



The innovative ERP Solution

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Enterprise Resource Planning (ERP)

sqlFinance - The innovative ERP Solution

Object orientation

Object oriented technology offers many possibilities for innovations in application development. sqlFinance is committed to this approach. The software is organised in a framework including three layers: user interface, database access and business rules.

Intuitive user interface

When working with sqlFinance, the user can open application windows at his demand and get simultaneous access to local and remote databases. Through drag and drop operations data can be moved between windows and double clicks to get drill down information about referenced records.

Efficient working tools

Several tools make the use of sqlFinance very efficient: a select tool for initial data selection, a report tool with user modifiable reports, a text edit tool to create letters and other documents and store them in the database, and many more.

Free public version

Learn more about sqlFinance with the download of the free public version (single user) and the manual including user's guide and reference at www.sqlfinance.com. With no charge at all this version of sqlFinance allows you to manage your general ledger accounting, even over several mandates, with an unlimited number of batches and bookings. The free version includes foreign currency and allows the entry of cost centers and contracts at the booking level. A language manager is available for foreign language support (German translation available, French coming soon).

Approved software

sqlFinance has been used in client applications (portfolio management) audited by PRICEWATERHOUSECOOPERS. All requirements of the auditors were fulfilled.

sqlFinance Modules

- General ledger with unlimited number of mandates and sub-periods
- Sales and Purchase Process
- Inventory Control with Shipping and Picking
- Accounts Payable and Receivable
- Human Resources Module with Payroll
- Time Management
- Portfolio Management

Introduction

In human resources consulting, the management of customer and candidate contacts is a key factor. This is true for the quality of the interaction between the consultant and his contact partner, but also for the logistics used in the administration process. sqlFinance originally was designed in this context and migrated in several steps from the first UNIX based database up to an object oriented client server application.



Starting from key features like customer relationship management and batch processing, sqlFinance has been further enhanced to a comprehensive software system for the management of business data. The object-oriented interface allows the simultaneous access of separate local and server databases. Several mandates can be defined in one database, with different accounting charts but shared customer data. Decentralised server installations may exchange their data through replication tools.

Accounting requirements are met throughout all processes. Batches with a number of bookings are associated to periods or sub periods. Reports can be run on open or closed periods, according to the needs of the accountant. Bookings can handle foreign currencies as well as VAT and other tax charges (through the sales and purchase modules). A payroll module includes recurring payments to employees, as well as the automatic production of bookings for social benefit management.

In the sales and purchase order modules, products and bills of materials can be used. The billing process supports the use of several tax rates in one bill. Separate shipping and billing addresses can be used. Stock availability and shipping of goods can be traced in the server versions.

Language management has been considered a key feature from the beginning. All language is driven from databases, and a LanguageManager administration tool allows the efficient adaption to another language.

An easy start is offered with the free download offer for the general ledger module. This version includes an IFRS chart of accounts. Foreign currency support is included, as well as organisation (cost centre) and contract partner definition at booking level. The free download version is limited to one simultaneous user and can be obtained from the website www.sqlfinance.com.

sqlFinance has been used in Switzerland for companies audited by



Revisions also have been effected by Social Security and official Tax Auditors. The software has met – without exception – all requirements of these audits.



Application Overview

The application basically includes a login procedure that will lead to a selection tool. Starting from this tool, an unlimited number of forms can be opened. Each form will give access to a table and offer either a list view with several records in a grid or a field view with field headers and values. Through master and detail selection forms can be organised in cascades and shown in a hierarchical collection. Normally, only the current form is visible, and the user can step up and down through the form collection using simple keystrokes. If necessary, single forms can be separated from the collection and get used as an entry point for a new collection.

The treeview tool on the left end of the screen helps the user to navigate through his collections of open forms. Any form in a cascade can be made visible through a right mouse click on the respective treeview entry. Forms can be dragged over a "records" tool that will hold a list of dragged records. Notes can be added to the list, and forms reactivated from the "records" tool. Drag and drop also can be used to copy data from one form entry to another. With this technique bookings can be copied from one to another period or another mandate. Through repetitive action entire booking or accounting lists can be copied.

