# THE APPLE MACINTOSH AS PRESENTATION SERVER FOR THE R/3 SYSTEM

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# THE APPLE MACINTOSH AS PRESENTATION SERVER FOR THE R/3 SYSTEM

Apple Macintosh systems are renowned for their user-friendliness and efficiency as workplace computers. Macintosh systems currently in use within departments are rapidly being integrated into the global infrastructure of computer-assisted business installations. SAP® AG is responding to this trend by extending its system offerings. SAP-GUI permits presentation of business functions on Macintosh and Power Macintosh.

## SAP-GUI: Direct Implementation of Software on the Apple Macintosh and Power Macintosh

SAP-GUI software - Graphical User Interface - enables interaction between users and the R/3 System. Within the scope of a SAP/Apple alliance, the product SAP-GUI for Macintosh is available since November 1994 with R/3 release 2.1h/2.2b. It can be used for R/3 installations of Release 2.1d or later.

SAP-GUI for Macintosh constitutes a direct implementation of this software on Macintosh systems. The SAP-GUI software takes advantage of all local computing power.

The arrangement of operating elements can be customized to the individual, and user preferences can be stored and applied. On-screen displays and the activation of different functions can be set in various user-definable ways. This lets the user access frequently-needed functions more easily, because he or she can tailor the system to their particular skills, level of knowledge and tasks. This provides for enhanced operational ease, manageability and ergonomics. The implementation of the SAP-GUI on the Macintosh takes account of the special technologies and features of the Macintosh System Apple Script™, BalloonHelp, Quick Help or using several monitor screens.
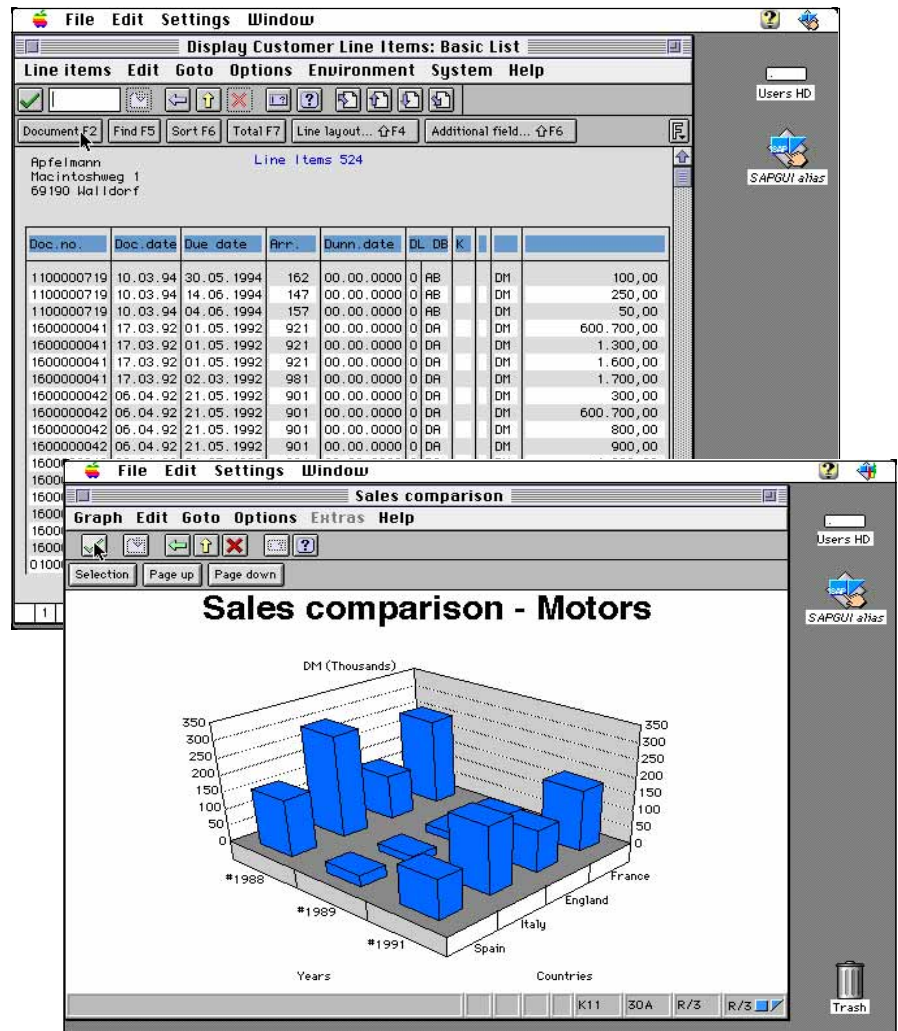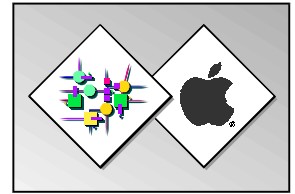
As a result, Apple users can continue working within the user interface that they know and feel most comfortable with.



