SMART CARD BETTING/BANKING SYSTEM

Background of the invention

The present invention relates to a smart card betting/banking system, and in particular, to a smart card betting system which may utilise wireless or conventional communication channels, and which may have a wireless or conventional communication electronic banking interface via a magnetic card, (credit/debit) such as a bankcard. The present invention generally relates to such a smart card betting system which may be utilised for on-course or off-course fixed priced and totalisator betting, sports-betting, wagering and/or gaming, games of chance, lotteries, etc., either in conjunction with, or without, established providers.

In its preferred form, the present invention relates to a smart card betting system which has a host device to receive, transmit and process information, including betting, debit, credit, and/or identification information, and, plurality of betting terminals which may either be hand-held or kiosk styled devices, each of which are adapted to receive smart (IC) (Integrated Circuit) cards issued to operators.

A communications channel, being a wireless, infra-red and/or hard wired communications channel, is established for two-way communication of information between the host device and the betting terminals.

Each of the betting terminals are adapted to be utilised by an operator, wherein the operator places his or her smart (IC) card within the betting terminal, and supplies other identification information pertinent to the particular operator, such that the information is communicated and verified by the host device. Once identification has been confirmed, the operator may supply betting information into the betting terminal, which is then communicated to the host device.

After a race result is determined, the race result information is then processed by the host device to determine any winning operators, such that, upon placement of the smart card of the

respective operator into a betting terminal, the race result information is communicated to the betting terminal and this smart card is updated with the information, including any monies owed to the operator as a result of any successful bets/transactions.

Description of the Prior Art

Presently, there exists two main types of race betting procedures.

The first, and more traditional, is the procedure whereby a punter attends a race meeting and places a bet with a bookie. The bookie displays his individual odds, which the punter can assess and compare with those of other bookies, and then inform the bookie of the amount of the bet. Money is then exchanged for a ticket, upon which the pertinent information related to the horse (or other competitor), such as the race and horse details, the odds, etc., is written.

The other, more recent, type of betting procedure utilises a comprehensive system, such as that of the Totalisator Agency Board (TAB). In this procedure, the punter marks his selections on a card and registers his card and makes payment of his money. Information on the card, pertinent to the bet is supplied into a centralised computer. After the race is finished, the race result information is supplied into the computer, and, depending upon the other bets placed by other punters, the winnings amounts are determined. The punters then return their cards to collect their winnings.

It will be appreciated that there are certain disadvantages with these presently used systems, including the inconvenience in the punters having to physically attend the bookie's stand or the TAB office to place the bet, and, the general necessity to provide cash at the time the bet is placed.

Summary of the invention

The present invention seeks to provide a betting system which overcomes the disadvantages of the prior art.

The present invention also seeks to provide a betting system which utilises smart cards,

otherwise known as integrated circuit (IC) cards.

The present invention also seeks to provide a betting system which enables punters (operators) to place a bet from a remote location, by either a wireless or hand-wired communications channel.

The present invention also seeks to provide a betting system whereby a punter (operator) can transfer funds between a bank account, a host device betting account and/or an electronic purse of a smart (IC) card.

In one broad form, the present invention provides a smart (I.C.) card betting system, comprising:

a host device to receive/transmit and process betting/credit/identification information;

a plurality of betting terminals, each betting terminal adapted to receive a plurality of smart (I.C.) cards issued to a plurality of operators, respectively; and,

a communications channel for two-way communication of information between said host device and said betting terminals;

wherein, for an operator to perform a betting sequence at a betting terminal:

said operator places a smart (I.C.) card and other identifying information into said betting terminal;

said information is communicated to and verified by said host device;

said operator supplies betting information into said betting terminal, which is communicated to said host device; and

wherein, after a race result is determined:

race result information is processed by said host device to determine any winning operator(s);

upon placement of said smart card into said betting terminal, race result information is communicated to said betting terminal(s) and said smart card information is updated.