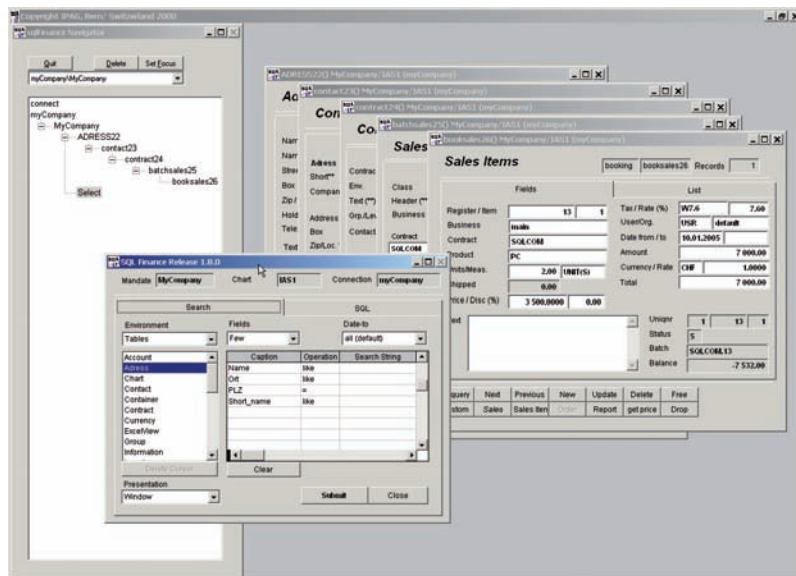
The form cascades basically follow the data model. For the convenience of the user, the data model has been kept as simple as possible. An accounting system can be seen as a multidimensional parameter structure, driving a booking record with its amount value and a comment. All the parameter values of the booking record reference to a parent entry in the master table. For example, an account value – in order to be accepted in a booking – would require an entry in the account (master) table.

Throughout the application, master tables can be accessed through a double click on the referenced field. Double clicking in the "account" field of the booking form will open an "account" form with records corresponding to the value entered in the "account" field. The lookup action is based on the value the user has entered in the reference field. This value can include wildcards like "MyCompany%", meaning in this case that the lookup should list all records with a contract entry beginning with "MyCompany....". While the



lookup accepts multiple retrievals, a booking entry will only be accepted when all parameter values entered lead to one and only one parent entry in the respective tables.

Based on field entries in the contract table, the system can set a default value for the account as well as for the organisation. While the contract entry is typed into the booking form, a whichpen feature checks the master contract table. As soon as it finds only one contract (mostly after three or four letters), it will auto finish the contract typing and copy the account and organisation defaults into the corresponding fields. The cursor is refocused on the amount field. With this help, the entry of simple credit or debit transactions can be made very fast, limiting the typing to a few letters and the amount.





Product Description

sqlFinance is an Enterprise Resource Planning (ERP) system that can be used as a ready to run product as well as a customizable development system. Experienced users will enjoy the possibility to modify databases, forms and reports and create their individual part of the application. With little training internal IT-Professionals or external service providers will be able to implement major enhancements like new tables with master/detail relations, lookup and verification rules and company specific services in the COM middle tier or the stored procedures of the server.

sqlFinance is shipped in two basic versions, a standalone PC version with single user access to a local database and a client-server version with access to a company database server. All of the software is developed with Microsoft tools and runs on Windows Server with SQL Server installations. The use of sqlFinance with other database servers like Oracle or MySQL is possible.

The product supports the management of relationships with different kinds of business partners. Contract management allows the handling of business interactions not only with clients, vendors or other external business partners, but also employees or any other contacts. Business events can be grouped and analysed over different periods according to order, shipping, billing, payment, profitability and cash flow aspects.

