# COMPETITIVE REWARDS BENCHMARKING SYSTEM AND METHOD

The present invention relates to the field of computer database systems and in particular relates to a competitive rewards benchmarking system and method.

Many business entities find it necessary to obtain, analyze and interpret worker rewards market data to better recruit and retain workers or "talent". Often, market pressures require business organizations to identify and retain the best qualified talent available, and ensure they are properly recognized and rewarded. However, several difficulties arise in carrying out this task.

Some business entities benchmark worker rewards against various competitors in such areas as: salary ranges, salary increases, paid/ unpaid leave, retirement programs; medical, dental, vision care, insurance programs, alternate work schedules and the like. Effective benchmarking requires relatively large amounts of up to date and accurate data. For example, competitive rewards data is preferably gathered from multiple business organizations via surveys and the like for incorporation into a database. In general, surveys are quite labor intensive to administer and can include data gathered and compiled on a local, national or global basis.

Competitive rewards data can be compiled in-house or can be obtained from a variety of sources (out-sourced). A typical competitive rewards database contains: base salary information, incentives and total cash compensation as well as other factors such as use of overtime, stock plans and cash awards (like performance bonuses and profit sharing). Reports generated from such data can contain global or national salary information as well as breakouts based on numerous criteria, including sales revenue, geographic region, industry type, company size and the like.

Often, access to out-sourced data requires a business entity to pay a fee and also commit at least a portion of its resources to compile and submit its data regarding its workers. The preparation and submission of this information is also quite labor intensive. However, out-sourcing is advantageous in that the actual compilation, maintenance and administration of the database are handled by a third party.

The consistency and accuracy of the compiled data can be affected by various factors. For example, various worker roles may not be defined consistently between business organizations. The geographic location of various businesses may affect the magnitude and form of worker compensation packages. Country specific rewards and

translating across currencies and cultures can add further inconsistencies in the data. Survey inconsistencies may also affect the accuracy of the gathered data.

What is needed in the art and provided by the invention are improved systems and methods for providing current competitive rewards data.

**Summary of the Invention**

The invention concerns a system and method for implementing and/or administering a competitive rewards database. Member data is received from at least one member computer via a data feed. The (raw) member data is automatically mapped and incorporated into the competitive rewards database.

According to one aspect of the present invention, there is provided a method for managing competitive rewards data for a plurality of members, comprising: obtaining the competitive rewards data from computer systems associated with the plurality of members for storage in a database, each member computer system coupled to the database via a data feed to support collection of the competitive rewards data in a storage medium accessible by all of the members; in the event that a portion of the competitive rewards data comprises a raw data format that is not compatible with a database format for the database, then converting the portion of the competitive rewards data having the raw data format to the database format; for each of the members, using a data mapping table to map at least selected segments of the competitive rewards data into corresponding fields of records for the database; and processing a plurality of the database records to complete an analysis of the competitive rewards data associated with one or more of the members in response to a request transmitted by one of the members.

According to another aspect of the present invention, there is provided a method of managing competitive rewards data for a plurality of members, comprising: obtaining the competitive rewards data from computer system associated with the plurality of members for storage in a database, each member computer system coupled to the database via a data feed; in the event that a portion of the competitive rewards data comprises a raw data format that is not compatible with a database format for the database, then converting the portion of the competitive rewards data having the raw data format to the database format; using a data mapping table to map at least selected segments of the competitive rewards data into corresponding fields of records for the database; processing a plurality of the database records for a subset of the compensation reward data accessible by a requesting one of the members to complete an analysis of competitive rewards, the subset comprising the requesting member's

competitive rewards data and compiled competitive rewards data derived from a compilation of the competitive rewards data obtained from the members; and generating a report of the analysis for the requesting member, whereby the analysis provides an up-to-date mapping for individuals employed by the requesting member to an established benchmark.

