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PAYROLL MANAGEMENT METHOD AND APPARATUS

FIELD OF THE INVENTION

The present invention relates to a method and apparatus for managing payrolls, of the type where employees are paid according to the time actually attended or worked.

BACKGROUND OF THE INVENTION

Existing systems for managing payrolls of this type typically require the preparation of rosters, and the entering by employees (whether by time clock or time sheet, etc) of the time actually worked. The time actually worked will commonly not correspond exactly to the rostered hours, owing to employee illness, late attendance, overtime, early departure, etc.

Details of the accumulated time worked - as recorded on a time sheet or otherwise - is passed to and authorised by a supervisor, and then sent to payroll administration for processing. The times and accumulated hours actually worked are compared with the roster so that habitual diligence or tardiness, absences due to sickness etc, or any other significant issue can be monitored, recorded and appropriate action - if any - taken.

Payroll administration posts all wage amounts to specific accounts in the general ledger and accrual accounts for future payments. Statutory reports and EFT (electronic funds transfer) submissions are undertaken and the appropriate sums forwarded to the relevant authority or financial institution. Payroll administration must also prepare pay slips, which are distributed to each employee with - if EFT is

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not used - pay attached.

Periodically, statements of yearly earnings and income tax deductions, etc (referred to in some jurisdictions as "Group Certificates") may be prepared and distributed.A flow chart for an example of such a prior art system is shown in figure 1, from the step of recruiting employees to the ultimate issuing of Group Certificates.

Such prior art systems, however, require a large quantity of data entry, including into the initial roster, into time sheets, and into the payroll administration system.

SUMMARY OF THE INVENTION

It is an object of the present invention to provide a payroll method and apparatus that reduces the amount of data entry required by combining a number of these steps.

According to the present invention, therefore, there is provided a method of maintaining a payroll, including:

preparing a roster;

storing said roster in a processing means;

receiving in said processing means attendance information pertaining to one or more workers;

comparing said roster and said attendance information by means of said processing means;

preparing a payroll in respect of a respective worker based on said roster; and

authorizing said payroll if said attendance information pertaining to said respective worker agrees with said roster in respect of said respective worker to within a predetermined tolerance.

Thus, the integration of roster maintenance and

attendance information entry obviates the need for separate payroll data entry or for a time sheet. If an actual time sheet is still desired (for example, for an employee's records or to conform with legal requirements), a time sheet can readily be generated for each employee from the attendance information. However, time sheets are not required to prepare the payroll.

The step of preparing the payroll does not usually include authorising or paying the payroll; authorising the payroll would usually be regarded as separate operation to be performed by a person. However, if the attendance information for any particular worker meets predetermined criteria (such as agreeing within certain tolerances with the original roster), the method authorises the payroll as it pertains to that particular worker. For example, if a worker has commenced and finished work within 5 minutes of every rostered starting and finishing time, and the worker's total attendance is within 1% of the total hours rostered for that worker, the method may include automatically authorising the worker's pay.

The term "attendance information" is used to refer to any measure of the time worked by a worker. In some cases a worker may be employed in a number of different capacities within the one workplace, each capacity having a different pay rate. In such cases, the attendance information would preferably include information pertaining to the attendance of the worker in each separate capacity.

The attendance information preferably includes arrival or commencement time, and departure or finishing time.

Preferably said method includes receiving said attendance information from each respective worker.

Preferably said method includes receiving said attendance information by means of data entry means operable by each respective worker.

Preferably said data entry means comprises an identity card and an identity card reader. The card may be a smart card. Alternatively, the data entry means may comprise a keypad, a fingerprint reader or an iris reader.

Thus, the data entry means can identify each worker and send to the processing means the identity of that worker with time of arrival or departure.

The method preferably includes transferring the pay by electronic funds transfer to the worker's bank account, calculating and transferring the required income tax to the appropriate statutory authority, and producing a pay slip.

The method preferably includes measuring compliance of workers with the roster and providing an output indicating breaches of that compliance greater than a predetermined level.

The present invention also provides an apparatus for maintaining a payroll, comprising:

roster preparation means;

processing means for storing said roster, receiving attendance information pertaining to one or more workers, comparing said roster and said attendance information, and for preparing said payroll based on said roster; and

authorization means for determining if said payroll or a part thereof agrees with said

roster to within a predetermined tolerance and, if so, authorizing said respective payroll or part thereof.

The attendance information preferably includes arrival or commencement time, and departure or finishing time.

Preferably said apparatus includes data entry means operable by each worker to enter respective attendance information.

Preferably said data entry means comprises an identity card and an identity card reader. The card may be a smart card. Alternatively, the data entry means may comprise a keypad, a fingerprint reader or an iris reader.

