

The FAO-GTZ MicroBanking System

Overview

The FAO-GTZ MicroBanking System for Windows (MBWin) is banking software designed and developed to support financial intermediaries ranging from small to large. To cater for this wide range of users, the system is highly scalable in terms of software and hardware platforms and modular in terms of applications and functionality.

The MBWin is composed of Current Accounts, Savings Accounts, Time Deposits, Share Accounts and Loan Accounts modules that interface with the back end General Ledger (GL) module thereby enabling a robust integrated system. It has a centralized contact information file (CIF), which contains an array of comprehensive information about the customers, members, groups, guarantors, signatories and other persons or entities either directly or indirectly related to a customer account.

The system provides a classic user-friendly Windows menu structure as well as a set of speed buttons for the most common functions.

The built-in reports are based on the requirements of different financial organizations, central banks, project donors and other external organizations. It is also possible to integrate user-written reports to meet the specific requirements of individual organizations or countries.

A product generator allows the user to setup and specify products without the need of reprogramming.

A data capture or data conversion program ("Take-on System") is provided separately. This program is used to capture information from manual records into the computer.

A migration utility is provided to convert the DOS version MicroBanker XBase database files to the SQL database format

A translation utility is available to translate MBWin to other languages. Languages currently available are English, French, Spanish, Russian, Indonesian and Thai. An Arabic language version is in production.

A branch replication utility program is provided to seamlessly set-up the MBWin system in a new branch or branches using an existing or pre-configured branch database.

An Intra-Office Message Exchange software is built-in specifically use for remote approval of pending transactions.

Technology and Architecture

MBWin is written in the Borland Delphi programming tool in the front-end and using the Microsoft SQL Server Database as back-end. It runs either on Microsoft Windows XP/2000Pro for stand-alone platform or in a network environment utilizing Microsoft Windows 2000 Server.

MBWin is a multi-tier client/server system with the following components:

- Client software for data input, running on the workstation
- Application servers for processing, running on an application server
- The SQL-Database, running on a database server.

The system is scaleable. All components can be run in local and remote networking systems. In the case of small organizations, all three components may be run on one single computer under Windows 2000 (or higher). For medium size institutions, the application server and the database server can be run combined, on one physical server under Windows 2000. Large organizations would run the application server and the database server on two or more separate servers whereby the application server runs under Windows 2000.

Scalability also applies to the database platform. The entry-level Microsoft SQL Server database is the MSDE 2000 (Microsoft SQL Server 2000 Desktop Engine) for stand-alone users or small branches with up to five workstations. It can be upgraded to the more powerful Microsoft SQL Server 2000 for larger networks and branch networks.

MBWin System Features

- Supports both interactive and batch modes of customer account transaction processing
- Real time transaction processing, with end-of-day update of the respective general ledger accounts.
- Provides, in addition to real time transaction processing, back office batch transaction processing facilities.
- Batch transaction types include (a) Mixed Accounts, (b) Inward Cheque Clearing, (c) Customer Account Debit List, (d) Customer Account Credit List, (e) Fund Transfer between Customer Accounts, and (f) General Ledger Journal.
- "Mixed Accounts" batch transaction type allows posting of transactions across customer accounts and General Ledger accounts, from within one batch.
- Integrated customer, savings, current account, time deposit, loan accounts, share accounts and general ledger application modules
- Standing Order facility for automatic regular fund transfer between savings, share accounts, current and GL accounts.
- User selectable automatic or manual clearing of cheque deposits.
- Generation of automatic journals for transactions between two customer accounts and between customer and GL accounts. This allows, for example for automatic recovery of loan installments from a savings or current account.