According to another aspect of the present invention, there is provided a competitive rewards database system, comprising: a computer database for storing a collection of records comprising competitive rewards data contributed by a plurality of different entities, the database maintained on a storage medium accessible by each of the entities; and a plurality of member computer systems, each associated with one of the entities and coupled to the database via a data feed to support the communication of competitive rewards data for that entity to the database, wherein the computer database, responsive to a determination that a portion of the competitive rewards data received via the data feed from one of the member computer systems comprises an entity-specific raw data format that is not compatible with a database format for the database, is operable to use mapping data to convert the portion of the competitive rewards data having the raw data format to the database format, and wherein the computer database, responsive to a request transmitted electronically by one of the members, is operable to process a plurality of the records to complete an analysis of the competitive rewards data associated with one or more of the members.

In a preferred embodiment, the competitive rewards database contains at least one of base pay data, long term incentive pay data and annual incentive pay data. Other data elements can include any human resource management system data element, incentive data, perquisite data and/or benefit plan provision data. The competitive rewards database can also contain at least one calculated data value.

Another preferred embodiment of the invention is direct to a data capture tool operable to adjust the mapping of member data. Preferably, the data capture tool is coupled to a data network and is operable to provide remote access to at least a portion of the competitive rewards database.

Another embodiment of the invention is directed to a rewards workbench operable to query the competitive rewards database. Preferably, the rewards workbench

is coupled to a data network and is operable to provide remote access to at least a portion of the competitive rewards database (e. g., compiled statistics summarizing the data received from multiple members). In a preferred embodiment, the rewards workbench is operable to automate data feeds to at least one third party human resources management system.

An embodiment of the invention is directed to a competitive rewards database system. The system may have a competitive rewards database subsystem having a competitive rewards database and a data communications channel. The system may have mapping data for automatically mapping member data prior to incorporation into the competitive rewards database. The system may also include at least one member computer system having a data feed coupled to the data communications channel.

In a preferred embodiment the system also has a data capture tool operable to adjust the mapping of member data. Preferably, the data capture tool is coupled to a data network and is operable to provide remote access to at least a portion of the competitive rewards database.

Another preferred embodiment of the system provides a rewards workbench operable to query the competitive rewards database. Preferably, the rewards workbench is coupled to a data network and is operable to provide remote access to at least a portion of the competitive rewards database. The rewards workbench can optionally be operable to automate data feeds to at least one third party human resources management system.

**Brief Description of the Drawings**

Figure 1 is a general block diagram showing the basic components of computer system in accordance with the invention;

Figure 2 is a block diagram showing the basic components of the competitive rewards database subsystem in accordance with the invention;

Figure 3 is flow chart illustrates operation of a computer system with respect to member data feeds in accordance with the invention; and

Figure 4 is an exemplary data mapping table in accordance with the invention.

**Detailed Description of the Invention**

**Definitions**

The following terms shall have, for the purposes of this application, the respective meanings set forth below.

- **Database:** means a collection of information stored for later retrieval. Traditional databases are organized by fields, records, and files. A field is a single piece of information; a record is one complete set of fields; and a file is a collection of records. The term "database" is used herein in its broadest sense (i.e., a collection of information) and is not limited to any particular structure or implementation.
- **Data network:** means a group of two or more computer systems linked together in data communication. The term "data network" encompasses any type of wired or wireless computer network, independent of protocol, including local-area networks (LANs), wide-area networks (WANs) and networks of networks including the an intranet, extranet and the Internet.
- **HTML:** is an acronym for Hyper-Text Markup Language, the authoring language used to create documents on the World Wide Web. HTML defines the structure and layout of a Web document by using a variety of tags and attributes.
- **Link:** means an HTML element that provides a Hyper-Text link. For example an HTML element supporting the HREF attribute which specifies a Hyper-Text link to another resource, such as an HTML document, image or the like.
- **Server:** means a program running on a computer that provides some service to other (e.g., client) programs.

The invention concerns a competitive rewards database system and method of administration. The system is operable to receive member data from at least one member computer via a data feed and automatically map the member data prior to incorporation into the competitive rewards database. The system is preferably coupled to a plurality of member human resources management systems (i.e., computer systems) and receives automatic data feeds of raw member data on a regular basis.

The term "member computer system" as used herein refers to a member's human resources management systems (HRMS). A typical member HRMS is implemented with a proprietary software package and one or more computer. The implementation, configuration, maintenance and operation of a computer based HRMS is well known to those skilled in the art.