The server version includes logistics support. Inventory may be tracked in different locations, with average sales and purchase prices. The user may pick and ship from the inventory with drag and drop features.

sqlFinance is a product with an international orientation. It supports foreign currency through all kinds of transactions and can be easily adapted to any foreign language. Through connection with the Language Manager all screens, reports and messages can use online translation without any loss of speed or comfort. The Language Manager supports all foreign languages compatible with the window operating system and provides a powerful set of tools to make the translation process efficient as well as consistent in the use of the foreign language terms.

sqlFinance includes office tools for text processing. Letters, offers, bills, documents may be imported, exported and stored in many text fields of the database. Reports can be directed to the screen, to paper, to files or their ASCII or HTML output kept in text fields. This makes the storage and retrieval of business documents very efficient.

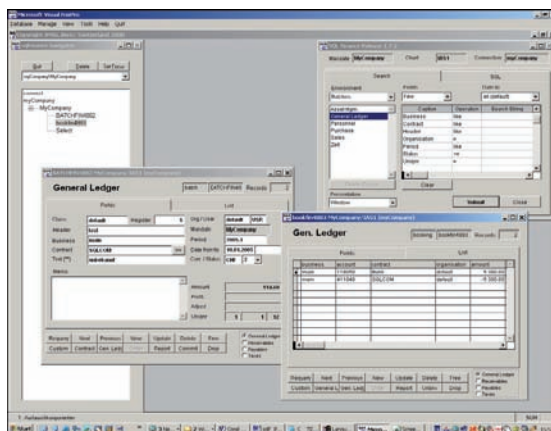
The «reports» tool includes, in a similar manner as the «search» tool, powerful query options.

A report can be run:

- On the current list of records
- On any selection referenced to the current record. The selection may include several tables joined through master/detail relationships. In the report tool, the user may edit the SQL query statement at any time and add desired search criteria.

The output of the report tool can be directed to:

- A previewer
- The print manager
- A browser list (with possibility to export)
- A file (ASCII or HTML)
- A text window in the reports tool
- An Excel Spreadsheet



Search tool with General Ledger batch and bookings form

Accounting Principles

Mathematically, an accounting system can be seen as an addition of bookings with a total of zero. These bookings are grouped into four groups: assets, liabilities, expenses and earnings. Since the overall total is zero, the difference of two groups must equal the negative difference of the two other groups. In accounting terms, the difference is called "profit", and bookings grouped as follows:

The server version includes logistics support. Inventory may be tracked in different locations, with average sales and purchase prices. The user may pick and ship from the inventory with drag and drop features.

(1) + Assets	(3) + Expenses
(2) - Liabilities	(4) - Earnings
= Balance Profit	= - Revenue Profit

Accounting systems use two different ways to make sure, that the total of all bookings will result to zero:

1 Debit/Credit bookings, like:

> debit account, credit account, date, text, amount

In the reports, the booking line later is transformed into two bookings with a total of zero, like:

> debit account, date, text, amount
> credit account, date, text, - amount



2 Batches with several bookings, like:

- > debit account, credit account, date, text, amount

In the reports, the booking line later is transformed into two bookings with a total of zero, like:

In this case, the booking lines reappear unchanged in the report:

- > Account1, Date1, Text1, Amount1
- > Account2, Date2, Text2, Amount2
- > Account3, Date3, Text3, Amount3
- > etc.

whereas the sum (amount1, amount2, amount3 ...) equals zero.

Method (1) has the advantage, that the rule of zero totals will always be met. However, the booking line used violates the requirement of normalisation. A normalised data model would not accept a debit and a credit account on one record line. In Method (2) this normalisation requirement is fulfilled, with the disadvantage that in case of an error the total of the bookings might not result to zero.