- Central customer file provides instant access to all accounts held by one customer.
- Customer records accessible through any of that customer's account numbers and, vice versa, account records accessible via the customer record.
- Control of proper sequencing of beginning and end-of-period operations prevents operator errors.
- Enforced balancing of a teller's cash, cheques and vouchers on-hand with computer entries maintains full cash control. One GL Cash and one GL Cheque account for each authorized teller.
- User modifiable transaction mnemonics.
- Multiple address handling allows direct mailing to the business or to the home address or other address, including temporary mailing addresses.
- Handling of multiple signatories with user-defined signatory rules.
- Many-to-many relationships between customers and accounts.
- Extended customer account relations (e.g. co-owner, signatories, loan guarantors, etc.)
- Customer-relation management allows maintenance of relations between customers and allows analysis of the banking organization's exposure to groups of borrowers or conglomerates of companies.
- Support for various types of microfinance products and methodologies.
- On-line customer photo and signature retrieval.
- Choice from a wide array of customer account number format. Example, customer identification number (CID) can be used as the core part of the account number.
- The system applies the concept of User/Teller Roles rather than levels. Created roles are assigned with appropriate system functionalities. Users/tellers are then given the one or more roles to provide them access to the menu options they need.
- Concurrent Multiple Language Support (CMLS). This allows the use of up to three different languages simultaneously for tellers, customers and for the reports.
- Built-in report writer which allows users to create their own reports.
- Automatic opening of savings and/or share accounts for newly opened customer.
- Opening of savings, share and loan accounts by template.
- Authorization of exceptional front office or teller transactions is performed remotely within the local area network
- Supports the following financial field formats: American (9,999,999.99) European (9.999.999.99), Indian "lakh format" (99,99,999.99). Number of decimal places may be zero, two or three. A total of 18 digits including decimals is supported for all amount fields.
- Supports American (mmddyyyy), British (ddmmyyyy) or international date format (yyyymmdd), with the choice of slash (/), dash (-), or period (.) as separator.
- Maintains the product-wise history of changes in interest rates.
- Accepts other over-the-counter financial transactions such as utility bills payment, manager's cheque purchase, field staff reimbursements, etc.
- Maintains chequebooks inventory for financial products with cheque facility.
- "Quick Access" feature that allows direct customer account access without going through the menu hierarchy.
- Extra features such as passbook cover layout designer, balance sheet and income statement designer, built-in calculator, transaction slip and transaction validation designer.

Security Access, Data Security & Control Features

- MBWin has a number of built-in security and control features which make it highly suitable for use on stand-alone or local area networks in remote rural sites and in small offices where supervisor control is minimal.
- System access is controlled through a pre-authorized teller access number. Passwords are teller-selectable and changeable and consisting of six to ten alphanumeric characters.
- Record-level data security is achieved through an encryption algorithm that protects sensitive system information against outside manipulation.
- Configurable access control to the various system functions using the “roles” feature which limits a particular user to access only the designated menu options.
- Automatic data-recovery restores data integrity after system crash and informs the operator when a transaction needs to be re-entered.
- Paper audit trail and hardcopy account listings allow for a smooth shift to manual operations in case of prolonged power failure or hardware breakdown.
- Built-in work flow control minimizes the possibility of operator errors and automates major daily, monthly, and annual processes.
- The end-of-day and end-of-month data backup are enforced by the system.
- Audit trail, supported by transaction vouchers and hard copy daily transaction and account listings, records the number and date of the previous transaction. Teller number is also recorded with each transaction.

Contact Information File (CIF)

- Centralized CIF with protection against the creation of duplicate records.
- Contact ID Number (CID) can be either system generated or manually assigned.
- Customer orientated with instant access to all the customer's accounts and related contacts on screen.
- The system imposes no limit on the number of savings, current, time deposit, share accounts or loan accounts per customer.
- Facility to set relationship between contacts through defined relationships such as spouse, corporate officer, shareholder, family relationships, or other personal relation.
- CIF records are accessible by (i) CID (ii) National ID number, (iii) Name or part of the Contact's name (iv) Any of the customer's accounts.
- Control of age-specific savings products through the customer's date of birth, such as for Senior Citizen and Youth Accounts.
- Maintains historic loan information for each client, which is available for loan appraisal purpose when the client applies for a next loan.
- Comprehensive contact information can be entered in a multi-tab page interface while simple information can be entered through the use of CIF template.

