

## Sage MAS 90/200 ERP for Windows Accounting Software

### Executive Summary

Version 4.30 of Sage MAS 90 and MAS 200 builds upon the enhancements contained in previous versions by adding some surprisingly simple yet powerful features that have been garnered many “oohs and aahs” from end users.

There were no module upgrades in version 4.3, rather Sage concentrated on making the software easier to work with by including several significant and well-received global enhancements.

Sage also introduced a new bundle they’ve labeled Extended Enterprise Suite. For the purposes of this summary think of Extended Enterprise as a competitively priced (both product and maintenance is cheaper) collection of modules.

### Sage MAS 90 & 200 Modules Included In EES

(Extended Enterprise Suite)

- Crystal Reports
- Library Master
- Business Insights
- General Ledger
- Accounts Receivable
- CRM (SageCRM)
- Accounts Payable
- Inventory Management
- Sales Order
- Purchase Order
- Return Merchandise
- Bill of Materials
- Bank Reconciliation
- Visual Integrator
- Custom Office
- Fixed Assets (Sage FAS)
- FRX
- Sage Federal and State eFiling of Reporting (Aatrix)
- CCP (Credit Card Processing) by Sage Payment Services

### Modules Available For Separate Purchase

- Bar Code
- eBusiness
- Work Order
- Job Cost
- Time Card
- Time Sheet
- CCP By PC Charge
- Payroll
- Electronic Reporting
- Direct Deposit
- Starship

- Sage Sales Tax
- MRP
- Abra HR
- Sage Extended Solutions

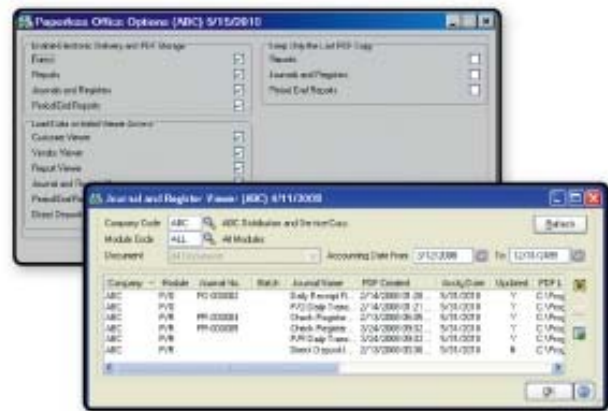
Because of the value proposition of EES, most users with a need for several Sage MAS 90 or 200 modules should investigate EES.

### New Features To Version 4.30

Although the new version doesn’t include any module upgrades, there are still plenty of functionality and global enhancements to make this latest version worth a look.

### Paperless Office Saves Time, Money, Hassles

Arguably the biggest feature addition to version 4.3 is the inclusion of the formerly expensive Paperless Office feature.



Paperless Office creates PDF documents automatically from your report data in Sage MAS 90 and 200. It works in much the same way you’d expect a PDF writer would.

While PDF files could be manually created with the use of freebie PDF converters- the added benefits of Paperless Office are security and control.

Documents created with Paperless Office are automatically stored in a secure location that you (not your end user) determine.

You have complete control over the portions of Paperless Office used in your company. The most popular feature is likely the Paperless Journal and Registers that sends all registers to a PDF file prior to updating. When activated, there’s no longer a need to print a paper register with Sage MAS 90 or 200 prior to being allowed to update.

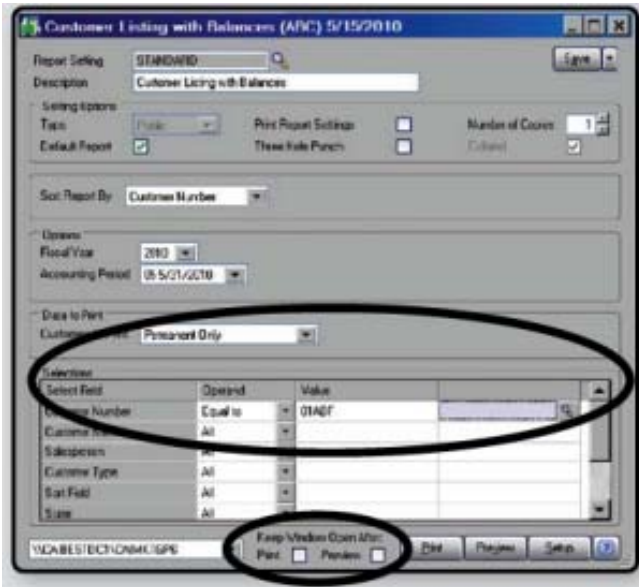
Using Role Maintenance you'll specify if a user should be able to see all documents or, as may be the case with sensitive financial reports, only those documents which they created.

Additionally a number of forms (sales orders, invoices, statements, direct deposit stubs) may be delivered electronically via email.

When forms such as invoices are printed, they're also accessible directly from the customer maintenance screen. This makes re-printing (or just viewing) copies of historical invoices easier than ever.

**Keep Report Window Open After Printing**

A new feature that Sage refers to as "keep window open after" is available on all version 4.x modules to allow for repeated printing or previewing of reports without having to go and re-open a report window



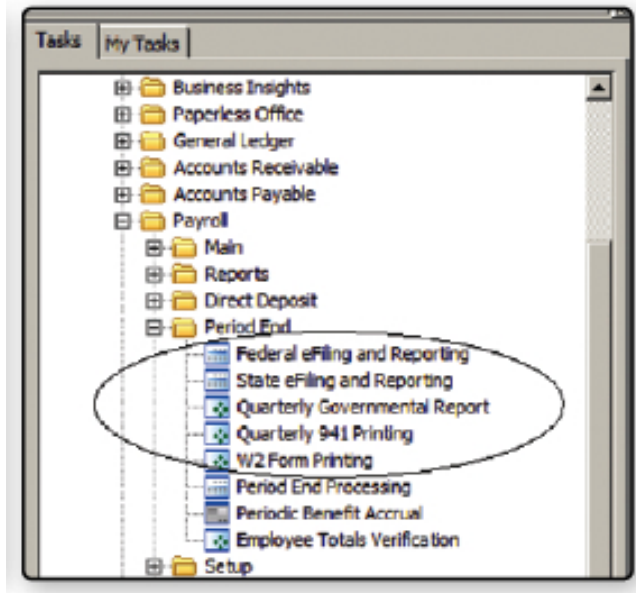
In prior versions of Sage MAS 90 or 200 users would complain that they had to repeatedly open report option screens when they wanted to create multiple copies of the same reports.

With the new "keep window open" option, users no longer have to constantly re-open a parameter window to create another copy of the same report.

**Electronic Filing of Payroll Taxes Included**

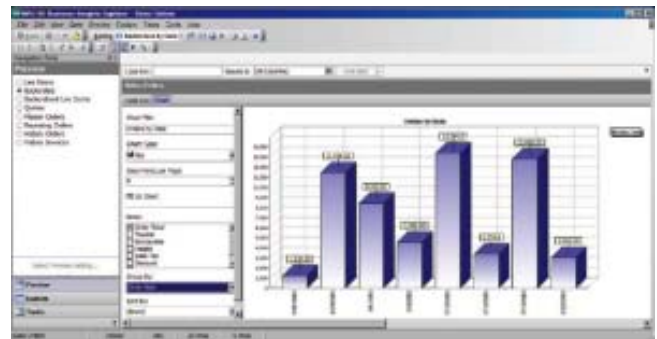
The Aatrix electronic tax reporting integration is a welcome new feature introduced into version 4.3 that creates a one way feed of year-end payroll data. This module is free of charge in version 4.3 (not available as an integrated solution for older Sage MAS 90 versions) and allows for editing and uploading year-end payroll data to the state and federal

government. For a small fee the service can also distribute copies of your W2 forms. Payroll tax filing services are also available via this new integration.