Figure 1 shows a block diagram of a computer system in accordance with the invention. The computer system has a competitive rewards database subsystem 10 (associated with at least one computer) operable store data such as base pay data, long term incentive pay data and annual incentive pay data. Other data elements can include any human resource management system data element, incentive data, perquisite data and/or benefit plan provision data and the like. Mapping data 20 provides a mechanism for automatically mapping raw member data prior to incorporation into the competitive rewards database as discussed in more detail below. Mapping data 20 is generally coupled to the competitive rewards database subsystem 10 as shown generally by arrow 22 (e.g., via Lan, Wan, intranet, extranet or the like).

The competitive rewards database subsystem 10 is preferably coupled to at least one member computer system. See blocks 30, 32, 34 and 36. Data communication (e.g., data feeds) between member computer systems 30, 32, 34 and 36 and the competitive rewards database subsystem 10 are shown generally by arrows 40. Data communications in association with database reporting functions are shown generally by arrows 70. Data communications in association with data capture tool 52 is shown generally by arrow 52. Data communications between various portions of the system are preferably carried out via a data network such as the Internet. It is understood that other data network configurations are compatible with the invention (e.g., Lan, Wan, intranet, extranet or the like). It is also understood that enhanced security can be provided via firewalls, secure servers and the like.

In the case of the Internet, data communications often traverse a series of intermediate network nodes prior to reaching the desired destination. Arrows 40, 52 and 70 do not suggest a direct physical connection between the member computer systems and the competitive rewards database subsystem and encompass typical Internet communications (a connectionless, best-efforts packet-based system).

It is understood that other components may be required to fully implement communications between the member computer systems 30, 32, 34 and 36 and the competitive rewards database subsystem such as firewalls, routers, policy servers, Web servers, application servers, enterprise management systems, data communications channels (e.g. communications equipment, leased data lines and the like), switches, encryption products and/or gateways and the like. Configuration of the required hardware and software to implement data communication in accordance with the invention is well known to those skilled in the art.

A data capture tool 50 is coupled to the competitive rewards database subsystem. The data capture tool is preferably an Internet World Wide Web based "smart" tool to capture HR and Line Manager input on benchmark global job matches. Preferably, the data capture tool is populated with appropriate employee data (based on data in the competitive rewards database) according to reporting relationships. Line Managers can then advantageously review data for each employee they supervise.

A rewards workbench is 60 is coupled to the competitive rewards database subsystem. The rewards workbench is an analytic tool to access to data contained in the competitive rewards database subsystem. The rewards workbench is preferably operable to query the competitive rewards database and provide various reports relevant to competitive rewards analysis, total compensation planning, data mining and performance based analysis.

The data capture tool 50 and rewards workbench 60 are preferably implemented via with one or more HTML servers hosting an Internet Web site. There are many varieties of commercially or publicly available World Wide Web server software packages which are compatible with the invention (e.g., Apache, IBM WebSphere products, NETSCAPE Enterprise, Microsoft Windows IIS Server and the like) all of which can be implemented with commonly available hardware from vendors such as IBM, Hewlett Packard, Compaq, Dell, Sun and numerous others that are known to those skilled in the art.

Members wishing to access the data capture tool 50 or rewards workbench 60 will typically use a network processing device (not shown) coupled to the external data network (e.g., the Internet). Two or more network devices (e.g., a network processing device and competitive rewards database subsystem 10) as disclosed herein are "coupled" so long as data communication between the devices is possible (e.g., hard wired data communication, wireless data communications and the like). Typical network processing devices include, but are not limited to, personal computers (portable or desktop), personal digital assistants (PDA), Browser phones, 2-way pagers or the like. Network processing devices also include browser software or the like for providing a user interface and enabling communication with the external data network (e.g., Microsoft Internet Explorer, Netsacape Communicator, mini-browsers or the like).

In the context of the Internet, the network processing device and the competitive rewards database subsystem 10 communicate via TCP/IP protocol (Transmission Control Protocol over Internet Protocol). Each is network addressable in that it has a specific IP address (e.g., a 32-bit address defined by the Internet Protocol usually represented in dotted decimal notation) which is used to route data between the devices. It is also understood that other data networks using various network protocols are suitable for use in accordance with the invention.

