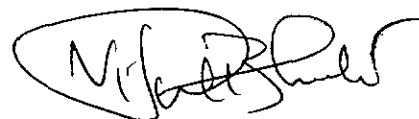# ABSTRACT

The present invention provides a single self-service kiosk for all the basic banking services resulting in flexibility of services to customers. The present invention also facilitates non-banking services like Mobile/DTH recharge, ticketing, Bill Payments through the said kiosk. The present kiosk facilitates flexibility of timings and no. of working days unlike bank branches restricted working hours and no. of days. The said banking kiosk doesn't require air conditioned chamber unlike conventional ATMs, resulting in high reduction of operational cost. The present invention enhances cost effectiveness for banks by facilitating single kiosk for Cheque deposit Services, for Passbook Printing Services, for Cash Deposit services, etc. The said kiosk integrates a plurality of banking system in backend. The said Kiosk is also capable of working on Solar Power, thus enabling its usage where power shortage is prevalent. This kiosk is also enabled with Braille Pin pads and Audio instructions for disabled people.

ADITYA & ASSOCIATES

-13-

2 9 JAN 201�½

Claims

We claim:

1. A multipurpose banking kiosk comprising:

a sheet of metal enclosure, wherein the sheet metal enclosure forms the outer structure of the banking kiosk;

a high speed computing device, wherein the computing device enclosed in the metal enclosure;

a monitor with capacitive touch-sensitive screen, wherein the monitor is connected to the computing device ;

a currency note validator, wherein the currency note is connected to an assembly of the banking kiosk;

a plurality of printers, wherein the plurality of printers is connected to the computing device a hybrid card reader, wherein the hybrid card reader is connected to the computing device;

a plurality of scanner, wherein the plurality of scanner is connected to the assembly as well as the computing device through a unidirectional bus;

an encrypted pin pad, wherein the encrypted pin pad is connected to the assembly ;

a keypad with touchball, wherein the keypad is connected with the computing device;

a Braille pin pad, wherein the Braille pin pad is connected to the computing device;

a web-camera, wherein the web-camera is connected to the computing device;

wherein, the computing device comprises of intelligence and local memory to store the data processed locally for a predetermined period of time.

2. The banking kiosk as claimed in claim 1, wherein the computing device is connected to a central server Switch, wherein the central server stores data from a plurality of banking kiosks.

3. The banking kiosk as claimed in claim 1, wherein the plurality of printers comprises:
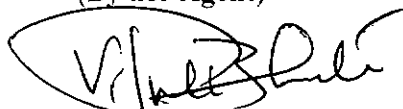
-11-

29 JAN 2015

a thermal receipt printer, wherein the thermal receipt printer has a print width of 80 mm;

a passbook printer, wherein the passbook printer prints standard sized bank passbooks;

an A4 laser printer, wherein the A4 laser printer prints the banking statements or booking details like ticket for a non-banking transaction.

4. The banking kiosk as claimed in claim 1, wherein the plurality of scanner comprises:

a barcode scanner, wherein the barcode scanner reads and processes a barcode over a bill, retail card, etc. during a non-banking transaction like ticketing, Form Printing,etc.

a cheque scanner, wherein the cheque scanner scans a cheque during its deposition.

5. The banking kiosk as claimed in claim 1 provides a plurality of functions comprising a cash withdrawal, a cash deposit, a cheque deposit with imaging, a fund transfer, a passbook printing, a statement printing, a balance inquiry, a mini- statement printing, an internet banking, a form printing, a PIN change, a bill payments, a mobile recharge, a DTH recharge, and a ticketing booking giving acknowledgement of the payment transactions through receipt. .

6. The banking kiosk as claimed in claim 1 further comprises in-built internet module, wherein the in-built internet module provides continuous internet connectivity.

THIS 28th DAY OF JANUARY, 2014
FOR FORBES TECHNOSYS LIMITED.
(By her Agent)

ADITYA & ASSOCIATES

-12-

2 9 JAN 2014

A) TECHNICAL FIELD OF INVENTION

[001] The present invention generally relates to the multipurpose banking kiosk capable of delivering various banking services. The present invention more particularly relates to an Automated Teller Machine (ATM) with capability of delivering banking as well as non-banking services facilitating a user to avail a plurality of services through the banking kiosk enabled with enhanced manual interactions without feeling the need to visit a bank.