- A new savings or share account can be opened automatically when a new CIF record is created.
- Accepts personal as well as institutional contact information
- Allows up to a maximum of four (4) configurable CIF name fields.
- Allows up to a maximum of nine (9) user-defined CIF classification codes.
- Handles multiple addresses (home, business, mailing, temporary, others).
- In case of multiple language implementation, customer language preference can be selected.

General Ledger Features

- User defined account format and header account format. GL accounts can have numeric or alpha-numeric account codes of a maximum of nine characters (or 13 characters if separators for numeric format are included).
- Easy account access through direct account code entry for experienced users or selection from pop-up menu for new users.
- Fully integrated and automated update of GL accounts during end-of-day processing.
- Standard reports include daily trial balance, daily listing of GL transactions and daily listing of GL transactions by GL account.
- The GL system can be run as a stand-alone program, which could be used in a head office accounting operation.
- Access to specific routines controlled by user defined teller roles.
- User-configured Balance Sheet, Profit and Loss, Weekly Balance Sheet, Six-column Trial Balance, and essential CGAP specified financial ratios can be generated.

Saving Account Features

- Automatic generation of journals for (i) Monthly or Quarterly interest transfer from Time Deposit to Savings account (ii) Automatic recoveries from Savings Accounts to repay a loan.
- Practically no limit on the number of accounts per customer.
- Automatic update of General Ledger at end-of-day.
- Automatic update of General Ledger for interest expense accruals at the end-of-month.
- Controls for (i) Verification of available balance upon withdrawal (ii) Transactions on dormant account (iii) Maintenance of user defined minimum balance (iv) User defined minimum balance for purpose of interest earning (v) Minimum opening balance for new accounts.
- Products user definable with or without passbook.
- Products user definable with or without withdrawals allowed.
- Facility for programmed savings with maturity date (contract and recurring savings)

- User selectable options for no-book deposits and no-book withdrawals.
- Automatic update of "un-posted" transactions in customer's passbook such as debit/credit memos, no-book deposits and withdrawals, interest credits and withholding tax debits.
- Statement of Account printing upon customer request.
- User defined period for dormancy with automatic transfer to dormant status and to dormant GL account.
- Full support for passbook-less operations.
- Full support for ledger-less operations.
- Facility to place a Hold on (part of) the balance of an account for a specified period of time.
- Facility to define and control opening of "senior citizen" or "junior" accounts as a function of the age of the client.
- Dual account ownership allows full customer information of both customers for one account.
- Cheques can be issued and used, like current accounts .
- Different types of account hold/block which include balance hold, account freeze, debit freeze, credit freeze, closing freeze.
- Option to stop interest calculation for specified account.
- Unlimited number of cheque deposit types can be defined.
- Allows up to five (5) user-defined savings account classification codes.
- Interest Schemes:
 - *Choice of straight daily balance, minimum monthly balance or minimum quarterly balance.*
 - *Optional graduated daily balance, selectable by product. The graduated rate depends on the balance of the account; for this purpose, a maximum of six balance brackets may be specified.*
 - *User selectable monthly, quarterly, bi-annual, or annual automatic interest capitalization at the product level. User can also select not to capitalize at all*
- Withholding tax option with up to nine tax rates as function of the category of client. If applicable, withholding tax is automatically debited at the time of capitalization. Products and/or customers may be tax exempt.
- Choice of treatment of uncleared cheques as to whether interest is payable or not payable on such cheques.
- Separate, user defined, (i) compulsory minimum balance, (ii) minimum balance for purpose of interest computation.
- Choice of treatment of dormant accounts as to whether interest is payable or not.
- Choice of current period interest payable/not payable upon account closure.