Figure 2 shows a block diagram of the competitive rewards database subsystem 10. Competitive rewards database 12 is generally operable to store data acquired from the member systems. However, raw data from the member computer systems must be mapped, in accordance with mapping data 20, prior to incorporation into the competitive rewards database 12 as discussed in more detail below. Computer(s)/server(s) 14 are generally operable to communication with the member computer systems via communications hardware/software 16. The interconnection of computers, servers, communication equipment and the like in accordance with the invention is well within the grasp of those skilled in the art. For example, the competitive rewards database subsystem 10 can be implemented via a Lan, Wan, intranet, extranet or the like.

Figure 3 generally illustrates operation of a computer system with respect to member data feeds in accordance with the invention. Preferably, each of the member computer systems 30, 32, 34 and 36 are configured to automatically transfer raw data on a somewhat regular or periodic basis (e.g., daily, weekly, monthly...). In the alternative, the competitive rewards database system 10 can be configured to poll each of the

member computer systems. Raw data can be transferred via any communication protocol, including but not limited to HTTP, FTP, GOPHER, NEWS, NNTP, MAILTO and the like.

The invention contemplates integration with a plurality of proprietary HRMS. Each member computer system may have a different raw data format. Preferably, each member has associated data map stored in the competitive rewards database subsystem. See Figures 1 and 2, block 20. The data map generally correlates each data element in the raw data with corresponding locations in competitive rewards database. Some of the raw data may be directly copied into the competitive rewards database. Other portions of the raw data may be translated, scaled, re-formatted, re-calculated and/or adjusted as necessary for compatibility with the format of the competitive rewards database. Once the raw data is mapped, it is stored in the competitive rewards database.

Figure 4 shows an exemplary portion of a data mapping table (incorporated into mapping data 20). It is generally understood that raw member data from a member's HRMS will contain a plurality of records. Figure 4 shows the data mapping for an excerpt of a HRMS database record including information related to a single employee. In a preferred embodiment, all of the raw data is mapped to a corresponding field in the competitive rewards database. In an alternate embodiment, some of the raw data can be omitted from the competitive rewards database (e.g., employee name, social security number and the like).

Some portions of the raw data are simply mapped into appropriate locations in the competitive rewards database. As stated above some of the raw data may be translated, scaled, re-formatted, re-calculated and/or adjusted as necessary for compatibility with the format of the competitive rewards database. For example, some HRMS may specify a given employee position by a text string (e.g., ASCII code). The competitive rewards database may be advantageously implemented with a plurality of numeric codes (i.e., job codes). Translation of text strings to numeric codes as well as general implementation of a data mapping table in accordance with the invention based on the foregoing disclosure is well within the scope of those skilled in the art.

In operation, each of the member computer systems transmits raw data to the competitive rewards database system. The raw data is mapped and re-formatted as necessary and is incorporated into the competitive rewards database. Data capture tool 50 can then be used by members (e.g., HR Managers, Line Managers) to view portions

of the competitive rewards database populated with appropriate employee data according to reporting relationships. The Manager can then review data for each employee they supervise. Preferably, menu-driven options are provided thereby enabling the Manager to "tag" employees — by function, discipline, level, and scope — and flag high-performers. Preferably, on-line help is available to guide managers through the matching process. In a preferred aspect of the invention, HR and Line Managers can review and update the mapping and competitive rewards database information as part of on-going HR processes.

Thus, the invention advantageously provides an up-to-date mapping of employees to benchmarks established by all members of the competitive rewards database system (e.g., function, discipline, level). This promotes Manager acceptance of market data and ensures robust, high-quality data.

Rewards workbench 60 provides members with a comprehensive analytic tool operable to access data contained in the competitive rewards database subsystem. The rewards workbench is preferably operable to: query prevalence of reward practices and plan provisions, compare member reward values to specific comparator groups, develop market reference data from the competitive rewards database, model and develop base pay structure, analyze cost implications, conduct data mining analyses on member's own data, and generate other custom real-time analyses on the competitive rewards database. The generation of various reports and analysis based on competitive rewards database information is well within the scope of those skilled in the art.

In a preferred embodiment, the rewards workbench provides for the formatting and export of formatted member data for submission to surveys. This information can be automatically transmitted to a third party HRMS. See Figure 1, reference number 80.