B) BACKGROUND OF THE INVENTION

[002] An automated teller machine or ATM machine. also known as an automated banking machine (ABM) is an electronic telecommunications device that enables the clients of a financial institution to perform financial transactions without the need for a cashier, human clerk or bank teller. Traditionally only Cash Withdrawal facility is used to be availed /delivered through self service counters like ATMs. In the present days. banks and third party companies install banking kiosks along with ATM machines. so as to deliver other banking facilities as well through these Self Service Kiosks But these kiosks were limited and are capable of delivering only given set of services. Hence there was a need for a Multifunction Kiosk capable of delivering a wide range of banking services like cash deposit, cheque deposit. passbook printing including Cash Withdrawal facility through a single kiosk/ machine thus thereby eliminating the need for having different kinds of kiosks for performing different banking functions and thereby saving in the overall cost of deploying these different machines and maintaining them..

[003] One of the prior arts discloses a self-service touchscreen kiosk for use in banks comprising a touchscreen enabled monitor. microprocessor. memory, hard disk, floppy disk. CD-ROM and associated hardware like modem. network connectivity, required device drivers and a set of software instructions. a printer. a MICR (Magnetic Ink Character Recognition) Reader and a kiosk enclosure. The set of software instructions dynamically generates and displays on the touch screen the transaction instructions and the result / details of such transactions. The kiosk enclosure has a lockable door, power distribution points. castor wheels. levelling screws and fans for ventilation.

2 9 JAN 2014

[004] However the prior arts are limited in the services they offer. The services offered by these prior arts are limited to the banking transactions such as cash withdrawal, cash deposition. Cheque deposit. passbook printing and checking of transaction statuses. The prior arts fail to provide many other types of banking services. The prior arts also fail to provide the facility of carrying out all sorts of the banking services using a single kiosk.

[005] In the view of foregoing, there is a need for a multipurpose banking kiosk which facilitates all sorts of banking services. Also there is a need for a banking kiosk to provide various non-core banking services

[006] The above mentioned shortcomings, disadvantages and problems are addressed herein, as detailed below.

C)   OBJECTS OF THE INVENTION

[007] The primary object of the present invention is to provide a banking kiosk with multiple banking functions.

[008]

[009] Yet another object of the present invention is to provide a banking kiosk that is capable of carrying out a plurality of non-banking services such as mobile recharge. travel bookings etc. along with providing the banking services.

[0010] These and other objects and advantages of the embodiments herein will become readily apparent from the following detailed description taken in conjunction with the accompanying drawings.

D)   SUMMARY OF THE INVENTION

[0011] The various embodiments of the present invention disclose a multipurpose banking kiosk. The multipurpose banking kiosk comprises a sheet of metal enclosure. a high speed computing device, a monitor with capacitive touch-sensitive screen. a currency note validator. a plurality of printers, a hybrid card reader, a plurality of scanner, an encrypted pin pad, a keypad with touchball. a Braille pin pad and a web-camera. The sheet metal enclosure forms the outer structure of the banking kiosk. The computing device enclosed in the metal enclosure. A monitor with capacitive touch-sensitive screen and is

connected to the computing device through a bus. The currency note validator is connected to to the processing unit through a bus. The plurality of printers is connected to the monitor through a bus. The plurality of printers is further connected to the computing device through a bus. The hybrid card reader is connected to the monitor as well as the computing device through a bus. The plurality of scanner is connected to the monitor as well as the computing device through a bus. The encrypted pin pad is connected to the monitor through a bus. The keypad is connected with the computing device through a bus. The Braille pin pad is connected to the computing device through a bus. The web-camera is connected to the computing device through a bus. The computing device comprises local memory to store the data processed locally for a predetermined period of time.

[0012] According to one embodiment of the present invention, the computing device is connected to a central server. the central server stores data from a plurality of banking kiosks.

[0013] According to one embodiment of the present invention, the plurality of printers comprises a thermal receipt printer, a passbook printer and an A4 laser printer. The thermal receipt printer has a print width of 80 mm. The passbook printer prints standard sized bank passbooks. The A4 laser printer prints the statement for a banking transaction and booking details, Tickets for a non-banking transaction.