*Fig. 1: SAP-GUI for Macintosh*

## Features

The SAP-GUI for the Macintosh weds the operation of the R/3 System to the advantages and ergonomics of the Macintosh.

Large monitor screens provide even greater flexibility and organizational clarity. In addition, the typical Macintosh feature — letting users connect additional screens to the system, thus enlarging the total screen area — is fully supported by SAP-GUI. R/3 users can take advantage of this feature to simultaneously invoke different functions and programs and view them at the same time on the same screen; windows would partially or completely overlap. This offers great advantages when a user is working with R/3, but also wants to view other programs like spreadsheets, word processors, or electronic mail.

## Apple Script support

Apple Script is a scripting language to simplify and accelerate repetitive operations. SAP-GUI for Macintosh is recordable and scriptable, which means, while running SAP-GUI, the performed commands are written in a log-file which can be executed later to do the same thing again. Also the user himself can write his own scripts.

## Configurations and network environments

SAP-GUI for the Macintosh is linked to the application servers by way of an Ethernet connection and TCP/IP protocols.

The prerequisites for installation are therefore a Macintosh with built-in Ethernet interface or a supplementary Ethernet card, e.g. from Apple Computer or another supplier. In addition, the MacTCP driver is required for TCP/IP transfer to the R/3 server.

Alternatively, TCP/IP connections can be implemented via a token ring network architecture. For LocalTalk links, an Ethernet junction is necessary, eg. Ethergate/Fastpath from Shiva or the Apple Computer Internet Router software.

Modem links: for integration of the SAP-GUI, various options are available for data transfer.

❑ AppleTalk remote access using converters between AppleTalk and TCP/IP.

❑ SLIP connections (Serial Line IP)

A transfer capacity of 9,600 baud per workplace is sufficient.

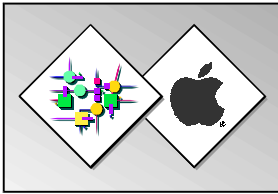## Linkage of Macintosh application to R/3 database servers

More and more integration tools are being implemented to link the Macintosh workplace software with SAP systems. It is already possible for the database servers in R/3 to be directly accessed from a workplace system. These access operations are performed by way of ANSI SQL links.

With SQL (Structured Query Language) data from a database server can be requested. SQL calls issued by a workplace system can, for example, be predefined macro commands output by a spreadsheet program. Also, query tools can be used that help the user generate SQL commands. Owing to the existing possibilities for exchanging data between different Macintosh programs, the data requested in this way can be imported and used by virtually any locally running software.

Various SQL tools serve as the medium for transferring the SQL commands to the database server and fetching the requested data back to the local system. These include:

❑ Data Access Language (DAL), sold by Apple Computer, is available for databases and platforms like Oracle and Informix on Digital VAX, and Oracle and Informix on various Unix systems, including HP-UX and AIX. A datasheet on DAL is available from Apple Computer.

❑ Open Database Connectivity (ODBC) from Microsoft is also a programming interface for SQL database access operations. ODBC is based on the standard of the SQL access group. Microsoft is expanding ODBC by adding DAL calls, and at the same time, Apple Computer is grafting ODBC capabilities onto DAL. Therefore, ODBC client/server systems can also be utilized for this purpose.

❑ Oracle is offering SQL-Net, a similar connection tool that is available as client software on the Macintosh and as server software on the relevant Oracle platforms.

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## Operation of the SAP-GUI for Macintosh

SAP-GUI for Macintosh is used and operated similarly to the other R/3 front end systems. For this reason, R/3 users should familiarize themselves with the corresponding documentation from SAP, such as „Introduction to the R/3 System." In addition, use of the Macintosh interface independently of the R/3 System is described in considerable detail in the documentation supplied by Apple.

## System Prerequisites

The following section lists the hardware and system software that a Macintosh system must have in order to run SAP-GUI for Macintosh.

### Operating System software Mac™ OS 7.0 or later.

For Apple Script is Mac OS 7.5 or extra Apple Script Installation Software needed. The SAP-GUI also supports Apple's PowerPC architecture.

### System Unit

❏ Processors: 68020 or better
68040 recommended
PC601 or better

❏ RAM: at least 8 megabytes,16 megabytes are recommended; At least16 megabytes for PowerPC

❏ Hard disk with approx. 20 megabytes of free storage space.

❏ Ethernet or Token Ring connection and TCP/IP protocols (Mac TCP 1.1 or later, 2.0.4 for Power Macintosh), Mac TCP is included in Mac OS 7.5.

❏ At least one Macintosh with a CD-ROM drive.