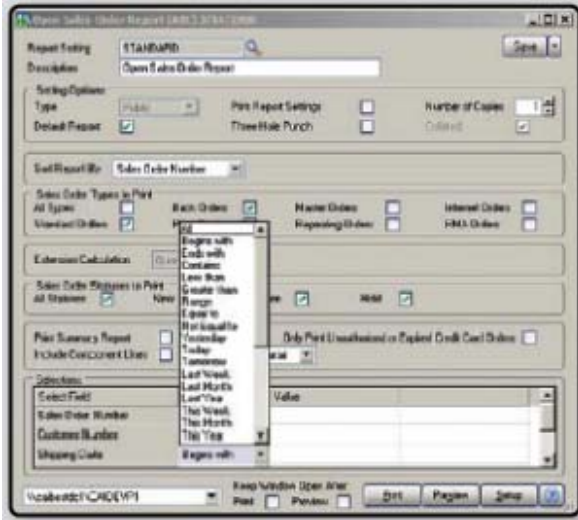


Other features new to version 4.30 include:

- Additional Business Insights Explorer views for General Ledger, Accounts Payable, Inventory Management and Purchase Order



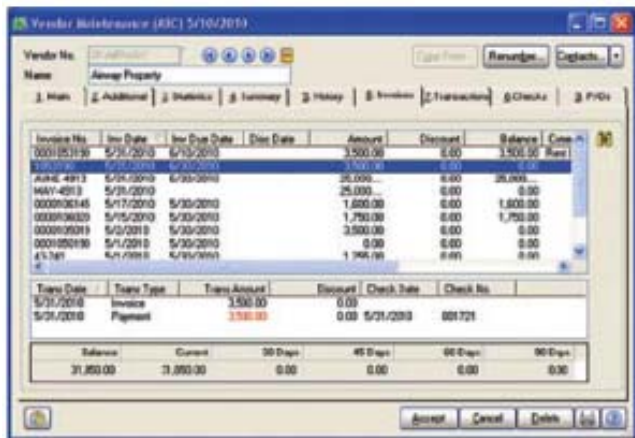
Streamlined report selection which support date range terms such as yesterday, today, tomorrow, last 7 days.



**Version 4.20 Updates Accounts Payable**

Version 4.20 added new features for Accounts Payable, which included some long overdue enhancements such as:

- Multiple year 1099 data tracking
- Tracking of detail vendor history totals (versus the prior clumsy practice of only tracking period to date information)
- Grid based data entry
- User defined fields stored along with related data for faster (and simpler) report printing.
- Alphanumeric fields for check numbers in manual check entry now facilitate simpler recording of bank transfers



With the move to version 4.2, all of the Accounts Payable reports are now Crystal based and completely customizable by the end user. Report settings and options can also be saved to make subsequent report selection even simpler.

Starting with version 4.2, Business Insights Explorer is an included tool that can access data from several modules and create ad hoc queries based on real time data from Sage MAS 90 or 200.



Using Business Insights Explorer an accounts receivable clerk or salesperson might quickly look up the open invoices for a particular customer. If further detail is needed about a particular invoice they can drill into the exact line items.

Most use of Business Insights Explorer will likely be from users not as familiar with Sage MAS 90 or 200 and looking for an alternate lookup or reporting tool.

The latest version 4.1 of Sage MAS 90 / 200 ERP accounting software adds enhancements to both Accounts Receivable and Sales Order Processing in addition to several miscellaneous global enhancements. In this document Sage MAS 90 will refer to both the Sage MAS 90 and Sage MAS 200 capabilities.

As with all previous version upgrades to Sage MAS 90, the data conversion is handled automatically by the software. Certain forms and reports that have been modified by the user may require manual conversion depending upon their complexity.

Previously, version 4.0 of Sage MAS 90 ERP upgraded the General Ledger and Bank Reconciliation while version 4.05 added functionality to some additional modules (primarily Job Cost) by incorporating some of the popular Sage Software Extended Solutions. Extended Solutions are pre-packaged customizations sold separately to further enhance the functionality of Sage MAS 90.

The initial 4.0 release substantially expanded the General Ledger capabilities and underlying system architecture. The remaining modules are all slated for a future upgrade to the new 4.0 standards with new features and interfaces being added as the modules are upgraded. One of the positive features of Sage MAS 90 and Sage MAS 200 is that data is always converted automatically during upgrades with the least user intervention possible.

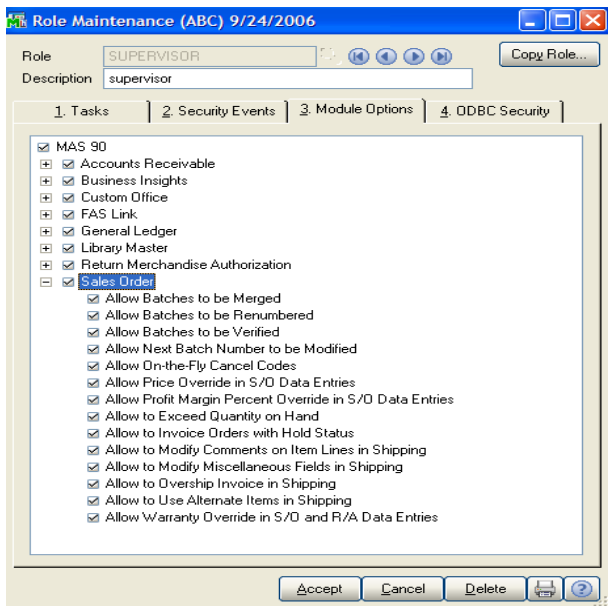
Every standard report in the newly upgraded modules has been beefed up by its conversion to user modifiable Crystal Reports. Though the same data and layouts appear, each of the reports may now be readily modified by the end user via Crystal Reports. Users who dedicated a couple of hours to learning Crystal Reports should be comfortable making minor custom reports.

Where needed, individual reports can have their settings modified and saved for easy recall. These saved settings can be global to the company or only for an individual user.

Batch auditing is significantly improved over all previous Sage MAS 90 versions. The date and user code is now retained any time a user creates or updates a batch.

Since the underlying Sales Order and Accounts Receivable data tables have changed, any Visual Integrator, Business Alerts or custom Crystal Reports will need re-working to be made compatible with the newest data schema.

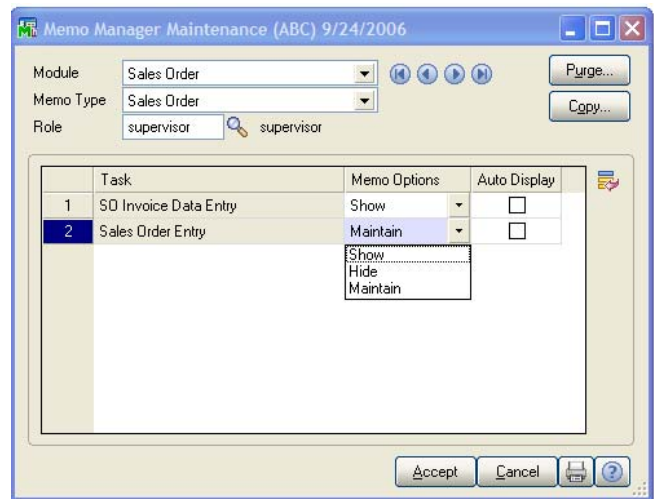
System security has been greatly enhanced for both modules. The roles based security allows for supervisor rights to be allowed for on a module by module basis. Most tasks can now be assigned Create/Modify/Remove/View rights.



The ability to assign role based security rights like shipping an item without the proper quantity on hand or overriding a price is a great improvement over past versions whose broad security permissions demanded an all or nothing granting of those same rights to every user.

Speed has not been significantly increased or decreased in this latest release. Those users with reported slowdowns have largely found the cause to be anti-virus or other network specific anomalies. The performance can often be tweaked by a skilled network administrator or Sage Business Partner.

Memos, long a standard feature of Sage MAS 90, are considerably beefed up in the latest release. File attachments are allowed for each memo. The user can now easily define where and when a specific memo will pop up (one example could be customer specific instructions to display during Sales Order entry).



User Defined Tables are a new feature of Version 4.x. They serve as an easy way to create a list of possible values used to validate entries to a User Defined Field. What's helpful about a User Defined Table is that it may be placed on the standard Sage MAS 90 menu for easy maintenance by any user. However, if you are upgrading a User Defined Field (UDF) from an earlier version (as opposed to creating one from scratch), be aware that the source for the UDF cannot be changed once it is created. That means if your original UDF used a manually defined list of values, after the upgrade to version 4.1 you cannot change that data source to be a User Defined Table without deleting the UDF, losing all historical data and starting from scratch.