[0014] According to one embodiment of the present invention. the plurality of scanner comprises a barcode scanner and a cheque scanner. The barcode scanner reads and processes a barcode over a bill and furnishes the account details. . The cheque scanner scans a cheque during its deposition.

[0015] According to one embodiment of the present invention, the banking kiosk provides a plurality of functions comprising a cash withdrawal, a cash deposit, a cheque deposit with imaging, a fund transfer. a passbook printing, a statement printing, a balance inquiry, a mini- statement printing, an internet banking, a form printing, a PIN change, a bill payments, a mobile recharge. a DTH recharge. and a ticketing booking and receipt generation.

[0016] According to one embodiment of the present invention. the banking kiosk further comprises in-built internet module to provide continuous internet connectivity.

[0017] According to one embodiment of the present invention, a customer receives an acknowledgement receipt during a transaction. The banking kiosk is connected with the bank at the backend and thus updates the transaction details at real time. The kiosk comprises a dynamic user interface giving step by step instructions to be followed by customer for performing a specific transaction. The instructions are displayed in a global or a local language depending on the requirements of a bank's or a customer's geographical profile. The kiosk further comprises a multilingual voice guidance and Braille pin pad.

[0018] These and other aspects of the embodiments herein will be better appreciated and understood when considered in conjunction with the following description and the accompanying drawings. It should be understood, however, that the following descriptions, while indicating preferred embodiments and numerous specific details thereof, are given by way of illustration and not of limitation. Many changes and modifications may be made within the scope of the embodiments herein without departing from the spirit thereof, and the embodiments herein include all such modifications.

E)   BRIEF DESCRIPTION OF THE DRAWINGS

[0019] The other objects, features and advantages will occur to those skilled in the art from the following description of the preferred embodiment and the accompanying drawings in which:

[0020] FIG. 1 illustrates a block diagram of the multipurpose kiosk, according to one embodiment of the present invention.

[0021] FIG. 2 illustrates a flowchart of a workflow in the banking kiosk, according to one embodiment of the present invention.

[0022] FIG. 3 illustrates a flowchart of a workflow during a cash deposit, according to one embodiment of the present invention.

[0023] FIG. 4 illustrates a flowchart of a workflow during a cheque deposit, according to one embodiment of the present invention.

[0024] FIG. 5 illustrates a flowchart of a workflow during a passbook printing, according to one embodiment of the present invention.

[0025] FIG. 6 illustrates a flowchart of a workflow during a statement printing, according to one embodiment of the present invention.

[0026] **FIG. 7** illustrates a flowchart of a workflow during an internet banking, according to one embodiment of the present invention.

[0027] **FIG. 8** illustrates a flowchart of a workflow during a travel ticket generation, according to one embodiment of the present invention.

[0028] **FIG. 9** illustrates a flowchart of a workflow during a mobile recharge, according to one embodiment of the present invention.

[0029] **FIG. 10** illustrates a flowchart of a workflow during a DTH recharge, according to one embodiment of the present invention.

[0030] **FIG. 11** illustrates a flowchart of a workflow during a bill payment, according to one embodiment of the present invention.

F) DETAILED DESCRIPTION OF DRAWINGS

[0031] **FIG. 1** illustrates a block diagram of the multipurpose kiosk, according to one embodiment of the present invention. With respect to **FIG. 1**, the multipurpose banking kiosk **100** comprises a sheet of metal enclosure **101**, a high speed computing device (not shown), a monitor with capacitive touch-sensitive screen **102**, a currency note validator **103**, a plurality of printers, a hybrid card reader **104**, a plurality of scanners, an encrypted pin pad (not shown), a keypad with touchball (not shown), a Braille pin pad with auxilliary screen **105** and a web-camera **106**. The sheet metal enclosure **101** forms the outer structure of the banking kiosk. The sheet of metal enclosure forms a body of the kiosk. The computing device is enclosed in the metal enclosure. A monitor with capacitive touch-sensitive screen **102** is connected to the computing device through a bus. The currency note validator **103** is connected to to the processing unit through a bus. The pluralities of printers are connected to the assembly **102** through a bus. The pluralities of printers are further connected to the computing device through a bus. The hybrid card reader **104** is connected to the monitor **102** as well as the computing device through a bus. The plurality of scanner is connected to the assembly as well as the computing device through a unidirectional bus. The encrypted pin pad is connected to the assembly through a bus. The keypad is connected with the computing device through a bus. The Braille pin pad **105** is connected to the computing device through a bus. The web-camera **106** is connected to the