### Monitor

❏ Screen size: at least 640 X 480 pixels; a 16-inch or larger monitor is recommended

❏ Color resolution: 256 colors are recommended

### Keyboard

The SAP-GUI can be operated with all Macintosh keyboards. The SAP-GUI also supports the function keys when using the "extended" and "adjustable" Apple keyboards.
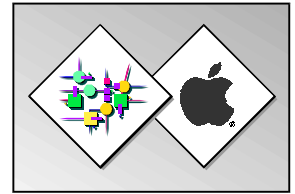
### Printer

Printout is done using printers that are directly addressed by the R/3 application server and are directly connected to the R/3 System. In order to address printers using AppleTalk protocols from R/3, a third-party software product is needed. At this time, for example, use of the EtherShare software from Helios has been tested on the R/3 application server. Also planned is support for the Apple Printer Laserwriter Pro 810 as an output unit, since this system can be directly addressed in Ethernet using TCP/IP protocols.

### Supported Languages

The local SAP-GUI for Macintosh is currently available in English. Independently of this, the language used by the application server in the application program is supported and displayed accordingly.

## Prices and Licenses

The price and license arrangements for the SAP-GUI for the Macintosh correspond to those for the other presentation platforms marketed by SAP. The Software is delivered on the SAP CD-ROM "R/3 Documentation" which contains a Macintosh partition.

## Interface elements

The R/3 applications and actions are activated in the *R/3 application menue bar*.

The *status area* is used to display success and error messages. When the system is processing a transaction, the message *Server* appears. The *Standard Toolbar* provides quick access to frequently needed functions.

The *title bar* indicates which SAP application is active in this window. The system- or hostname, client, transaction code or response time can be displayed in the *information area*.

Areas which belong together are grouped in a frame in the *SAP application* window.

Mac GUI menu bar

R/3 application menu bar

Standard Toolbar

Application Toolbar

Title bar



Status area

SAP application window

Information area
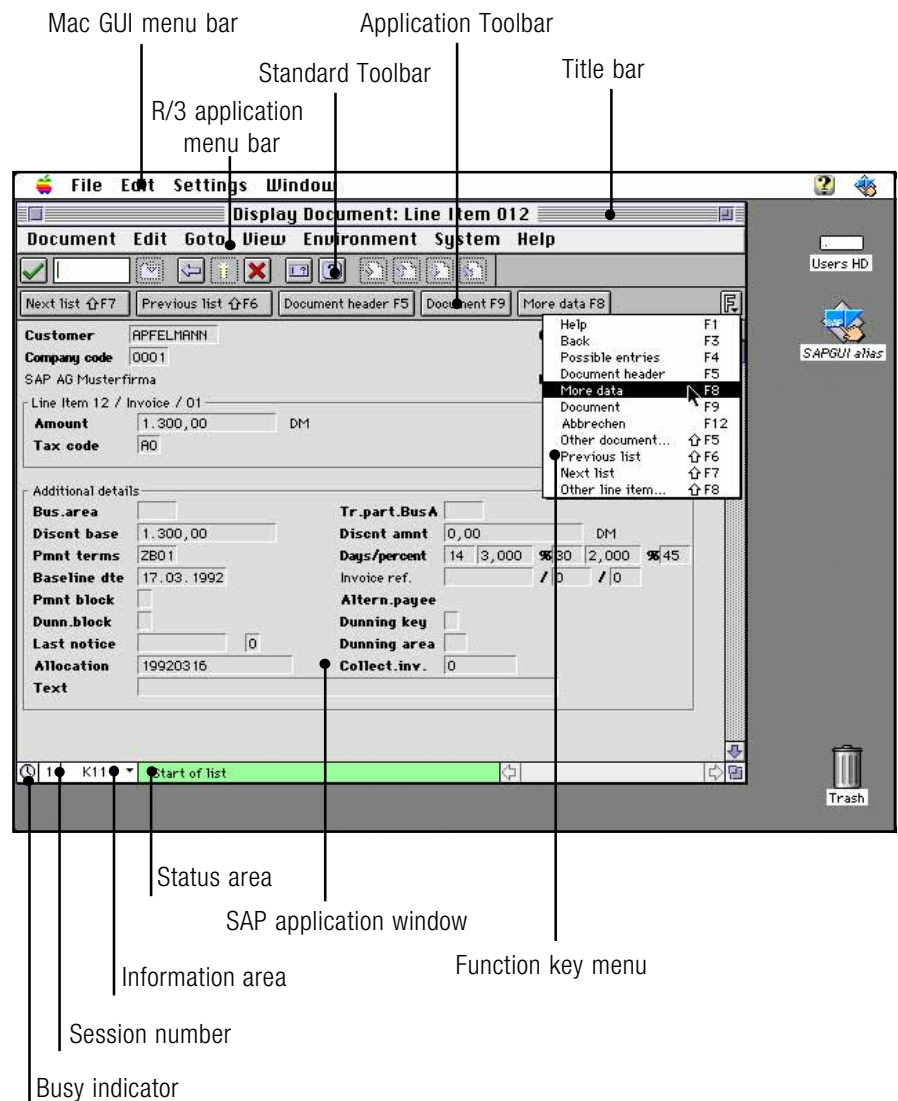
Function key menu

Session number

Busy indicator

*Fig. 2: Operating elements in the graphical interface*

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