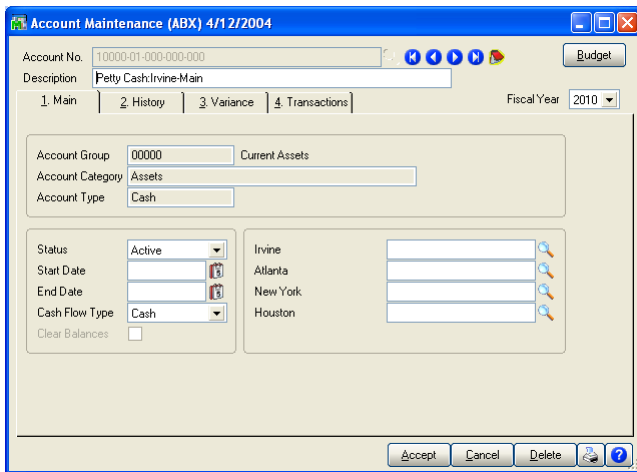
Numeric fields have been greatly expanded so that they now accommodate up to 999 million within line item entry and 99 billion for reports.

**4.0 Changes**

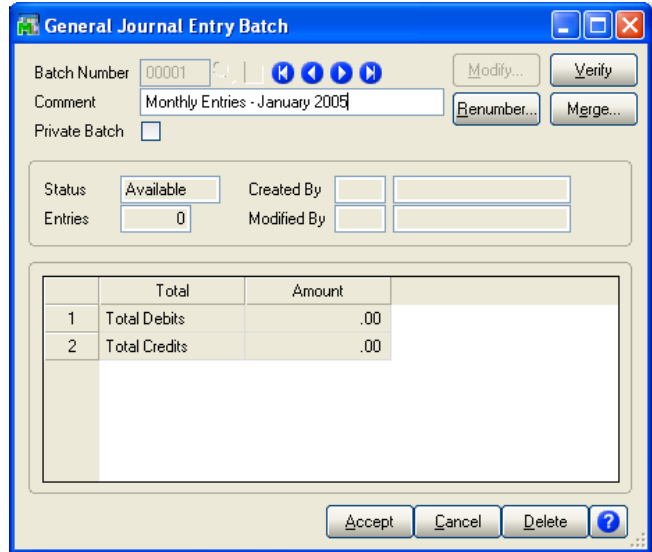
Stretching the account code from 9 characters to a maximum of 32 was a key goal of this initial Version 4 release. The new structure allows for greater flexibility within the accounting setup. While the initial Version 4 release most significantly enhances General Ledger – each of the other modules has access to the expanded General Ledger accounting size as well as a new interface.

Sage MAS 90 Version 4 features a completely enhanced General Ledger module. Aside from the expanded account structure, there are several other significant enhancements to the module. The data entry screens within General Ledger allow for a simplified grid entry. Instead of having to page through fields – the data can now be completed on one screen. All of the reports in the General Module have been re-written so they are user customizable via Crystal Report Writer (Note: The modules which have not yet been brought to 4.0 standards retain their prior reports which will not be customizable until those modules have been upgraded).

Users of the Sage MAS 90 and Sage MAS 200 custom financials should plan on migrating their financial statements to FRX which is a more robust financial report writer than the old Custom Financials option which is being phased out.



*Sage MAS 90 / 200 4.0 General Ledger structure*



*Batches are now supported in Sage MAS 90 Version 4 Journal Entries*

Sage MAS 90’s strength is the wholesale distribution marketplace. Sage MAS 90 remains a strong competitor due to its ease-of-use. The software has matured and minor problems that may have existed with printing or stability in the first Windows release are long gone. Sage MAS 90 is easiest to operate on a Windows 2000 or Windows 2003 network, although support for Novell is provided by Sage. In today’s competitive accounting software market, the 70,000+ users of Sage MAS 90 give strong assurance that this is a package that will be well supported and maintained. The product also boasts a large number of Master Developers who create enhancements for the product. For companies interested in e-commerce, the eBusiness Manager module has been designed as more of an “out-of-the-box” solution for simple setup and maintenance – with the Sage assurance that “No expensive Web Consultants will be needed.”

**Different Versions of Sage MAS 90 / 200 Available**

There are several versions of Sage MAS 90 that are available. Each version contains the same program functionality, however it is fine tuned or packaged for different situations. If you start with an entry level version of Sage MAS 90 you will be able to automatically convert your data to other versions.

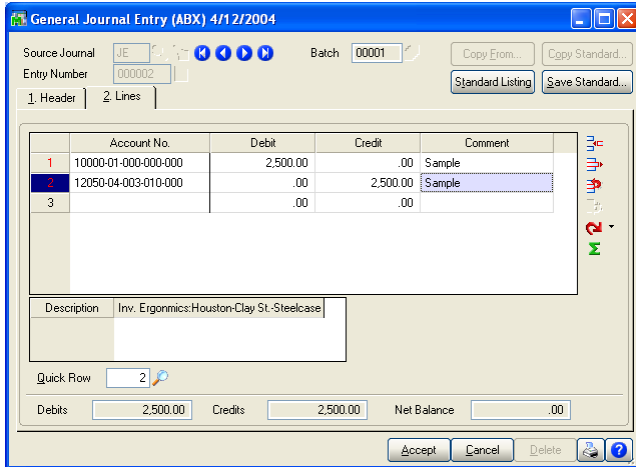


Figure 1: The Version 4 interface support Grid Entry for greater ease of use.

**Sage MAS 90** – Operates as a standalone or on Novell / Windows 2000/2003 networks. This is the flagship product aimed at companies with fewer than 15 concurrent network users or light data volume.

**Sage MAS 200**– This is the Client/Server version of Sage MAS 90 (formerly called Sage MAS 90 CS). The software is the same but it operates exclusively on a Windows NT/2000/2003 servers and offloads a significant portion of the file access to the server. If you will have many simultaneous users performing data entry, Sage MAS 200 is the answer. The setup is simple and the features are exactly the same as Sage MAS 90.

**Sage MAS 200 SQL** – This is the SQL version of Sage MAS 90. Again, it offers identical features and functionality as the core Sage MAS 90 program. It is based on the SQL architecture for those organizations who demand an SQL database structure. Surprisingly, the Sage MAS 200 Client Server version is the faster of the two flavors. The SQL version of Sage MAS 200 is on a different upgrade schedule than the core Sage MAS 200 product, therefore enhancements are being released more gradually.

**Sage MAS 90 SMALL BUSINESS or Sage MAS 90 PEACHTREE EDITION or Sage MAS 90 QUICKBOOKS EDITION** – These versions are price reduced versions of Sage MAS 90. The features and functionality are identical to regular Sage MAS 90 (with the exception of Small Business which is limited to a maximum of 2 concurrent users). The Peachtree and QuickBooks versions of Sage MAS 90 are a marketing tool to attract users who are outgrowing those respective products. It is sometimes offered at a discount to registered users. The features and functionalities of both these versions are identical to the regular Sage MAS 90 program.

### Sage Extended Enterprise (Available for MAS 90 or MAS 200 )

Starting with version 4.3 Sage introduced a product bundle they're marketing as Extended Enterprise Suite (EES).

While there's no official declaration as such, it appears likely that going forward the lion's share of effort (both development and marketing) will be put into the suite.

For one fixed price per user (minimum initial purchase of 5 users) your company receives a bundle of MAS 90 or MAS 200 modules, which include CRM as well as Fixed Assets.

The Sage MAS 90 or MAS 200 accounting modules included in EES are identical to those discussed here.

This pricing for the bundle is a significant reduction over what the separate portions (accounting + CRM + fixed assets) would have cost previously. It's also an admission that most ERP vendors are including all three of these types of programs in their offerings.

### Scalability

Sage MAS 90 is built using Providex which is a Windows Business Basic programming language. In practice the system scales quite readily up to perhaps 30 or 40 concurrent users (which is heavily dependent on the type of data entry each is doing.). The latest version 4.0 of Sage MAS 90 is expected to improve multi-user performance. The use of the Sage MAS 200 Client Server version should be strongly investigated by anyone anticipating heavy data entry as the small additional price for the Client Server version is more than justified by the additional processing speed.