computing device through a bus. The plurality of printers comprises a thermal receipt printer **109**. a passbook printer **107** and an A4 laser printer **108**. The thermal receipt printer **109** has a print width of 80 mm. The passbook printer **107** prints standard sized bank passbooks. The A4 laser printer **108** prints the banking statements and booking details for anon-banking transaction like Ticketing and Forms Printing. The plurality of scanner comprises a barcode scanner (not shown) and a cheque scanner **110**. The barcode scanner reads and furnishes the details of the bill during a non-banking transaction like Bill Payment. The cheque scanner **110** scans a cheque during its deposition.

[0032] According to the embodiments of the present invention, the multiple functions provided by the banking kiosk comprises the barcode reader for bill payments, the multilingual touch-sensitive screen for enhancing communication facilities to the users, the card reader for secure transactions, the biometric scanner **112** for high level security, the stainless steel keyboard for easy user interface, the Braille pin pad **113** for the visually challenged users. the encrypted pin pad for secure transactions, the UL-291 compliant safe **111** for secure transactions. the 80 mm receipt printer for printing receipts for transactions, the cheque scanner for image based cheque deposit, the currency note validator for real-time cash deposit, the digital video surveillance system for secure transactions, the additional screen for brand promotions and information services **105**, the A4 Printer for statement printing **108**, the passbook printer for passbook updating **107** and the multilingual voice guidance for semi-literate users.

[0033] FIG. 2 illustrates a flowchart of a workflow in the banking kiosk. according to one embodiment of the present invention. With respect to **FIG. 2**, the transaction is initiated with inserting a card **(201)**. The user enters a PIN code of a bank account **(203)** if the card is successfully read **(202)**. The transaction is terminated with an error message **(204)** if the card is not read properly. The user selects a type of transaction **(206)** if the entered PIN is correct **(205)**. The transaction is terminated if the entered PIN is incorrect. The transaction is selected **(207)** and an amount is entered if a cash withdrawal is selected **(208)** or a payee account and amount is selected in case of an account transfer is selected **(209)** or a new PIN entered if PIN change request is selected **(210)** or a transaction receipt is generated in case of a mini-statement request is selected **(211)**. Further, during a balance enquiry, an account type is selected **(212)**. A transaction is processed **(213)** and a response is generated **(214)**

after a transaction selection. In response to the processed transaction, a balance enquiry receipt (215), a cash transaction and its receipt (216), a mini-statement receipt (217), a pin change receipt (218), a fund transfer receipt (219) and statement receipt (220) is generated followed by termination of the ongoing transaction (221).

[0034] FIG. 3 illustrates a flowchart of a workflow during a cash deposit, according to one embodiment of the present invention. With respect to FIG. 3, the program for cash deposit is initiated (301) with selection of transaction (302). The user enters an account number through the touch-sensitive monitor (303). The monitor checks the validity of the entered account (304) and the details are checked for the entered account on its successful validation (305). The cash is deposited once successful check of the account details is done (306). The account balance is updated (307) and corresponding receipt of the transaction is printed (308) followed by termination of the transaction (309). The unsuccessful validation during the transaction leads to termination of the transaction.

[0035] FIG. 4 illustrates a flowchart of a workflow during a cheque deposit, according to one embodiment of the present invention. With respect FIG. 4, the program for cheque deposit is initiated (401) with selection of transaction (402). The user enters an account number through the touch-sensitive monitor (403). The monitor checks the validity of the entered account (404) and the details are checked for the entered account on its successful validation (405). The user enters a cheque date on successful validation of account details (406) followed by entering the cheque amount (407). The cheque of the entered amount is deposited (408). The receipt for the cheque deposition is printed (409) on successful validation of the cheque details (410) followed by termination of the transaction (411). The unsuccessful validation during the transaction leads to termination of the transaction.