Preferably said apparatus includes fund transfer means for transferring funds according to said authorisation. Preferably said apparatus includes pay slip preparation means for preparing pay slips.

Preferably said apparatus includes compliance monitoring means for monitoring the compliance of workers to said roster and outputting or indicating breaches of that compliance greater than a predetermined level.

In one aspect, the present invention also provides a method of costing a roster, involving:

preparing a roster, said roster comprising one or more work periods, each work period being populated by one or more workers;

providing award information for calculating a payroll for each of said workers in said roster; and

calculating a roster wage cost that would result from implementation of said roster, based on

said roster and said award information;

wherein a respective pay-rate for a respective worker may depend on the work period populated by said respective worker, and a respective worker may be rostered in more than one of said work periods.

In another aspect, the present invention provides an apparatus for costing a roster according to the method described above.

The present also provides a computer program product directly loadable into the internal memory of a computer, comprising software code portions for performing the steps of the method described above when the product is run on a computer.

The present invention still further provides a computer program product stored on a computer useable medium, comprising computer readable program means for causing a computer to perform the steps of a method as described above.

The present invention still further provides a computer readable medium, having a program recorded thereon, wherein said program is for making a computer execute a method as described above.

BRIEF DESCRIPTION OF THE FIGURES

A preferred embodiment of the present invention will now be described, by way of example, with reference to the accompanying drawings, in which:

Figure 1 is a flow chart of a prior art payroll management system; and

Figure 2 is a flow chart of a payroll management system according to a preferred embodiment of the present invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

A flow chart of a payroll management system according to a preferred embodiment of the present invention is shown in figure 2. The system includes a computer running a program that carries out each of the functions (other than those requiring human intervention) described below.

Potential employees are recruited through normal channels, and successful employees entered onto a database of the system.

A roster is developed (preferably on the system directly) and stored on the system, for each operation within an organisation. Each roster is costed by the system. Each roster incorporates the planned or required attendance of each employee of the respective department within that organisation. Management advises employees of their required attendance over a specified period of time by means of such a roster.

Employees record their actual attendance by means of electronic time clocks linked to the system, and operated with a keypad. Each employee is allocated a Personal Identification Numbers (PIN), which is entered upon arrival and at departure. The system identifies the employee on the basis of the PIN, and records arrival and departure times for that employee.

In other preferred embodiments, a fingerprint identification pad is provided instead of a keypad and PIN: an employee places a finger or thumb as required on the pad so that the system can identify the employee and record the corresponding arrival or

departure time.

Attendance for each employee is then automatically compared by the system with the roster of that employee and, if they are in agreement, the appropriate pay is calculated: no further input is required. The pay data can then be forwarded electronically from the system to the general ledger, paymaster or even directly to the bank for the payment of the employee's wages and other benefits.

If the time and attendance function identifies a variance between the roster and the times of attendance of that employee, the system will flag the variance and require the human intervention of management to decide on what basis that employee will be paid for the relevant period. It may be that a reduced pay is deemed appropriate, or - if management have been notified of a legitimate excuse (such as one due to illness or compassionate leave) - the appropriate sick pay etc calculated. This function can be undertaken at the point of the pay authorization or payroll run.

The system includes a database containing wage rate data, (in some jurisdictions termed "awards") to enable the aforementioned calculation of the appropriate pay. This data is also used to calculate statutory charges associated with the employment of each employee. The system also uses this data to predict the projected payroll cost of a particular roster.

Once each part of the payroll has been approved (by the system where attendance/roster variance is

within an acceptable level, or manually where not) pay can be electronically forwarded to the appropriate accounts.

The system then generates the necessary pay slips for the employees, and payroll reports (including details of variance from the roster, wages, superannuation, tax deductions, etc, as well as wage cost predictions) for management.

As the rosters are stored by the system, the rosters can be copied from previous periods to expedite the development of specific subsequent rosters which are tailored for specific trading conditions.

The system can also be used to process pays without the need for a formal time of attendance process by way of the approving the pay by using the pay roster function. This can be used in instances that an employee does not want to verify attendance of all or some of the employees.

The system also allows employees to access their own rosters, attendance details and pay details, thereby reducing the cost of distributing such data and material. It also enables employees who do not wish to receive formal documents of their pays etc other than their bank details not to receive them. This function lowers the cost of payroll processing

Further, employees can access the system to notify non-availability for specific future periods, to ensure that rosters prepared subsequently by management only include available employees.