Fields			List		
business	account	contract	organisation	amount	
main	118050	Bank	default	5 380.00	
main	411040	SQLCOM	default	-5 380.00	

example with multiple bookings grouped to a batch with total of zero

Either method has its costs. Method (1) will be cheaper at the moment of data entry, but more expensive at the reporting level, since query statements will always have to ask for debit OR credit accounts. The use of the logical OR-operator is well known for slowing performance in SQL queries. Furthermore, since the bookings can't be grouped into batches, the use of clearing accounts is very common. These clearing accounts should still give a total of zero, but the cleaning up does rather affect the accountant and his work and not the accounting system as such.

Method (2) is more expensive at the moment of data entry and will require a software system that assures a total of zero for each batch. The later use of the data in the reporting process however is straight forward. Redundancy can be kept at a minimal level and clearing accounts largely avoided. The rule of zero totals is not as critical as might be expected. Simple checking reports can easily identify and locate any system fault. Thus, data consistency is assured on the system as well as the application level.

Fields		List	
Register / Step	1 1	Date from / to	10.01.2005 13.01.2005
Account	118050 1	Comm/Charges	0.00 0.00
Business	main	Amount	5 380.00
Contract	Bank	Currency / Rate	CHF 1.0000
User/Org.	USR default	Total	5 380.00
Text Swiss Bank Corporation: Payment SQLCOM		Uniqnr	1 1 1
		Status	2
		Batch	test
		Balance	0.00

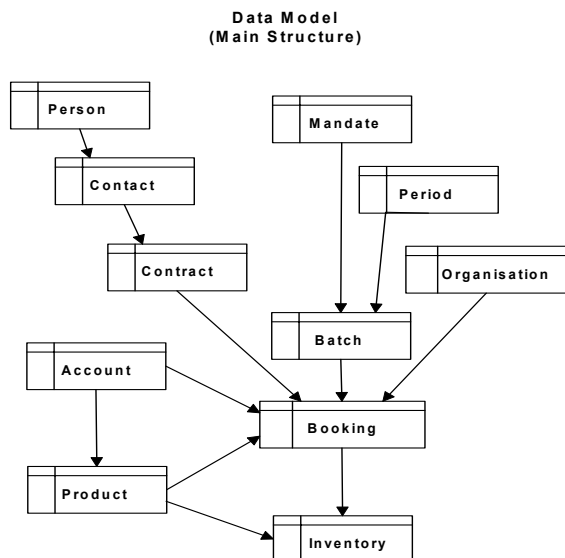
sqlFinance booking record structure

Even though Method (1) is widely used in Europe, we decided to follow Method (2) for the sqlFinance accounting system. One main factor was the reduction of costs in the software development. The consistency management can be implemented in a simple way, transparent for the user. His supplementary work to assure zero totals in batches will be well compensated through reduced vol-

umes in data entry and less work with clearing accounts, and the supplementary incentive of a more consistent and better accessible reporting system – one of the key assets of sqlFinance.

Application Structure

sqlFinance uses a well proven data model. User specific data structures can be added to the basic data model. After specification of new data structures in the meta database, the form manager will support presentation and update operations on these data structures as well. Through master detail and lookup relationships new tables may be integrated into the sqlFinance data model. The high consistency of the data model keeps database structure simple and is a solid base for queries and later analysis.



sqlFinance can be combined with Business Process Engineering for the modelling of the following basic dimensions:

- WHERE: Company Organisation (cost centre)
- WHAT: Product or Service
- WHO: Contractor (client, vendor, employee)
- WHEN: Period (reporting period, closing period, order date, due date)
- WHY: Business (tracking of business fields and profitability)

Technical features of the server version:

- Multiuser Environment
- Transaction processing
- Multiuser access control
- Record level locking
- Locking of closed periods and closed batches
- Log file for follow up of user activities

Basic application elements

- Accounts (chart with IFRS sample, account structure, reporting account structure, account groups)
- Company and company organisation (profit centres, cost centres, groups within the organisation)
- Contracts (orders, sales, banks, insurances, employees) with contract financial status (earnings, expenses, balance, credit limit), contract specific properties (currency, taxability, market region) and contact data (person/address).
- Products (including bill of materials, product line with instructions for general ledger accounting and taxes applicable)
- Prices and discounts (per market, company, product line or product). Price list per market, with foreign currency. Price per unit of measure, per minimum quantity. Special prices and discount sales.
- Properties (descriptive feature for persons, positions, batches)
- Batches with collection of bookings (ex. General Ledger batch with closing records, Sales Order batch with sales items for a customer)