[0036] FIG. 5 illustrates a flowchart of a workflow during a passbook printing, according to one embodiment of the present invention. With respect to FIG. 5, the transaction is initiated (501) with passbook printing (502). The barcoded account number is displayed (503). The passbook is insertion status (505) is checked on successful account validation (504). The transaction details are printed (506) on successful insertion of the passbook. The printed data is updated on the server (508) after the collection of passbook (507) followed by wish message (509) and transaction termination (510). The unsuccessful validation during the transaction leads to termination of the transaction.

-7-

[0037] **FIG. 6** illustrates a flowchart of a workflow during a statement printing, according to one embodiment of the present invention. With respect to FIG. 6, the transaction is initiated (**601**) with statement printing (**602**). The account number is entered (**603**). The period selection is checked (**605**) on successful account validation (**604**). The transaction details are fetched (**606**) on successful insertion of the passbook. The statement for the transaction is printed (**607**) followed by wish message (**508**) and transaction termination (**509**). The unsuccessful validation during the transaction leads to termination of the transaction.

[0038] **FIG. 7** illustrates a flowchart of a workflow during an internet banking, according to one embodiment of the present invention. With respect to FIG. 7, the transaction is initiated (**701**) for the internet banking (**702**) routing to connection with internet banking server (**703**). The internet banking is processed after returning to the internet banking application (**704**) through its website (**705**) followed by displaying wish message (**706**) and transaction termination (**707**). The unsuccessful validation during the transaction leads to termination of the transaction.

[0039] **FIG. 8** illustrates a flowchart of a workflow during a travel ticket generation, according to one embodiment of the present invention. With respect to FIG. 8, the transaction is initiated (**801**) for the ticketing (**802**) routing to connection with ticketing server (**803**). The ticketing is processed after returning to the ticketing application (**804**) through its website (**805**) followed by displaying wish message (**806**) and transaction termination (**807**). The unsuccessful validation during the transaction leads to termination of the transaction.

[0040] **FIG. 9** illustrates a flowchart of a workflow during a mobile recharge, according to one embodiment of the present invention. With respect to FIG. 9, the transaction is initiated (**901**) for a mobile recharge (**902**). The account number is entered (**903**). A mobile number (**905**) and the amount of recharged (**906**) are entered on successful account validation (**904**) resulting in redirection to mobile portal (**907**). The transaction receipt is printed (**908**) on successful recharge of the entered mobile number followed by wish message (**909**) and transaction termination (**910**). The unsuccessful validation during the transaction leads to termination of the transaction.

[0041] FIG. 10 illustrates a flowchart of a workflow during a DTH recharge, according to one embodiment of the present invention. With respect to FIG. 10, the transaction is initiated (1001) for a DTH recharge (1002). A DTH account number is entered (1003). An account no. from which the recharge amount is to be deducted (1004) and a recharge amount (1005) is entered. The transaction receipt is printed (1007) on successful payment process completion (1008) and recharge followed by wish message (1009) and transaction termination (1010). The unsuccessful validation during the transaction leads to termination of the transaction.

[0042] FIG. 11 illustrates a flowchart of a workflow during a bill payment, according to one embodiment of the present invention. With respect to FIG. 9, the transaction is initiated (1101) for a bill payment (1102). The account number from amount is to be deducted is entered (1103). A bar-coded bill is swiped (1105) and a payment amount is entered (1106) on successful account validation (1104) resulting in redirection to bill payment portal (1107). The transaction receipt is printed (1108) on successful bill payment followed by wish message (1109) and transaction termination (1110). The unsuccessful validation during the transaction leads to termination of the transaction.

[0043] In the following detailed description, a reference is made to the accompanying drawings that form a part hereof, and in which the specific embodiments that may be practiced is shown by way of illustration. The embodiments are described in sufficient detail to enable those skilled in the art to practice the embodiments and it is to be understood that the logical, mechanical and other changes may be made without departing from the scope of the embodiments. The following detailed description is therefore not to be taken in a limiting sense.