Share Account Features

- All features and functionalities of Savings Accounts are present in Share Accounts module. This application is normally used for Cooperative institutions and also referred to as Share Capital or Share Contribution.
- Ability to produce share capital related reports such as “Patronage Refund” and “Dividend Distribution”

Current Account Features

- Automatic generation of journals for (i) Monthly or quarterly interest transfer from Time Deposit to Current account (ii) Automatic recoveries from Current Accounts to repay a loan.
- No limit on the number of accounts per customer.
- No limit on the number of Current Account products per bank.
- Overdraft facility with unlimited number of overdraft slabs per account, whereby each slab, representing an overdraft level, is charged at an incremental interest rate.
- Automatic update of General Ledger at end-of-day with Current Account transactions for that day.
- Automatic update of General Ledger with debit interest capitalization (interest earned on overdraft accounts) at the end-of-month or quarter or year.
- Controls for (i) Verification of available balance upon withdrawal (ii) Transactions on dormant account (iii) Maintenance of user defined minimum balance for non-overdraft accounts (iv) Minimum opening balance for new accounts (v) Cheque numbers actually issued and used (vi) stopped cheques.
- Statements of Account are printed daily or weekly or monthly or quarterly or upon customer request.
- User defined period for dormancy.
- Full support for ledger-less operations.
- Facility to place a Hold on (part of) the balance of an account for a specified period of time.
- Dual account ownership allows full customer information of both customers for one account.
- Products user definable with or without passbook.
- Automatic transfer of GL account balances from debit to credit and vice versa depending on overdraft status.
- Different types of account hold/block which include balance hold, account freeze, debit freeze, credit freeze, closing freeze.
- Unlimited number of cheque deposit types can be defined.
- Allows up to five (5) user-defined current account classification codes .
- Interest Schemes:

- *Interest rates for overdraft accounts set per account and per overdraft level, effectively allowing an unlimited number of rates per account, depending on the debit balance.*
- *Choice of 360 or 365 days per year as interest divisor.*
- *User selectable monthly, quarterly, bi-annual or annual interest capitalization.*
- *Allows calculation of both debit and credit interests.*
- *For credit interest, choice of straight daily balance, minimum monthly balance or minimum quarterly balance.*
- *Optional graduated daily balance, selectable by product.*

Time Deposit Features

- Automatic generation of journals for monthly or quarterly interest transfer to savings, current account, loan or GL pay-order account.
- System places no limit on the number of accounts per customer.
- No limit to the number of Time Deposit products per bank.
- Automatic update of General Ledger accounts at end-of-day and for interest accruals at end-of-month.
- Control of (i) Pre-termination (ii) Dormancy after maturity (iii) Validation of interest rates, periods and minimum and maximum amounts per bracket during opening.
- Support for pre-numbered Certificates.
- Optionally re-definable interest rates and contract duration at the time of opening of the account.
- User defined dormancy period, defined as number of month after maturity without rollover.
- Full support for ledger-less operations.
- Allows multiple ownership.
- Different types of account hold/block which include balance hold, account freeze, debit freeze, credit freeze, closing freeze.
- Allows up to five (5) user-defined time deposit account classification codes
- Can specify Rollover until certain expiry date. Account will be renewed until that date.
- Optionally allows additional deposits until the maturity date.
- Interest Schemes:
 - *Per product, interest rate may be a function of the term, the amount or a combination of both. Maximum of eight term brackets and five amount brackets.*
 - *Interest may be paid monthly, quarterly, half-yearly, annually, upon maturity or at any time. Monthly and quarterly interest payments may be credited to a current account, loan or savings account or to a GL pay-order account.*
 - *Upon maturity, the time deposit may be renewed ("rolled-over") with or without interest.*

- *Interest after maturity (and when not renewed) payable at the savings rate or at any other, specified, rate.*
 - *Interest in case of pre-termination may be specified at (i) savings rate (ii) special rate (iii) time-based rate, depending on the term that was actually completed.*
- Withholding tax option with up to nine tax rates as function of the category of client. If applicable, withholding tax is automatically debited.