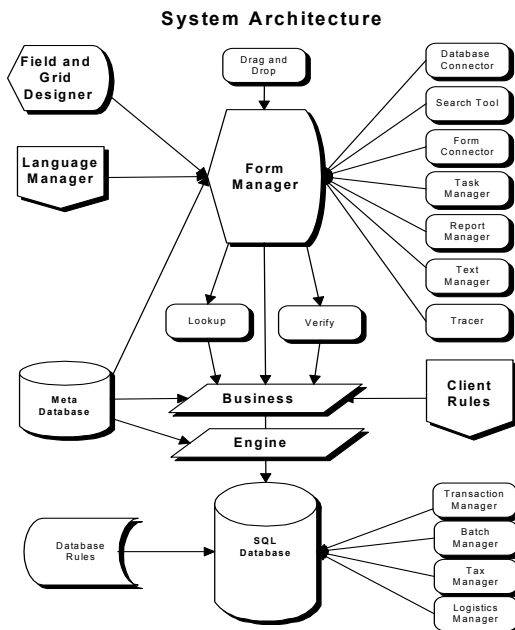


Batch structure

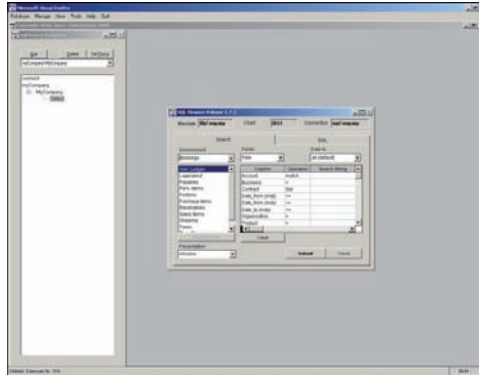
- General Ledger (multiline entries, foreign currency)
- Accounts Receivable/Payable (conditions, address information, foreign currency, payment clearing)
- Purchase and Sales: (product, unit of measure, price, discount, tax, sales person, time status, foreign currency)
- Payroll (labor costs, labor quantity, organisation, insurance and social security, percentages, accounting information)
- Time Management (time, price, contract, employee)
- Portfolio Management (value, price, expenses)

System Architecture

The modular architecture of sqlFinance makes the product attractive for users as well as for developers. All tables are presented through the form manager. The user can choose be-



tween a grid listing of the current selection or a collection of fields for the current record. Master/detail relations are easy to understand and triggered through the use of master/detail keys or double clicks on fields to lookup master references.



sqlFinance search tool and treeview toolbar (on the left)

The form manager is database driven. Classes and methods access a meta database defining data structures, data relationships and rules. The meta databases includes information about referential integrity, lookups and double click effects. Modifications in these rules can be effected without any programming necessary.

The search tool is used to specify the search values for a query. Queries can be stored and reused in the search tool. Search values can reference any fields, and the ordering of the selection can be specified additionally.

Database access is executed through the "engine" COM object. The engine will assure the integrity of the active user environment, considering the current mandate and chart of accounts. The use of the engine enables the user to work simultaneously in more than one mandate or database and transfer data from one mandate or database to another.

A toolbar manages the windows opened. This facilitates window access when many windows are opened. Another tool allows to store a reference to any single record selected, with the possibility to add personal notes in a text field. These "notes" may be classi-

fied according to a priority and retrieved in later sessions. Drag and drop is used widely in the application. It is possible to drag records to the toolbar, or establish connections between records through drag and drop (ex. Connect a master and detail product entry in a bill of material). Drag and drop can also be used to connect payments to bills, with more than two records possible and test if the total clears to zero. Dragging records of one window over another similar window will create new entries with copy of the source records in the target window.