Preferably, the system further comprises an electronic banking interface means associated

with said betting terminals, whereby, an operator can transfer funds between a credit or banking authority, a host device betting account and/or an electronic purse of a smart (I.C.) card.

Also preferably, the system further comprises control/processor means to control communications between said betting terminals, one or more host device, and, said bank.

In preferred forms, said communications channel is a wireless, such as infrared, and/or hard wired communications channel.

Also preferably, said electronic banking interface is via a magnetic card, such as a continuous credit/debit card.

In a preferred embodiment, each said betting terminal is comprised of:

data entry means (keypad) to effect operator entry of said information;

display means to display said information;

a communications port to effect communication of said information to/from said terminal; and

card read/write means to receive a smart (I.C.) card and to read and write information to and from said smart (I.C.) card.

Preferably, said betting terminals are portable hand-held terminals.

Alternatively, said betting terminals are fixed or multi-drop table units.

Alternatively, but also preferably, said betting terminals are kiosk-style terminals.

Preferably, said card read/write means is additionally adapted to receive a magnetic (credit/debit) card, such as a bank card.

Brief Description of the drawings

The present invention will become more fully understood from the following detailed

description of the preferred but non-limiting embodied thereof, described in connection with the accompanying drawings wherein

Figure 1 illustrates a preferred embodiment of the betting system in accordance with the present invention;

Figure 2 illustrates an alternatively preferred embodiment of the present invention;

Figure 3 illustrates another alternatively preferred embodiment of the present invention;

Figure 4 illustrates a flow diagram showing the basic steps performed by operator, in a betting procedure, in accordance with the present invention;

Figure 5 shows, in Fig. 5A and Fig. 5B and Fig 5C thereof, a typical key-pad layout of a portable betting terminal in accordance with the present invention;

Figure 6 shows a preferred embodiment of a "kiosk" betting terminal, in accordance with the present invention;

Figure 7 shows in Figs. 7A to 7I screens, preferably graphic screens, displayed to an operator during placement of a bet; and,

Figure 8 shows in Figs. 8A to 8E screens, preferably graphic screens, displayed to an operator during the banking transaction.

Detailed of description of preferred embodiments

Throughout the drawings, like numerals would be utilised to identify similar features, except where expressly otherwise indicated.

Various arrangements of the primary functional components of betting systems in accordance with preferred embodiments of the present invention, are shown in Figures 1, 2 and

3, in block diagram type format.

As shown in Figures 1 to 3, there are provided a plurality of betting terminals, designated by the numeral 1 which are adapted to communicate, via a communications channel 2 with a host device 3. Communication may be directly with a host device 3 as shown in Figure 1, or, via a suitable interface or buffer, termed herein as a "front-end processor" 4, as shown in Figures 2 and 3. Each betting terminal 1 may be either portable hand-held terminal, such as shown in Figure 5, or a kiosk-style terminal, such as shown in Figure 6. The purpose of each betting terminal is to enable a punter (operator) to key in pertinent information to identify himself, and to input the pertinent information in order to place a bet on, for example, a horse race or perform any other gaming, wagering or game of chance. The information supplied to the betting terminal 1 is communicated by a communications channel 2 to the host device 3 which may, for example, be an already established organisation computer such as a TAB or AJC/STC (Australian Jockey Club/Sydney Turf Club). The information received from the betting terminals is processed in the host device 3, and then, after the race result is determined, information pertinent to the race result and pertinent to particular bet placed by the punter (operator), is communicated to the betting terminals 1. A front-end processor, as is shown in Figures 2 and 3, may be supplied intermediate host device and the betting terminals for communication therebetween, such that the betting terminals 1 may be utilised to connect to different host devices 3, bookmakers 5, or to other facilities, such as an EFTPOS (Electronic Funds Transfer at Point of Sale) facility of a bank 6, and/or other services, such as information services 7. Details of these connections will be described hereinafter.