Rewards workbench 60, advantageously provides direct access to a robust data source to conduct a wide range of sophisticated analyses. This improves efficiency of survey submission process by leveraging initial benchmark matching and validation efforts (using the data capture tool). Rewards workbench 60 also allows electronic feed of competitive rewards data to other specialized human resources systems.

It is understood that some of the data contained in the competitive rewards database is not available to all users. For example, each member preferably can access all of data contained in the competitive rewards database derived from their raw data. Each member can also access a subset of the data contained in the competitive rewards

database derived from other member raw data (e.g., compiled statistics summarizing the data received from multiple members). However, individual employee names, social security numbers, personal data, billing information are not made available to other members. In general, access to member data is restricted as needed for compliance with international, federal, state and local regulations (e.g., the timing of release of new data, the level of detail of the data released, and the release of data with respect to various geographic regions).

While this invention has been described with an emphasis upon preferred embodiments, it will be obvious to those of ordinary skill in the art that variations in the preferred devices and methods may be used and that it is intended that the invention may be practiced otherwise than as specifically described herein. Accordingly, this invention includes all modifications encompassed within the spirit and scope of the invention as defined by the claims that follow.

CLAIMS:

1. A method for managing competitive rewards data for a plurality of members, comprising:

obtaining the competitive rewards data from computer systems associated with the plurality of members for storage in a database, each member computer system coupled to the database via a data feed to support collection of the competitive rewards data in a storage medium accessible by all of the members;

in the event that a portion of the competitive rewards data comprises a raw data format that is not compatible with a database format for the database, then converting the portion of the competitive rewards data having the raw data format to the database format;

for each of the members, using a data mapping table to map at least selected segments of the competitive rewards data into corresponding fields of records for the database; and

processing a plurality of the database records to complete an analysis of the competitive rewards data associated with one or more of the members in response to a request transmitted by one of the members.

2. The method of claim 1, wherein the competitive rewards data comprises at least one of fixed compensation data and incentive compensation data for individuals employed by the members.

3. The method of claim 1, wherein the step of obtaining the competitive rewards data comprises transmitting the competitive rewards data from each member computer system via the data feed to the database.

4. The method of claim 3, wherein the step of obtaining the competitive rewards data further comprises transmitting the competitive rewards data from each member computer system to the database on a periodic basis.

5. The method of claim 1, wherein the step of obtaining the competitive rewards data for each of the members comprises:

sending a polling signal from the database to one of the member computer systems; and

responsive to the polling signal, transmitting the competitive rewards data from the member computer system via the data feed to the database.

6. The method of claim 1, wherein the data mapping step comprises:

using the data mapping table assigned to the corresponding member to map without manual intervention the selected segments of the competitive rewards data associated with the member into the corresponding fields of database records;

storing the database records in the database.

7. The method of claim 1 further comprising the step of generating a report relevant to the analysis of the competitive rewards data.

8. The method of claim 1, wherein the analysis provides an up-to-date mapping for rewards data of employees of the requesting member to an established benchmark.

9. The method of claim 1, wherein the analysis comprises a comparison of the rewards data for the requesting member to a benchmark derived from the competitive rewards data maintained by the database.

10. The method of claim 1, wherein the analysis provides the requesting member with an ability to evaluate the prevalence of reward practices and plan provisions based on a robust data set comprising the compensation rewards data submitted by the plurality of the members.

11. The method of claim 1, wherein the analysis provides the requesting member with the ability to compare values of competitive rewards data of different ones of the members to specific comparison groups.

12. The method of claim 1, wherein the analysis allows the requesting member to develop market-based compensation reference data based on the competitive rewards data submitted by all or a portion of the members.

13. The method of claim 1, wherein the analysis allows the requesting member to model and develop a base compensation structure by evaluating the competitive rewards data submitted by the plurality of the members.

14. The method of claim 1 further comprising the step of exporting competitive reward data maintained in the database in an electronic format on behalf of one of the plurality of the members for use in a survey submission to a party that is not one of the plurality of the members.

15. The method of claim 1, wherein one of the member computer systems can access on behalf of the corresponding member only a subset of the competitive rewards data maintained in the database, the subset comprising the member's competitive rewards data and compiled competitive rewards data derived from a compilation of the competitive rewards data obtained from the plurality of the members.