Loan Account Features

- Automatic generation of journals for monthly or quarterly interest transfer from Time Deposit and for transfers from a savings or current account for the purpose of loan repayment.
- System imposes no limit on the number of accounts per customer.
- No limit on the number of loan products per bank.
- Automatic update of General Ledger at end-of-day.
- Option for accounting of income on either accrual basis or cash basis for performing loans.
- Separate option for accounting on cash basis for non performing loans and for penal interest.
- If accrual basis is selected for performing loans, automatic generation of interest accruals and update of the General Ledger income account at the end-of-month.
- Control of
 - Product dependent loan limits
 - Opening, approval and disbursement process with supervisor control over loan approval
 - Disbursement schedule (date and amount)
 - Product dependent maximum and minimum loan periods.
- Products definable as single repayment or choice of installment schemes with frequencies of daily, weekly, fortnightly, semimonthly, monthly, bi-monthly, quarterly, four-monthly, six-monthly, annually. In addition, a product may be defined to have an operator specified individual installment schedule which is flexible in terms of both installment dates and principal installment amounts.
- Repayment schedule with grace period, with or without interest during grace period.
- Repayment schedule with alternate installments with interest only and principal + interest.
- Rescheduling facility, with or without interest capitalization, with or without increase in loan amount, with or without change in installment schedule.
- Facility to debit miscellaneous charges as an accrual, separate from the principal balance.
- Option to deduct charges or fees from loan amount disbursed.
- Unlimited multiple disbursements from the same account.
- Disbursements may be made in cash, by cheque, or in kind. Repayments may be made in cash or by cheque or by voucher (neither cash or cheque).

- No periodic interest capitalization. Interest capitalization allowed only on an individual account basis for purpose of rescheduling.
 - Repayments credited in the following order of priority:
 - (i) Charges
 - (ii) Penal interest
 - (iii) Normal interest
 - (iv) Principal.
- Optional "Specified Repayments" allow to override this order.
- Up to five user-defined loan classification codes. Each code may be three characters with a break after the first character for purpose of sub-classification and sub-totaling.
 - Up to four user-defined disbursement allocation codes per account, reflecting the use of cash or in-kind disbursements.
 - Up to five classifications for non-performing accounts, based on user defined age of the oldest overdue installment.
 - Daily report, at beginning-of-day, on installments falling due that day and listing of all overdue loans.
 - Facility to generate a mail-merge file with account and customer information for the purpose of sending billings or reminder letters to borrowers.
 - Maintains historic information on closed loans and reports by client. Loan Interest and penal interest schemes.
 - Interest and penal rate defined by product and specified at the time of account opening.
 - Choice of 360 or 365 days per year as interest divisor.
 - Per product, installments definable as (i) annuity installments whereby the sum of principal and interest is constant (ii) fixed principal installments with interest on declining daily balance (iii) fixed principal installments with flat interest on starting balance using either the daily interest or a periodic interest calculation.
 - Option for deduction of interest in advance for loans with single repayment, with or without rebate in case of early repayment.
 - An option for installment loans to apply repayments strictly following the installment schedule
 - Option to add loan guarantors and co-owners
 - Allows two separate account links for automatic recovery and surplus payments
 - Default Penalty Rate can be overridden during account opening

Microfinance Groups Features

- Facility to maintain hierarchy of field officer/staff, up to three group levels, and group members.
- Automatic generation of disbursement and collection sheets
- Batch transactions for group disbursements and collections are automatically created to allow exception posting, thereby reducing the processing time
- Loan installment schedules, and disbursements, can be synchronized with Center meeting dates
- Facility to include force/compulsory savings deposits in the collection sheet

- Various reports can be generated specific to groups implementation
- Loans of individual group members can be opened using loan opening template which significantly reduces data entry

Multicurrency Features

- Multicurrency module caters for customer accounts in multiple different currencies.
- Operations in each currency are handled in a separate MBWin system, but some of the information is shared. For example, it is possible to see accounts of each client in all currencies.
- Balance Sheet, Income Statement and Trial Balance reports can be printed based on consolidated information on all currencies or using the currency of choice.
- Foreign currency revaluation gains or losses are calculated automatically, but should be posted manually.
- Automatic Foreign Exchange operations are currently not supported in MBWin, but can be handled by posting several separate transactions in different currencies.