Users outgrowing any of the Sage MAS 90 flavors will have an upgrade path to the Sage MAS 500 which is a fully SQL based system marketed to larger companies. Sage MAS 500 does NOT share the same user interface as Sage MAS 90 – it is an entirely different program which also requires a data conversion which unfortunately is not automatic.

Sage offers a SQL version of their MAS 200 product. However this version has been neglected and remains at the 3.7x level without receiving any version 4.x feature upgrades. It does not seem that the SQL version of MAS 200 will make the transition to a version 4.x level and users still away Sage's announced plans for the SQL product.

If SQL is a must in your organization, consider a product which provides for mirroring of MAS 90 or 200 data tables to SQL (see DSD Business Systems on the web for more information on SQL Mirroring).

### Customizability

Virtually all customizations to Sage MAS 90 are made in one of three ways

1. By selecting the different configuration options that each module's setup screens offer.
2. By purchasing pre-packaged enhancements from one of several master developers.
3. By using the Customizer to make minor changes to such things as tab layouts and to add user defined fields.

There is a book listing several enhancements that have already been written for Sage MAS 90. These enhancements are generally bug-free and more cost efficient than hiring a programmer to write something from scratch.

Users who are simply looking to report on data from Sage MAS 90 / 200, can make use of the ODBC link that is included with all versions of Sage MAS 90 to pull data into (but not write back) any ODBC compliant software. In order to write data back to Sage MAS 90 a separate Visual Integrator module is required. This Visual Integrator is recommended for all data integration projects – even those making use of the SQL version.

### Setup Process

Setting up Sage MAS 90 is best accomplished with the assistance of a local consultant/reseller. The program is not difficult to use, but there are many options that need to be set during the initialization process.

Upgraders from previous versions will be pleased to learn that old Sage MAS 90 data automatically and effortlessly is converted.

There is a Data Migrator module available that converts data from the most current version of Peachtree to Sage MAS 90. Future plans for the Data Migrator include the ability to convert Business Works and QuickBooks data.

### Hosting Services

Sage offers a solution for anyone seeking to have an outside service host their Sage MAS 90 system (similar to an ASP). The present solution is operated through IBM and allows for an annual, lease or subscription based payment.

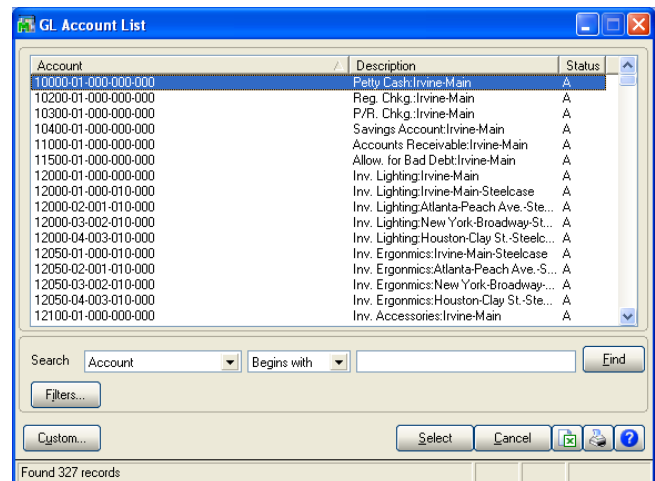
As of yet, ASP hosted solutions have yet to catch on. They tend to make the most sense for companies with many different physical locations who need to access their accounting software quickly without the overhead of having an IT staff to manage and configure everything.

### Best Features of Sage MAS 90

The best features of Sage MAS 90 continue to be ease-of-use, functionality, over 22 separate accounting modules, widespread support and the full backing of the Sage Corporation, one of the largest vendors of PC Based accounting software in the world.

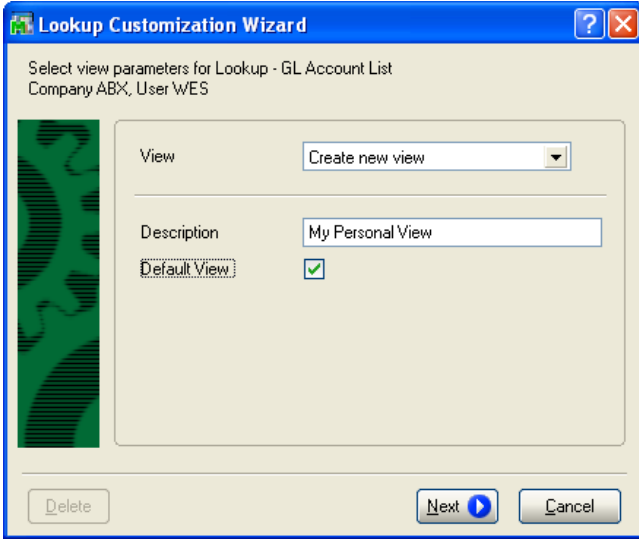
Some of the other strong features:

- Stability
- Strong wholesale / distribution
- Significant number of online technical resources for those ends users who want to support themselves.
- Large number of resellers. Sage has initiated testing and certifications within their reseller base which will help ensure that only qualified resellers represent their products.
- Hundreds of pre-written enhancements to Sage MAS 90 that are available for a fixed fee and in most instances completely avoid the need to hire an expensive programmer.
- All upgrades and updates automatically convert data for you (Note: Do not underestimate the value of this).
- Strong core modules – GL,AR,AP,PR,SO,IM,PO.
- Powerful Sage Knowledgebase available to all end-users on a software maintenance plan.
- Sage Talk messaging board available to all users.

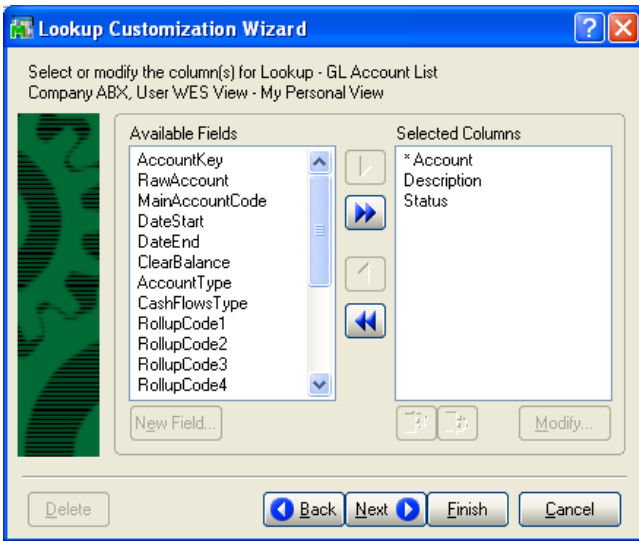


*The Advanced Lookup Engine (ALE) replaces the functionality of the F2 lookup key. Every screen may be customized for any combination of user and company code.*

- Powerful usability tools such the ALE shown above that make it easy to get to the data you need.



*Sage MAS 90 features the ability to create up to 99 separate lookups per view. Useful for situations such as payroll where you may want a view that shows people hired or fired since the start of the year, etc.*



*With the Advanced Lookup Engine, each user can customize which fields are shown in their lookup windows. These can be customized for every user, company and module.*

End-users appreciate the well-designed lookup screens, especially the ability to easily view transactions such as checks or invoices in the Accounts Payable or Accounts Receivable modules.

**Are There Any Problems With Sage MAS 90?**

Software setup is very sensitive to using the right versions of networking protocols under either Windows XP or Novell. Whenever possible, use Windows 2000/2003 as the file server to minimize conflicts.

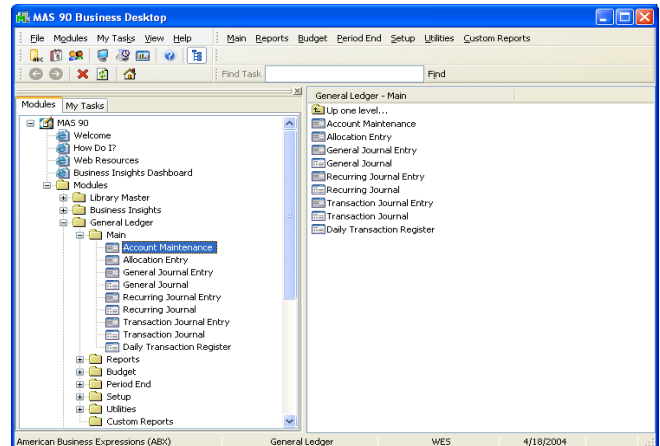
The Crystal Report Writer (included) for forms such as checks and invoices is both a blessing and a curse. The blessing is the extreme amount of report customization that a tool like Crystal Report Writer allows. The curse is the slow speed of creating those reports. With large amounts of data, Crystal Reports takes an unusually long amount of time to print reports.