THE CLAIMS DEFINING THE INVENTION ARE AS FOLLOWS:

1. A method of maintaining a payroll, including:

preparing a roster;

storing said roster in a processing means;

receiving in said processing means attendance information pertaining to one or more workers;

comparing said roster and said attendance information by means of said processing means;

preparing a payroll in respect of a respective worker based on said roster; and

authorizing said payroll if said attendance information pertaining to said respective worker agrees with said roster in respect of said respective worker to within a predetermined tolerance.

2. A method as claimed in claim 1, wherein said attendance information includes arrival or commencement time, and departure or finishing time.

3. A method as claimed in either claim 1 or 2, including receiving said attendance information from each respective worker.

4. A method as claimed in any one of the preceding claims, including receiving said attendance information by means of data entry means operable by each respective worker.

5. A method as claimed in any one of the preceding claims, wherein said data entry means comprises an identity card and an identity card reader.

6. A method as claimed in claim 5, wherein said card is a smart card.

7. A method as claimed in any one of the preceding

claims, wherein said predetermined tolerance comprises agreement to within a predetermined time period between rostered and actual starting times, between rostered and actual finishing times, or both, for said respective worker.

8. A method as claimed in any one of claims 1 to 6, wherein said predetermined tolerance comprises agreement between said roster and said attendance information in respect of said respective worker.

9. A method as claimed in any one of claims 1 to 6, wherein said predetermined tolerance includes agreement to within a predetermined time period or factor between rostered and actual total attendance for said respective worker.

10. A method as claimed in any one of the preceding claims, including automatically paying, or initiating the paying of, said respective worker.

11. A method as claimed in any one of the preceding claims, including measuring compliance of workers with the roster and providing an output indicating breaches of that compliance greater than a predetermined level.

12. A method as claimed in any one of the preceding claims, including costing said roster.

13. An apparatus for maintaining a payroll, comprising:

roster preparation means;

processing means for storing said roster, receiving attendance information pertaining to one or more workers, comparing said roster and said attendance information, and for preparing said payroll based on said roster; and

authorization means for determining if

said payroll or a part thereof agrees with said roster to within a predetermined tolerance and, if so, authorizing said respective payroll or part thereof.

14. An apparatus as claimed in claim 13, including data entry means operable by each worker to enter respective attendance information.

15. An apparatus as claimed in claim 14, wherein said data entry means comprises an identity card and an identity card reader.

16. An apparatus as claimed in any one of claims 13 to 15, including authorization means for determining if said payroll or a part thereof meets said predetermined tolerance and authorizing said respective payroll or part thereof if said predetermined tolerance is met.

17. An apparatus as claimed in claim 16, including fund transfer means for transferring funds according to said authorizing of said respective payroll or part thereof.

18. An apparatus as claimed in any one of claims 13 to 17, including compliance monitoring means for monitoring the compliance of workers to said roster and outputting or indicating breaches of that compliance greater than a predetermined level.

19. An apparatus as claimed in any one of claims 13 to 18, wherein said apparatus is also operable to cost said roster.

20. An apparatus for costing a roster, having:

roster preparation means, said roster comprising one or more work periods, each work period being populated by one or more workers;

a database of award information for calculating a payroll for each of said workers in said roster; and

processing means for calculating a roster wage cost that would result from implementation of said roster, based on said roster and said award information;

wherein a respective pay-rate for a respective worker may depend on the work period populated by said respective worker, and a respective worker may be rostered in more than one of said work periods.

21. A method of costing a roster, involving:

preparing a roster, said roster comprising one or more work periods, each work period being populated by one or more workers;

providing award information for calculating a payroll for each of said workers in said roster; and

calculating a roster wage cost that would result from implementation of said roster, based on said roster and said award information;

wherein a respective pay-rate for a respective worker may depend on the work period populated by said respective worker, and a respective worker may be rostered in more than one of said work periods.

22. A computer program product directly loadable into the internal memory of a computer, comprising software code portions for performing the steps of the method of maintaining a payroll as claimed in any one of claims 1 to 12 when said product is run on a computer.

23. A computer program product stored on a computer useable medium, comprising computer readable program means for causing a computer to perform the steps of

the method of maintaining a payroll as claimed in any one of claims 1 to 12.

24. A computer readable medium, having a program recorded thereon, wherein said program is for making a computer execute the method of maintaining a payroll as claimed in any one of claims 1 to 12.

25. A computer program product directly loadable into the internal memory of a computer, comprising software code portions for performing the steps of the method of costing a roster as claimed in claim 21 when said product is run on a computer.

26. A computer program product stored on a computer useable medium, comprising computer readable program means for causing a computer to perform the steps of the method of costing a roster as claimed in claim 21.

27. A computer readable medium, having a program recorded thereon, wherein said program is for making a computer execute the method of costing a roster as claimed in claim 21.