Recommended System Requirements for MBWin

Hardware:

LOCAL AREA NETWORK

Server:

Pentium III 600, 256 MB RAM, 10 GB SCSI HDD

Client:

Pentium III, 128 MB RAM, at least 200 MB of free HDD space

STAND ALONE

Pentium III 600, 128 MB RAM, 10 GB HDD

As with any other software, the higher processor speed and more memory will speed up the processing of operations. Also, if you plan for many tellers or high amount of daily transactions, the hardware requirements should be adjusted accordingly.

PRINTER

Reports are printed on standard size paper using any Windows-compatible printer

Operating System:

LOCAL AREA NETWORK

Server:

Microsoft Windows 2000 or 2003 Server

Client:

Microsoft Windows 2000 or XP Professional

STANDALONE

Microsoft Windows 2000 or XP Professional

Database:

Microsoft SQL Server 2000 Desktop Engine (MSDE 2000)

or

Microsoft SQL Server 2000 Standard Edition

or

Microsoft SQL Server 2000 Enterprise Edition

MBWin Users as of August, 2004

Country	Organization Name	Number of Sites
Bangladesh	Rangpur Dinajpur Rural Service (RDRS)	44
Cambodia	Thaneakea Phum Cambodia (TPC)	11
Cambodia	Angkor Mikroheranhvatho Kampuchea (AMK)	4
Cambodia	Ennatién Moulethan Tchonnebat (EMT)	2
East Timor	MMicrofinance Institution of East Timor (MFiET)	4
Kenya	FAULU Kenya, Ltd.	6
Kyrgyzstan	Kyrgyzstan Credit Unions	12
Laos	Laos Credit Unions	3
Nepal	Energetic Women's Savings and Credit Cooperative	1
Nepal	Subhecha Development bank	1
Sri Lanka	SANASA Development Bank (SDB)	17
Sri Lanka	Tamil Eelam Rural Development Bank	1
Tanzania	FAULU Tanzania, Ltd.	1
Thailand	Dej Udom Savings Group	1
Uganda	FAULU Uganda, Ltd.	8
Total		116

Contact Details

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LICENSE FEES FOR THE FAO/GTZ MICROBANKING SYSTEM SOFTWARE FOR WINDOWS

	Price in US\$
1. Standard License for Standalone (for single user)	
- MBWin with one application module of choice	1,500
- Additional application modules	250 per module
2. Standard License for LAN (for multi user)	
- MBWin with one application module of choice	2,000
- Additional application modules	500 per module
3. Volume License for Standalone or LAN	
a. Base license with one application module of choice	15,000
b. PLUS Each additional application modules	3,000 per module
c. PLUS Site Licenses (per office or branch)	
- first 10 sites	1,000 per site
- next 40 sites	750 per site
- after 50 sites	500 per site
- or unlimited number of site licenses	90,000
4. Discount for users of MicroBanker DOS who want to migrate to the Windows version and who purchased the DOS version before 1 July 2000.	50 % off MBWin license fees for the equivalent number of sites
5. Discount for users of MicroBanker DOS who want to migrate to the Windows version and who purchased the DOS version after 1 July 2000	50 % off the MicroBanker DOS license fees paid
6. In addition to above license fees, a support fee of US\$ 2,000 is required per institution for the first 12 months of remote support. This entitles the organization to send one participant to the MBWin training course that is conducted periodically at the FAO Regional Office in Bangkok, Thailand.	2,000 per organization
7. The above fees do not include the cost of software customization, on-site support and training that may be required for your organization.	

Notes:

1. **The base module of MBWin includes:**
 - (i) General Ledger,
 - (ii) Customer Maintenance,
 - (iii) Configurator,
 - (iv) Take -on, translation, migration and branch replication utilities
2. **Application modules are:**
 - (i) Savings Accounts,
 - (ii) Current Accounts,
 - (iii) Time Deposits,
 - (iv) Share Accounts,
 - (v) Loan Accounts,
 - (vi) Multicurrency Module.
3. **The above fees are applicable as of 1 July 2004 and can be changed without prior notice.**