If you are planning on using Crystal Reports with Sage MAS 90 to create crucial reporting functions, be sure to test it first with a database of the size and type that you are contemplating using. (**Crystal Report Tip:** Sometimes reports can be made to run lightening fast by performing complex functions such as sorting or grouping AFTER creating the basic report.)

**Cons:**

- Advanced Lookup Engine (ALE) is very powerful yet can be slow for lookups on files that have many records – such as history or detail files.
- Manufacturing and Construction modules haven't been significantly updated for many releases.
- Overly sensitive to proper network setup.

The entire Sage MAS 90 product line is 32 bit and a Client Server version (called Sage MAS 200) is available for both UNIX and NT servers (but NOT Novell). The Client Server (CS) Version provides for significantly greater speed. Reports that might normally take 30 minutes to print under Sage MAS 90 for Windows can print in less than 5 minutes with the client server version. The point for considering the CS version is usually 5 or more concurrent network users. The only difference in pricing is in the user licensing. All the accounting modules are the same price as 90/W.



*Shows look and feel of navigation with Windows Explorer*

**Global Features**

**Lookup-** Finding information is easily accomplished using the lookup feature. Standard lookups can be performed by one record or page at a time using account name or number. More specific lookups can be telephone number, zip code, product line, vendor, or user-defined fields. Starting with version 3.50, the Advanced Lookup Engine allows users to easily change the lookup screens to add or remove existing data fields. Beginning with version 3.4, when you enter a zip code into a data entry screen, the city/state can be automatically entered for you in either mixed case or all capital letters. Previous versions only allowed for the entry of the city/state in lower case letters.

**Drill Down & Drill Around** - Transactions may be expanded to see the entire entry. Transactions originating from other modules can be *drilled around* into the other module.

**Transaction Search** - While viewing transactions, there is a nice capability to narrow the search by transaction type, date, or specific comments.

**Printing Options** - Standard printing options are available along with previewing reports on the display. While previewing, a utility has been added to allow string searches so, for example, specific information on a 200 page report can be found quickly. Deferred printing is available and some reports may be saved in spreadsheet formats. Exporting of virtually any data can be accomplished via the Crystal Report Writer which supports file exports to Excel, Lotus, ASCII and many other popular formats.

**On-line Help** – Every user has access to all the Sage MAS 90 help in an online file. As each application field is encountered, Sage MAS 90 for Windows provides a field explanation of the Status Bar in addition to tool bar tips. Also, there are three levels of on-line help: *module*, *application* and *data field levels*. The module help describes navigation and even provides a flowchart for each module. On-line help for the application assists with a description, fields used, and helpful hints. Annotations may be attached to each level which may be helpful in developing standard operating procedures.

**Forms** - Each application comes with one predefined form (invoice, A/P checks, customer statement) developed in Crystal Reports. These forms may be modified to include a logo, create a watermark effect, and select font sizes or colors. Using Crystal, new forms may be created based upon differing needs. The same caveat about the slowness of Crystal Reports applies here. You will have a high degree of customizability within each form, however adding certain fields to a form can greatly slow the speed of printing. Again, this is an area to test if you anticipate making heavy use of modified Crystal Forms. Sage MAS 90 allows for more selective use of Crystal forms. For example within Accounts Receivable you might turn on

graphical forms for invoice printing but use the older character based forms for printing of statements.

In addition to the standard accounting applications, several productivity tools and vertical market applications round out the line. Productivity tools include F9 for Windows, Crystal Reports for Sage MAS 90 (included with your Sage MAS 90 system), FRx, Explorer, Sage MAS 90 Custom Office, and Visual Integrator (the graphical replacement for Import Master).

*Explorer* is an inquiry tool that allows users to be in a Sage MAS 90 screen (even data entry) and, by pressing the F7 function key, have instant access to records of customers, vendors, inventory items, sales orders, purchase orders, even updated invoicing down to line item detail, etc.

Sage MAS 90 Custom Office provides a tool-kit aimed at increasing the usefulness of the accounting data. It includes Sage MAS 90 Office, Customize. With Customizer, you can change the appearance of your 90W screens to match the way you prefer to work. If a field name such as Customer is not applicable to your organization, just use Customizer to change the name to Client. It may also be used to move fields, hide fields, create default values and even add user defined fields.

Among its vertical market applications, Sage has a Bill of Materials, Work Order processing and MRP capability suitable for light manufacturers. Third party vendors like BDO Seidman have taken the concept of the Sage MAS 90 manufacturing modules and improved them substantially with a fully integrated program called JobOps (<http://www.jobops.com>).

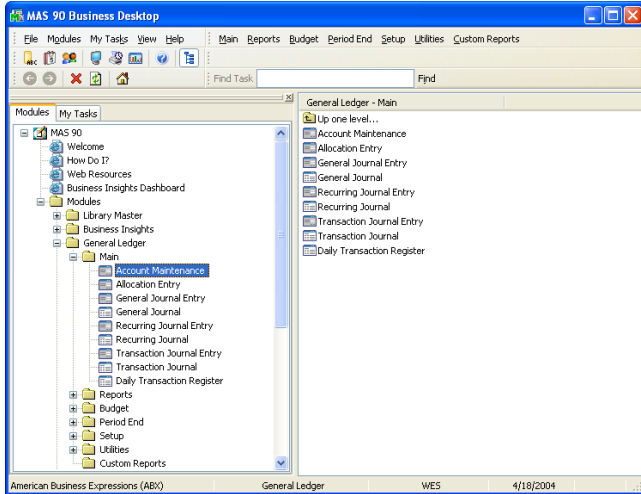
## User Interface

### Pros

- great variety of record lookup functions
- screens are consistent, easy to use
- easy to modify tab order or change field names with Custom Office software
- look-up lists can be customized by the end user to add fields of information
- new grid entry speeds data entry

### Cons

- cancelling out of some screens is confusing
- lookups (ALE) can be sluggish (slow finding records)



*Task launcher screen*

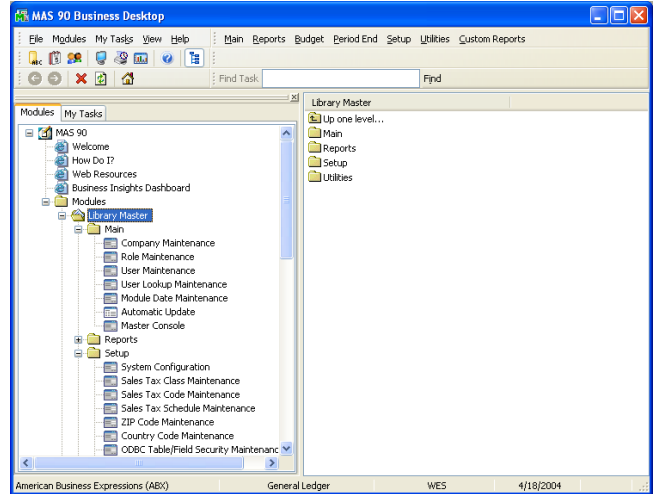
The Customizable *Launcher* is a feature of Library Master. The Launcher can display applications in Sage MAS 90 pull-down menus or in Windows Explorer style. The Tree View icon controls the style presented, which can vary from user to user. Users can also arrange the content of the launcher allowing immediate access to other productivity tools such as Word and Excel. Several of the Utilities are launcher-accessed, including the Chat function, Master Console, Change Company, Change Date, etc.

Crystal Reports, the presentation graphics-style report writer is accessed from the launcher. Also, Task menus can be defined in Library Master for specific tasks and individual operators. Shown above is the launcher screen.