16. The method of claim 1 wherein the competitive rewards database comprises at least one of base pay data, long term incentive pay data and annual incentive pay data.

17. The method of claim 1 wherein the competitive rewards database comprises at least one calculated data value.

18. The method of claim 1, wherein a data capture tool, coupled to a data network that allows the members to have remote access to at least a portion of the competitive rewards database, is operable to adjust the mapping to the competitive rewards data.

19. The method of claim 1, wherein a rewards workbench, coupled to a data network that allows the members to have remote access to at least a portion of the competitive rewards database, comprises an analytic tool operable to query the competitive rewards database and to allow an electronic feed of competitive rewards data to at least one third-party human resources management system.

20. A method of managing competitive rewards data for a plurality of members, comprising:

obtaining the competitive rewards data from computer systems associated with the plurality of members for storage in a database, each member computer system coupled to the database via a data feed;

in the event that a portion of the competitive rewards data comprises a raw data format that is not compatible with a database format for the database, then converting the portion of the competitive rewards data having the raw data format to the database format;

using a data mapping table to map at least selected segments of the competitive rewards data into corresponding fields of records for the database;

processing a plurality of the database records for a subset of the compensation reward data accessible by a requesting one of the members to complete an analysis of competitive rewards, the subset comprising the requesting member's competitive rewards data and compiled competitive rewards data derived from a compilation of the competitive rewards data obtained from the members; and

generating a report of the analysis for the requesting member, whereby the analysis provides an up-to-date mapping for individuals employed by the requesting member to an established benchmark.

21. The method of claim 20, wherein the competitive rewards data comprises at least one of fixed pay data and incentive compensation data for the individuals employed by each of the members.

22. The method of claim 20, wherein the step of obtaining the competitive rewards data comprises transmitting the competitive rewards data from each member computer system on a periodic basis via the data feed to the database.

23. The method of claim 20, wherein the step of obtaining the competitive rewards data for each of the members comprises:

sending a polling signal from the database to one of the member computer systems; and

responsive to the polling signal, transmitting the competitive rewards data from the member computer system via the data feed to the database.

24. The method of claim 20, wherein the step of obtaining the competitive rewards data comprises transmitting the competitive rewards data from each member computer system at predetermined intervals without manual intervention via the data feed to the database.

25. A competitive rewards database system, comprising:

a computer database for storing a collection of records comprising competitive rewards data contributed by a plurality of different entities, the database maintained on a storage medium accessible by each of the entities; and

a plurality of member computer systems, each associated with one of the entities and coupled to the database via a data feed to support the communication of competitive rewards data for that entity to the database,

wherein the computer database, responsive to a determination that a portion of the competitive rewards data received via the data feed from one of the member computer systems comprises an entity-specific raw data format that is not compatible with a database format for the database, is operable to use mapping data to convert the portion of the competitive rewards data having the raw data format to the database format, and

wherein the computer database, responsive to a request transmitted electronically by one of the members, is operable to process a plurality of the records to complete an analysis of the competitive rewards data associated with one or more of the members.

26. The competitive rewards database system of claim 25, wherein each member computer system is operative to transmit the competitive rewards data from each entity at predetermined intervals without manual intervention via the data feed to the computer database.

27. The competitive rewards database system of claim 25, wherein each member computer system is operative to transmit the competitive rewards data from each entity on a periodic basis via the data feed to the computer database.

28. The competitive rewards database system of claim 25, wherein the database is operative to sending a polling signal to one of the member computer systems; and

responsive to the polling signal, the member computer system is operative to transmit the competitive rewards data from the member computer system via the data feed to the computer database.

29. The competitive rewards database system of claim 25 further comprising a data capture tool coupled to the database via a computer network, for obtaining access to competitive rewards data maintained at the computer database in support of an analysis function for one of the entities.

30. The competitive rewards database system of claim 25 further comprising a rewards workbench, coupled to the database via a computer network, for transmitting a query to access competitive rewards data maintained at the computer network and for generating analysis reports related to an analysis of the competitive rewards data.

31. The competitive rewards database system of claim 25, wherein the competitive rewards data comprises at least one of fixed compensation data and incentive compensation data for individuals employed by the members.