G)   ADVANTAGES OF THE INVENTION

[0044] The present invention provides a single self-service kiosk for all the basic banking services resulting in flexibility of services to customers. The present invention also facilitates non-banking services like Mobile/DTH recharge, ticketing, Bill Payments through the said kiosk. The present kiosk facilitates flexibility of timings and no. of working days unlike bank branches restricted working hours and no. of days. The said banking kiosk doesn't require air conditioned chamber unlike conventional ATMs,
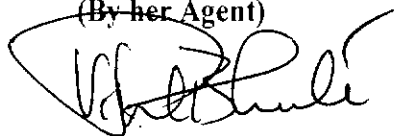
resulting in high reduction of operational cost. The present invention enhances cost effectiveness for banks by facilitating single kiosk for Cheque deposit Services. for Passbook Printing Services. for Cash Deposit services. etc. The said kiosk integrates a plurality of banking system in backend. The said Kiosk is also capable of working on Solar Power, thus enabling its usage where power shortage is prevalent. This kiosk is also enabled with Braille Pin pads and Audio instructions for disabled people.

[0045]   It is to be understood that the phraseology or terminology employed herein is for the purpose of description and not of limitation. Therefore. while the embodiments herein have been described in terms of preferred embodiments. those skilled in the art will recognize that the embodiments herein can be practiced with modification within the spirit and scope of the claims.

THIS 25th DAY OF JANUARY, 2014

FOR FORBES TECHNOSYS LIMITED.
(By her Agent)

ADITYA & ASSOCIATES

29 JAN 2014

Claims

We claim:

1. A multipurpose banking kiosk comprising:

a sheet of metal enclosure, wherein the sheet metal enclosure forms the outer structure of the banking kiosk;

a high speed computing device, wherein the computing device enclosed in the metal enclosure;

a monitor with capacitive touch-sensitive screen, wherein the monitor is connected to the computing device ;

a currency note validator, wherein the currency note is connected to an assembly of the banking kiosk;

a plurality of printers, wherein the plurality of printers is connected to the computing device a hybrid card reader, wherein the hybrid card reader is connected to the computing device;

a plurality of scanner, wherein the plurality of scanner is connected to the assembly as well as the computing device through a unidirectional bus;

an encrypted pin pad, wherein the encrypted pin pad is connected to the assembly ;

a keypad with touchball, wherein the keypad is connected with the computing device;

a Braille pin pad, wherein the Braille pin pad is connected to the computing device;

a web-camera, wherein the web-camera is connected to the computing device;

wherein, the computing device comprises of intelligence and local memory to store the data processed locally for a predetermined period of time.

2. The banking kiosk as claimed in claim 1, wherein the computing device is connected to a central server Switch, wherein the central server stores data from a plurality of banking kiosks.

3. The banking kiosk as claimed in claim 1, wherein the plurality of printers comprises:
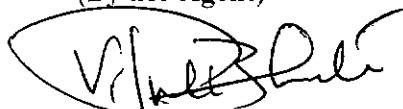
a thermal receipt printer, wherein the thermal receipt printer has a print width of 80 mm;

a passbook printer, wherein the passbook printer prints standard sized bank passbooks;

an A4 laser printer, wherein the A4 laser printer prints the banking statements or booking details like ticket for a non-banking transaction.

4. The banking kiosk as claimed in claim 1, wherein the plurality of scanner comprises:

a barcode scanner, wherein the barcode scanner reads and processes a barcode over a bill, retail card, etc. during a non-banking transaction like ticketing, Form Printing,etc.

a cheque scanner, wherein the cheque scanner scans a cheque during its deposition.

5. The banking kiosk as claimed in claim 1 provides a plurality of functions comprising a cash withdrawal, a cash deposit, a cheque deposit with imaging, a fund transfer, a passbook printing, a statement printing, a balance inquiry, a mini- statement printing, an internet banking, a form printing, a PIN change, a bill payments, a mobile recharge, a DTH recharge, and a ticketing booking giving acknowledgement of the payment transactions through receipt. .

6. The banking kiosk as claimed in claim 1 further comprises in-built internet module, wherein the in-built internet module provides continuous internet connectivity.

THIS 28th DAY OF JANUARY, 2014

FOR FORBES TECHNOSYS LIMITED.
(By her Agent)

ADITYA & ASSOCIATES

2 9 JAN 2014