An example of a typical betting procedure, performed by an operator, is shown in Fig. 4. The procedure will be described in more detail hereinafter with reference to Fig. 7.

A novel feature of the present invention is the particular design and functional characteristics of the betting terminals 1. The betting terminals 1 are adapted to work in conjunction with smart cards, otherwise known as integrated circuit cards or IC cards. For this purpose, each betting terminal 1 is adapted to receive, via a suitable or read/write means, a plurality of smart cards, such that a plurality of users, respectively, can utilise a single betting

terminal 1. As shown in Figures 5A and 5B and 5C, each betting terminal is preferably provided with a key-pad, having numeric keys, function keys, scroll keys, a screen (such as a LCD screen) backlighting, and a buzzer or like sound emitting device. A preferred embodiment of a betting terminal, in addition to being provided with a smart card read/write device, is also provided with a magnetic card reader to enable the transaction with a conventional type credit or debit card to be performed. Also preferably, the terminal is capable of being connected to a ticket printer and other accessories, and is provided with features such as an in-built battery charger.

Each betting terminal 1 may either be embodied as a portable hand-held device, adapted to communicate via an appropriate interface with the host device 3, either by a wireless and/or hard-wired communications channel 2, with suitable encryption and security to ensure that transactions are secure. The terminals may be comprised of a CPU and/or have expandable memory. Preferably, however, it is envisaged that various host devices 3, which may be operated by a separate organisations, might be adapted to communicate with the betting terminals 1. For this purpose, a 'front end' processor 4 is utilised. The front-end processor 4, is preferably also adapted to, in addition to acting as interface, perform other functions such as the issuance of smart cards and other uses and services. That is, the front-end processor 4 effectively acts, within the network at the 'gateway'. The security, authentication, smart card administration, auditing and message processing modules are provided within the 'front-end' processor, such that, as well as processing betting transactions, it can preferably also communicate with a bank to provide EFT facilities. The front-end processor (FEP) preferably keeps an audit trail of debts, and provides various messages, such as, at the declaration of correct weight and dividends, a broadcast message to the terminals.

By way of example only, a typical betting procedure, in accordance with a preferred embodiment of the invention, will now be described, with reference to Figure 7.

At the commencement of a betting procedure, a start-up procedure, such as shown in Figure 7A, will be viewed on the screen (e.g. an LCD (Liquid Crystal Display) screen) by an operator, requesting the operator to insert his personalised smart card. The personalised smart card contains pertinent information, identifying the operator, and, may already have valid credit

status which has been pre-purchased by the operator. Once the smart card is inserted, a terminal display, such as shown in Figure 7B, requesting the operator to enter a PIN (Personal Identification Number), will be displayed. The operator may have the ability to alter the language to be displayed, to change the betting location, etc. Once the personal identification number (PIN) is entered, the host device and/or the front end processor will issue validation to the smart card and check if the PIN is correct by sending a signal to the smart card. If verification is successful, the terminal will then display the main menu as shown in Figure 7C.

Preferably, various features are provided in relation to sign-on and smart card usage in the system. Any bet for which a dividend has not been checked is preferably stored in the smart card, and the total account balance and the card balance are identified as in such before any betting transactions are processed. It is preferable that each time the betting terminal communicates with the FEP, any winning dividends are up-dated, so that the smart card balance is equal to the Tote account balance.

It is also preferable that the smart card remains in the terminal during all operations, as security against unauthorised usage.

After PIN verification, a screen, such as shown in Figure 7C, will be displayed. The operator will typically be able to make one of, say, five selections from the main menu, including the ability to make normal bet to carry out normal betting procedure, an ability to claim dividends, carry out a bank in debit/credit transaction, read the smart card details, or, view of the bet history. At the first transaction for each day, the host will down load, into the betting terminal, the daily menus, race meetings, scratching details, and valid tote numbers for each race, and, sign-on response as shown in Figure 7D will be displayed. The terminal may display the total value of any winning ticket up-dates held at the FEP for the card and balance in the tote betting account. Any key may then be utilised for the operator to continue the betting procedure.

