprising analyzing and ranking the information contributed by the first registered member.
- 18. The method of claim 17, further comprising rewarding the first registered member for one or more of contribution and referrals.
- 19. The method of claim 15, further comprising providing a forum to enable communication between the first registered member and other registered members.
- 20. A computer readable medium containing sequences of instructions which are executable by a system, and which, when executed by the system, causes the system to perform a computer implemented method as described in claim 15.
  - 21. A system, comprising:
  - an application server connected to a network and configured to present web pages associated with a virtual community, the virtual community based around a theme;
  - a database server coupled to the application server and configured to store information associated with the virtual community; and
  - a plurality of client nodes connected to the network and to the application server, the client nodes used by potential

- members of the virtual community to register or by registered members of the virtual community to send contributions related to the theme, wherein the contributions are screened for objectively determinable characteristics before being made available to the virtual community.
- 22. The system of claim 21, wherein the application server comprises:
  - a web server configured to present the web pages associated with the virtual community, the web pages includes a registration form to register the potential members and a contribution form to receive the contributions; and
  - a data extractor to extract information from the registration form and from the contribution form.
- 23. The system of claim 21, further comprising an aggregator coupled to the application server, the aggregator configured to aggregate contributions received from the registered members and to distribute aggregated contributions electronically.
- 24. The system of claim 23, wherein the aggregator comprises a screen library used to screen the contributions for objectively determinable characteristics.
- 25. The system of claim 24, wherein the aggregator further comprises a rank module configured to rank the contributions.

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