A replication system handles the transfer of update operations from one database to another database. Separate installations can receive user updates that can be exchanged through replication or transferred from remote workstations to servers.

The middle tier provides a number of services:

- Database integrity
- Transaction management
- Closing of batches and periods
- Accounting requirements
- Tax management
- Inventory support
- Customer relationship management
- Log tracking

The middle tier is structured in three layers:

- Engine: control of database access
- Business: control of application rules
- Form: control of data representation in windows

The business tier may be implemented in two versions:

- COM server:
The COM server will be used in the standalone PC version, when there are no stored procedures available. The COM server is easy to program and company specific features can be implemented without modification of the other application elements.
- SQL Server stored procedures:
The stored procedures assure data and method integrity for all users. The business services of the stored procedures go further than the COM server. They include inventory control, shipping

Support & Contact

Need support for the installation or use of sqlFinance?

Do not hesitate to contact us. Our team is ready to answer your questions and offer you an efficient solution for your business application.

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Installation Instructions

A free version of the software (for Windows XP Operating System) can be downloaded from the homepage www.sqlFinance.com. After completion of the order form an email message with a link to the download procedure is sent to the user. Download and install following instructions and default suggestions. The default installation directory (usually `c:\programs\sqlFinance`) depends on the settings of your system, but any directory can be used.

The database "myCompany" in the "myCompany" directory will hold your accounting data. Several mandates can be stored in this database, but it is also possible to work with several databases. In this case, copy the "myCompany" directory and give it another name. To access this new database, enter a new connection using the connection tool (activate through menu "database\connection"). Since this is a local database, set the ODBC type to "Local-FoxPro").

Quick start

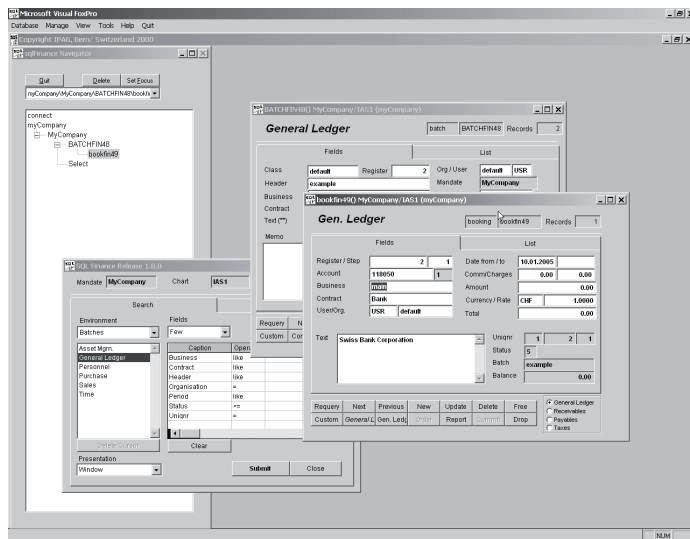
A new user might want to start entering bookings as soon as possible. For this purpose, the software is shipped with a sample database and mandate "myCompany". When the program is started, the user is logged in automatically and finds the "select" tool presented on the screen.

Two sample batches with bookings show him, how data should be entered. Create a new batch, then use the "detail" key ("bookings") to open a booking window linked to this batch. Now start entering the bookings. For the fields, default values like "2007.1" for the period, "default" for the organisation and contract, "USR" for the user will be accepted.

The IFRS chart of accounts can be used as it is or adjusted to user requirements. To get a list of available accounts, put the value "%" into the account field and then use a double click. Select an account record, and then use the key "release" to get back to the booking window.

When a new record is entered, in order to set the values of the previous record use the "oldValues" key. The effect of the first data entries on the booking form can be tracked on the printed profit and loss statement right away. Get the period form with the correct period, click on the key "reports", and start the favourite report "balance total slim".

begin entering booking records in a batch/booking cascade



www.sqlfinance.com

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