If, say, selection 1 is made, a conventional betting procedure will be initiated, and a betting screen, such as shown in Figure 7E or 7F will be displayed. The last active bet type will then be typically displayed on the screen. The operator can then carry out certain actions to

confirm or update his bet. For instance, the operator can firstly indicate his bet type. If the "bet type" is already displayed, the operator can push the enter key, or if not, he can use the arrow keys to scroll to the required selection. Bet types may include such functions such as win, place, etc. Once the enter key is selected, the cursor may move to the "location" selection field. The last active location may then be displayed, for example, Sydney. If the location is displayed as the required selection, the enter key can be selected, or if not, the arrow keys can be used to scroll to the required selection, for example, Melbourne Brisbane etc. Once the enter key is depressed the cursor moves to the "code" selection field. The last active code will then be displayed, for example, R = races. If the "code" displayed is the required selection, the enter key is depressed or if not, the arrow keys are used to scroll to the required selection, for example, T = trots, G = greyhounds. Once the enter key is selected, the cursor moves to the "race" selection field. The operator then keys in the race number for example 1, then depresses the enter key to move the cursor to the "bet" amount field. The operator can then key one or more bet amount, each followed by the enter key for example "$200.00 enter", "$40.00 enter", "$30.00 enter". After the last bet amount is entered, the enter key is then depressed, and the cursor is moved to the "selection" field. The operator then keys in one or more selections, each followed by the enter key, for example "1 enter", "6 enter", "14 enter". When all selections are completed, the operator can then return to the main menu, by pressing the "menu" key, change the betting promotion by pressing the "CHG" key, or press "send", to send it to the tote. If the entry was made as per the example shown in Figure 7F, the tote would be sent three bets and they would be acknowledged back to the terminal stored on the smart card with separate ticket numbers as follows:

1, 2, 3, 4, 5, 7/win/sr/1/200/1
1, 2, 3, 4, 5, 8/win/sr/1/40/6
1, 2, 3, 4, 5, 9/win/sr/1/30/14.

Once the "send" function is selected, the bet is sent instantly (on-line) to the remote tote host, which will then check its validity and accept or reject it. The remote host system will respond with an error code for the invalid or late bets, or with a date, time and ticket number for accepted bets. If a "multiple bet" is sent, the screen will display the number of bets to be

reviewed on the top right corner of the screen. The punter will use the next key to review each bet. The "last bet" confirmation will enable the use of the other keys. The response screens pertinent to the "bet screens" shown in Figures 7E and 7F, and shown in Figures 7H and 7I. Once these confirmations have been received, the operator can then return to the main menu, to display the next bet.

After the race results are determined, a procedure is then, of course, implemented to notify the results to the operators, and provide the appropriate payments. The "front-end processor" may automatically broadcast the messages. If any terminal is turned off, the information can be sent with the next transmission.

It should be obvious to persons skilled in the art how betting procedures and operator actions, for other types of bets, such as win and place bets, quinella bets, exacta bets, trifecta bets, double bets, superfecta bets, parlour bets, all-up bets, mystery bets, and other bet types, will be implemented.

It will also be appreciated that variations to the types of betting, such as bookmaker betting, tote betting, will be possible.

The procedure by which a banking/administration function may be carried out, will now be described, with reference to Figure 8.