### Library Master

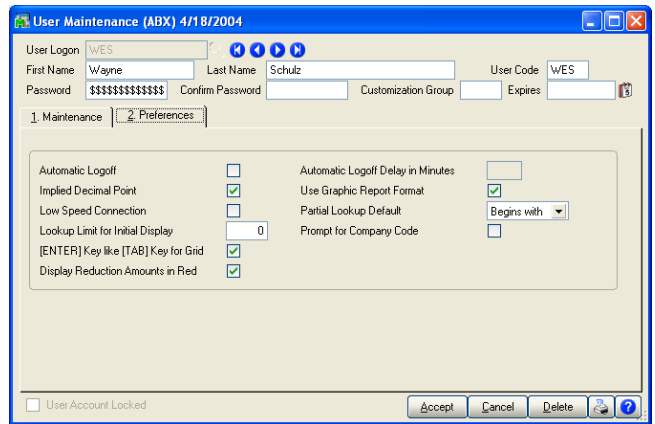
Library Master is a required system module used to set security codes, to operate special utilities like back up and restore and to set terminal and keyboard preferences. Terminal choices include color, reverse video, 132 column display option. Keyboard characters may be defined for both function keys and edit keys.

The system activity log will track all significant operating events (such as performing file maintenance, data entry, etc.) and list any error conditions that may occur. This log can be used to help diagnose error messages as they occur. Task menus allow users to group their own set of commonly performed tasks into a custom menu of their own design.

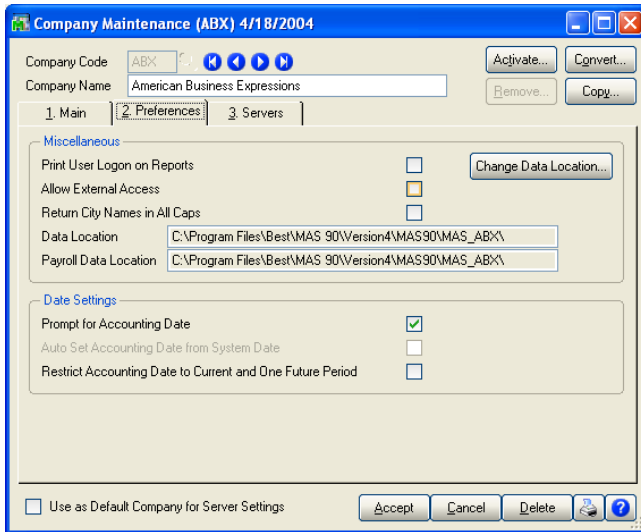


*Sage MAS 90 Library Master*

Task menus may be defined by module and assigned by company for an individual user or group of users. A terminal preference option allows the user to choose whether or not they want to use an "implied" decimal point when entering numeric data. The deferred printing option has been enhanced to allow a specific page number or a specific range of pages to be printed for a deferred report.



*Each user may set their terminal preferences within Sage MAS 90*



The administrator may now disallow postings to more than one future period within Sage MAS 90.

## General Ledger

### Pros

- retain up to 99 years of detailed general ledger history
- simple closing procedures
- powerful FRX financial reporter
- rapid batch entry of journal entries
- strong customer financial reporting
- adjusting journal entries support batch entry
- flexible recurring journals
- powerful link with MS Excel/Lotus via optional F9 module

### Start-up

The chart of accounts consists of up to thirty two alphanumeric characters with ten possible segments. This account structure is new for release 4 of Sage MAS 90. Unlike some systems, less than the full account structure may be defined and used. The system supports non-financial accounts as well as financial (for posting). Sage MAS 90 version 4 comes with several sample chart of accounts, once defined the chart of accounts can be copied from one company to another.

The standard reports use account number ranges within 12 predefined account types. Among these are current assets, fixed assets, revenue, cost of sales, etc. Account types are assigned to each account code and used to print "headers" on financial statements. For purposes of the statement of cash flows, each account is assigned a code of either operations, investment, financing, cash or a non-cash flows

account. The system supplies 12 pre-defined accounting periods and period-end dates, which can be changed to up to 13 periods and assigned specific end dates. A start-up convenience is entering initial opening account balances with special beginning balance journal entries.

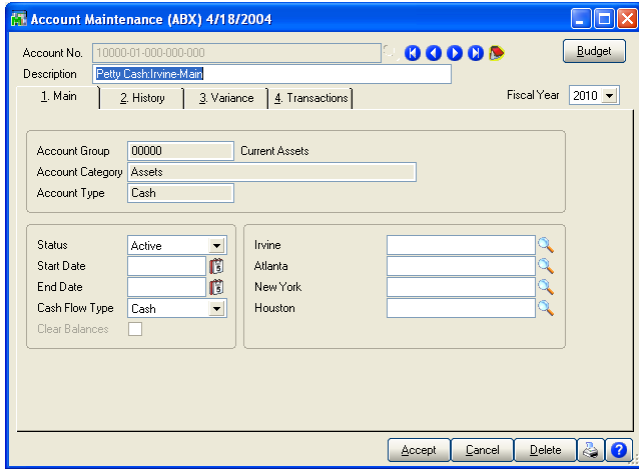
### Account Maintenance

There is the ability to automatically duplicate accounts for a new department or location or duplicate a new account for all existing departments or locations. This eliminates the need to enter each combination of account/department to the system and is potentially a great time saver on system setup. The account maintenance screen features the ability to not only look at current year actuals and budgets but also up to 99 years worth of future or past years data with all other budget fields, and transaction detail also available for the 99 years. There is full searching for transaction detail including a "string search" for transaction comments (show me all items where the word "tax" is included). A Delete, Renumber, Merge utility is available to help restructure the Chart of Accounts.

New to version 4 is the ability to make accounts active/inactive – including the specification of a start and end date for which an account may be utilized.

### Budgeting

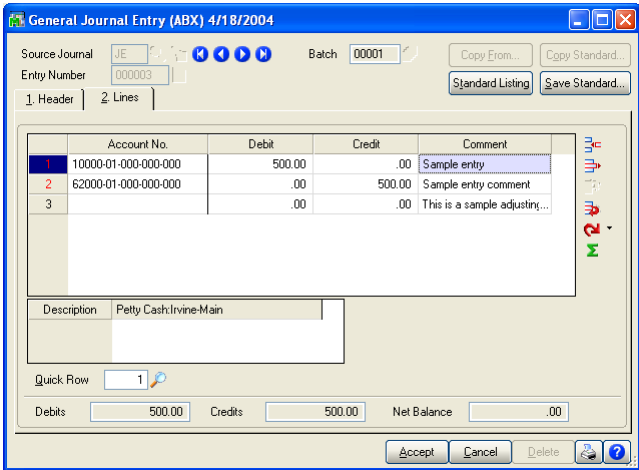
Budgeting capabilities are substantial. Three budget fields are available for each period; current, revised and a third type which is user-selectable. Budget data can be maintained for up to 99 years. Budget data may be entered a number of ways in addition to simply entering budget amounts by period. Users may enter one annual amount and have the system allocate it among all periods or copy it to all periods. In addition, budget amounts can be increased or decreased by a specified percentage or amount to remaining periods. Percentage changes can be done on a cumulative (increment each successive period and use that as base for next period) or flat percentage basis.



Account maintenance screen

**Journal Entry**

The program uses a system date to govern operations. The system date is the posting date. The system date can be other than the current period. For example, a user may make the system date July, and post to July, although June has not yet been closed. The system warns the user if the posting date entered is in a future accounting period but will let the user proceed. A user may even post to a future year period bucket in the chart of accounts file. This amount is then passed to the next fiscal year after the current one is closed. However, you cannot post to a prior period without resetting the current period ending date back to the desired prior period. These scenarios all assume that the user in question has the appropriate security credentials.



Sample Journal Entry Screen

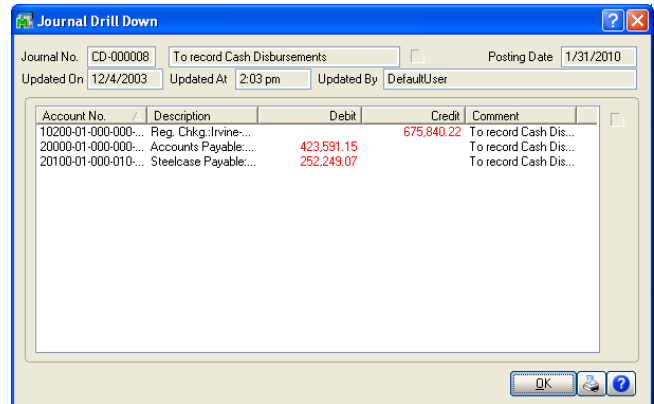
New to version 4 is the ability to use batches to manage journal entries. Single entries or the entire batch may be selected to be updated or the entire batch may be Journal entry has a number of productivity features such as the use of the insert and delete keys for editing entries. The browse function lets users scan the accounts file or journal entry

file or search for specific accounts using account names or numbers. If this option is elected during system setup, authorized users can enter new accounts "on-the-fly." The backspace or arrow keys are used to move from field to field. Journals are definable by any two letter code, but the format is the same for each. Once an entry is completed, it is still available for editing as long as it has not been posted to the journal file. Once all entries are completed, a general journal report is optionally printed and user may update the journal file or return to the journals for further editing.

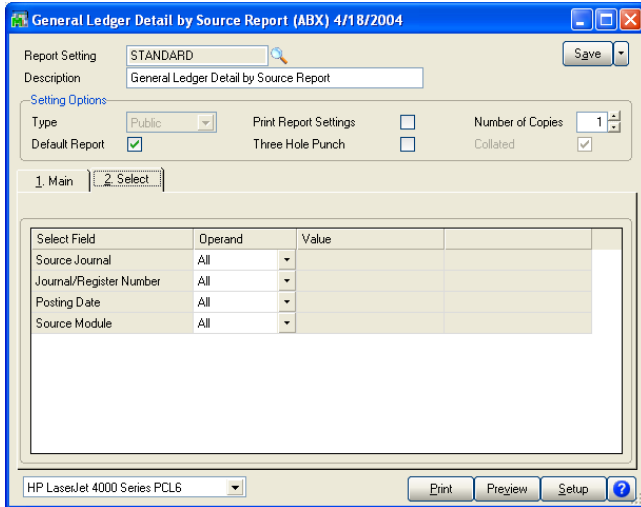
A useful time saving feature allows defining recurring journal entries by entering the accounts to debit and credit along with a select cycle that determines the frequency of posting the entry and a stop date. The stop date eliminates the need for the user to monitor when to remove these entries from the system. Unfortunately, only one standard entry per journal may be defined and the user must remember to make the necessary changes each period.

**Drill Down and Drill Around**

An entry on the long-time wish list for Sage MAS 90 is being able to list the entire journal entry that an individual journal line item originated from. With 90/W, it can be done. Account Maintenance for the Chart of Accounts offers a Transaction tab with drill-down capability. The user highlights the journal line desired, invokes the drill-down icon and remaining entries from the source entry pop up. If the transaction originates from Accounts Payable, the drill-around icon will display the entire voucher and any payment details.



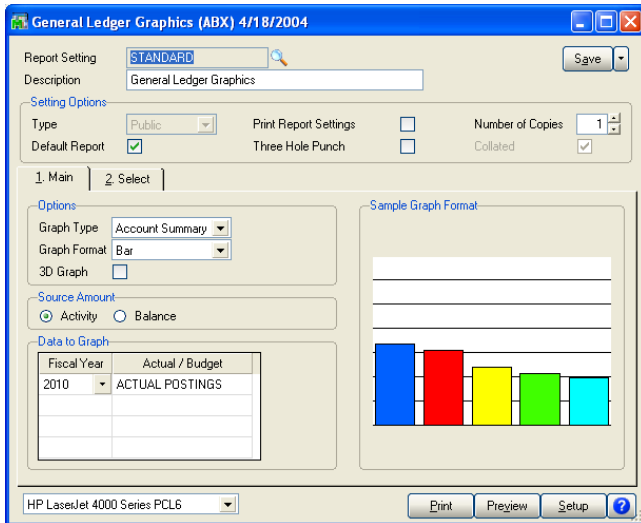
Sage MAS 90 has the ability to drill down to the detail behind any specific number in your general ledger.



*When you know the journal number, you may print a hard copy of the complete journal entry. Another way Sage MAS 90 allows you to drill down to the detail within your general ledger.*

**Graphics**

In General Ledger graphics available are bar charts or area graphs of an account, a range of accounts, income, expense, or profitability reporting for the entire firm or division/department. Any period or range of periods for 99 fiscal years can be selected. A Print Preview displays the graph to the screen prior to printing.



*Various General Ledger Information may be graphed*

**Closing**

Sage requires that the user actually close the accounting period, otherwise all periods are eligible for posting. In order to post prior closed-period corrections, a user may

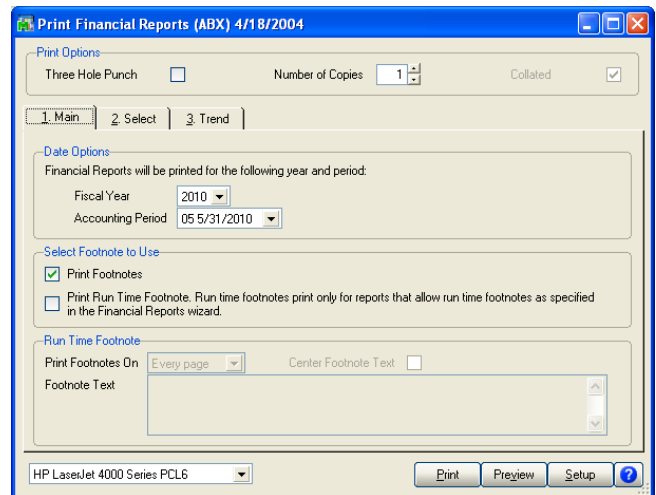
reopen the closed period, make the entry and then close the period again. Closing cannot take place until all entries from the daily transaction file have been updated.

**Allocations**

Allocation maintenance lets users define information that can be used to post an amount from a single source account to multiple destination accounts. The amount to be distributed can be the current period balance for the account or a manually entered amount. The amount to be posted to the destination accounts can be calculated based on a percentage or on a quantity such as head count or square footage. Users can distribute less than 100% of the net amount of an account balance instead of the full balance when using percentage allocation. Allocations can be posted manually or on an automatic cycle basis.

**Financial Reporting**

With three modes of financial reporting available, the array of financial reports is impressive. Because you define your account number ranges (assets/ liabilities/ equities/ revenues/ expenses) when you first set up the general ledger, you will never add a new account number and not have it show up on your standard financial statements. Unlike some other accounting systems, Sage MAS 90 will print a financial statement with no advance preparation beyond defining your account numbering ranges.



*Sage MAS 90 is pre-loaded with different financial statement layouts. More complex financial statements can be created with the FRX financial report writer (included)..*

The first mode is standard which provides set formats for columnar data for reports and may be printed by department (or a range of departments). Standard reports include these options: period-to-date actual and year-to-date actual, period and year-to-date actual, budget and variance, and period and year-to-date actual, budget and percentage

variance plus prior year comparison and variances. Quarter-to-date data is also available.

Departmental income statement formats can be generated without the need to define a new statement for each. A balance sheet report compares the prior year and current year and prior year end and current year. The Income Statement can be printed by a range of departments and produce a departmental trial balance. The trial balance will print current year beginning balance data sorted by department.

The general ledger detail report shows the net account change and prints the beginning balance, net debit or credit, and ending balance on one total line. It may be printed by date range or by periods and sorted by account or division.

A useful management report is the general ledger analysis which shows comparative data by account category for the following: prior period percentage change, prior year change (for same period), and year-to-date and prior year-to-date change. This report can be run for any period of the current year. It also includes ratios for measuring liquidity, ability to pay bills as they come due, operating ratios like turnover, and profitability ratios like gross profit and operating expenses to sales. All reports print with a run date and time. This is an excellent audit feature in tying down different versions of the same report.

The custom financial reporting function allows even greater reporting capability, but takes a little time to learn. Two methods can be used. The simpler one involves producing custom departmental income statements and balance sheets by using canned formats and modifying these to custom specifications. This copying and modification process can be performed on any custom report and is especially useful when creating reports which have similar formats. Modification is made easy by allowing direct entry to selected lines and fields.

The second method is designing reports from scratch. These reports can show any combination of data for period-to-date and year-to-date amounts and percentages for the current and prior period or year. In addition, quarterly activity can be shown in the following three formats:

- (1) quarter-to-date and year-to-date amounts
- 2) period-to-date amounts for three periods with quarter-to-date totals
- (3) Quarterly amounts for all four quarters of the year.