The operator firstly selects the banking/administration menu, as shown in Figure 8A, and then enters the number of the required menu selection, or, uses the arrow keys to scroll down the screen to the required menu selection, and pushes the "enter" key, such that the "request" menu will then be displayed. For example, if a bank balance enquiry is desired to be made, key "1" is selected, and a screen as shown in Figure 8B will be displayed the operator then be required to select the account type e.g. cheque savings etc. and then enter the PIN and depress the "enter" key. The host will then return the bank account balance, as shown in Figure 8C. The operator can then, again select the main menu, return to the banking/administration menu, go to the funds transfer screen, or to the bank deposit screen. For example the operator wishes to go

to the bank funds transfer screen, key "2" is depressed from the administration menu to initiate an electronic funds transfer (EFT) to load the smart card. To transfer the funds from the personal bank account into a tote permanent betting account, or the casual smart card account, i.e. when screen is as shown in Figure 8D, the operator selects the account type, keys in the amount swipes his magnetic card, uses the function keys to select the pertinent function e.g menu cheque/savings or credit account, and then keys in his PIN, and presses the "enter" key. If the funds are available, the bank will deposit the funds in the banking account of the betting authority. The tote host will then update the account balance and generate an access to the terminal. The betting terminal will update the smart card balance, store the credit, and display the response screen as shown in Figure 8E.

It will be obvious to persons skilled in the art that a bank deposit procedure will be similar.

It will also become obvious to persons skilled in the art, as to how information, e.g. information relating to forms, etc., may be accessed by operators.

The present invention therefore provides the unique betting system which overcomes the disadvantage of the prior art, by providing a smart card betting system which has a host device to receive, transmit and process information, a plurality of betting terminals, each of which is adapted to receive smart (IC) cards, and, a communications channel to establish two-way communication of the information between the host device and the betting terminals. The present invention incorporates interchangeable PCMCIA card capability, and permits the use of a personal apparatus directly by an operator.

Numerous variations and modifications to the betting system as hereinbefore described will become apparent to persons skilled in the art. All such variations and modifications should be considered to fall within the scope of the invention as broadly herein described.

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CLAIMS :

1. A smart (I.C.) card betting system, comprising:

a host device to receive/transmit and process betting/credit/identification information;

a plurality of betting terminals, each betting terminal adapted to receive a plurality of smart (I.C.) cards issued to a plurality of operators, respectively; and,

a communications channel for two-way communication of information between said host device and said betting terminals;

wherein, for an operator to perform a betting sequence at a betting terminal:

said operator places a smart (I.C.) card and other identifying information into said betting terminal;

said information is communicated to and verified by said host device;

said operator supplies betting information into said betting terminal, which is communicated to said host device; and

wherein, after a race result is determined:

race result information is processed by said host device to determine any winning operator(s);

upon placement of said smart card into said betting terminal, race result information is communicated to said betting terminal(s) and said smart card information is updated.

2. A smart card betting system as claimed in claim 1, further comprising:

an electronic banking interface means associated with said betting terminals, whereby, an operator can transfer funds between a bank account, a host device betting account and/or an electronic purse of a smart (I.C.) card.

3. A smart card betting system as claimed in claims 1 or 2, further comprising:

control/processor means to control communications between said betting terminals, one or more host device, and, said bank.

4. A smart card betting system as claimed in any one of claims 1 to 3, wherein said

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communications channel is a wireless and/or hard wired communications channel.

5. A smart card betting system as claimed in any one of claims 2 to 4, wherein said electronic banking interface is via a magnetic card, such as a continuous credit/debit card.

6. A smart card betting system as claimed in any one of claims 1 to 5, wherein each said betting terminal is comprised of:

data entry means (keypad) to effect operator entry of said information;

display means to display said information;

a communications port to effect communication of said information to/from said terminal; and

card read/write means to receive a smart (I.C.) card and to read and write information to and from said smart (I.C.) card.

7. A smart card betting system as claimed in claim 6, wherein said betting terminals are portable hand-held terminals.

8. A smart card betting system as claimed in claim 6, wherein said betting terminals are kiosk-style terminals.

9. A smart card betting system as claimed in any one of claims 6 to 8, wherein said card read/write means is additionally adapted to receive a magnetic (credit/debit) card, such as a bank card.

10. A smart card betting system, substantially as herein described with reference to the accompanying drawings.

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