Column specifications are very powerful. First, a user may specify the type of data for columns (e.g. Actual, current budget, revised, budget, prior year) with column calculations to compute variances percentages and ratios (up to 8 columns per report). The statement of cash flows

can be automatically generated using cash flows type information from the chart of accounts. Also, a trend income statement may be defined to display 12 or 13 period comparisons. GL account numbers can be printed on custom statements.

Each custom report is assigned an identification number. Because the system processes these reports in number sequence, a result line from one report can only be linked to a source line from another report with a lesser number. Therefore, care must be taken when assigning report numbers. Each line of a report may be "linked" to a single account, a group of accounts, or a specified line or lines from other custom report(s). For instance, if the sales line in the company's income statement is linked to department income statements, the sales line will get its balance from the sum of the sales lines in the individual department statements. If a line is linked to a group of accounts, a user may either specify an account range or use the "wildcard" designation to indicate that all matching accounts are to be linked to this line. For example, account number "400- \*-01" will link all accounts that begin with "400" and end with "01." This allows ranges to be defined on other than the last digits. In addition, the amount of a line may be specified as a percentage of another line's amount.

Numeric masking allows reducing data field size of, for example, the total dollar capacity thus enabling more columns to be printed on the report. Up to a four line footnote can be entered on standard financial statements and the pages they should print on can be specified. Consolidation of companies is accomplished by defining separate statements with the parent company. These statements act as supporting schedules and are linked to the consolidated statements by specifying corresponding lines on each statement. A problem with this approach is that if a supporting schedule's detail line is defined as a range of accounts, there is no way to carry the detail to the combined statement. Only the total is available. Also, because Sage MAS 90 does not provide a multiplication or division operator or the ability to multiply a line by a constant, performing elimination's by formula is restricted to addition and subtraction of data in an account or on another statement.

Once a report is designed, its format may be printed and examined with no data saving the time involved in running a report whose format is not acceptable. Existing custom reports may be modified in any way, including changing line titles, linkage information, and totals.

The most powerful financial reporting tool is the inclusion of FRx for Windows Report Writer (Standard Edition). FRx uses a building block philosophy which appears like a three-dimensional spreadsheet. Through separate entries report rows, columns, and reporting trees are defined. The FRx reporting tree is similar to an organizational chart. It contains individual reporting units that represent each box

in the chart. These units can be either individual departments from the general ledger or higher level units that summarize data from other reporting units.

Using the FRx drag and drop feature, you can restructure your cost centers, or carve out new account segments not possible in you standard General Ledger using a special “Clever” tool.

Once a report is prepared it can be printed, e-mailed, or exported to an Excel Worksheet While viewing reports, the drill down viewer can be used to break down summary information into account and transaction detail.

Reports may contain posted and unposted activities. They could contain complex calculations including conditional “If, Then” statements. Full GUI features are utilized which allows presentation quality reports using customized fonts, colors, and other formatting options.

### Data Exchange

With this menu function, General Ledger account and transaction data can be imported and exported. ASCII text, Lotus, and dBase data can also be directly imported in several formats. Conversely, the system will convert Sage MAS 90 files into these formats for file export. Import is especially important since this can facilitate converting from the current automated system. Prior to import or export, data is validated using parameters specified in the Data Exchange program.

Note: A better choice for data import / export is the Visual Integrator module because it allows you to check your work prior to updating it. The Data Exchange function writes directly to the data files.

## Accounts Receivable

### Pros

- mini inventory with sales codes
- unlimited customer memos
- options for divisional accounting
- save invoice history indefinitely with reprint capability
- flexible commission (splits) accounting and reporting
- can adjust invoices even after posting
- Pop-up customer memos during sales order and cash receipts entry.

### Cons

- cannot enter on-account payment to cash customer transaction

- no ability to print customer account history from transaction lookup screen.

	Period to Date	Year to Date	Prior Year
Sales	10,178.35	15,520.85	14,424.75
Cost of Goods Sold	2,733.99	2,733.99	.00
Profit Percent	73.139 %	82.385 %	100.000 %
Cash Received	8,482.38	9,332.38	18,752.18
No. of Invoices	14	18	10
Finance Charges	.00	43.89	118.50
No. of Finance Charges	0	1	2

### Version 4.10

Gone are the old “bucket driven” totals that users hated within Sage MAS 90. These buckets, which relied upon strict closing rules in order to report accurate period-to-date amounts, have been replaced by rolling totals which allow viewing of historical totals by period and year (including prior periods/years).

### Setup

Sage MAS 90 offers many parameter settings for divisional accounting. These include: A/R, cash sales and discounts codes for each division code, sales and receipts journal by division, posting to G/L by division and reporting outstanding receivables by division. Invoices can be printed directly as soon as they are completed. Users may save invoice history, including line item history and deleted invoices indefinitely. Terms codes are very flexible with not only days due and discount days, but the due date can be a day of the month. Discounts can be based on the gross invoice, or line items only or line items and freight.

There is a commission rate for each salesperson with the system tracking period to date, year to date and last year sales, gross profit and commissions paid. Sales Managers may be assigned to a salesperson with commissions calculated for the manager. Individual sales transactions can be edited for commission amount correction. Commissions can be based on net invoice or gross profit. Commissions may be posted to G/L, A/P, or Payroll. For service type businesses or for companies with just a limited number of products, sales codes can be used for invoice entry. Each item has a code which consists of the G/L account; sales tax status and whether subject to commissions. Use of the sales code file can allow for creating needed G/L entries for sales,

cost of sales and inventory without the Sales Order & Inventory Management modules.

New customer records may now be automatically assigned a customer number by enabling the auto numbering feature. When entering a new customer a click on the number sign instantly assigns the next available number.

There is a large amount of data maintained in the system. The customer file includes sales history screen (with average pay days, average days overdue, last payment date, highest balance, sales and profit for the period and year to date and last year), aging and invoice query (invoices and associated payments, on one screen), order inquiry (open customer orders with the ability to search by order number range and type), ship-to address file (sales tax codes can be assigned to ship-to states), and memo maintenance (allows maintenance of multiple query memos for each customer). There is a date-established field in the customer master file. Recent additions include international addresses, and credit card information. Each customer record may have multiple contacts which contain names, addresses, telephone, memos, e-mail and URL addresses. While adding new customers, the zip code entry will populate the city/state fields.

Sage MAS 90 Custom Office allows the merge of customer information to quickly create custom documents, mail merges, and modify Sage MAS 90 screens all without programming.

Sage MAS 90 offers many search options, including looking up customers by name, number, sort field, Zip code or telephone number. Invoice inquiry is by customer name, number or order number. Furthermore, access to customer files can be on an "inquiry only" basis. Searches for customers in invoice data entry, repetitive invoice entry,

and cash receipts entry, may be performed by name, number, user-defined sort field, zip code, and telephone number.

### Invoice Entry

Each transaction is identified by a seven character invoice number which can also use an automatic numbering feature. Debit memos, adjustments and cash sales may also be entered. An invoice line item consists of a sales code, memo, comment line, or miscellaneous item. Sales codes are regular billing items which could be inventory or for services. Each sales code has a default G/L code, description, tax status, cost and price and quantity billed may be entered. Any of these fields may be overridden. The search function may be used to find sales code, G/L number, customer number, or name. Users can also enter a brand new customer "on the fly." Codes for terms, salespersons, sales taxes and sales codes may be added on the fly during invoice entry (as well as customer maintenance).

As an alternate to a sales code, users may enter a miscellaneous item and fill in all information or a comment line with an unlimited number of lines of text. They may also bring in a pre-defined memo description for commonly used service type items. The extension amount for each line item may also be entered manually. When line items are complete, the totals screen shows taxable and nontaxable amount. The user may enter freight, sales tax, amount subject to commission, commission rate and commission amount. If the customer's credit limit is exceeded another screen appears with credit data.

Invoices may be edited by selecting the part to change (header, lines, or totals). After entry, the user may either print the invoice immediately or print them later in batch mode (with both customer phone number and two message lines to print on invoices in addition to line item data). A default printer can be established specifically for forms printing.

The processing sequence is to print the sales journal after invoice entry and printing, and, optionally, to print a gross profit journal by invoice and a transaction register. While all these reports have a print to screen option, this cannot update the customer files until the sales journal has printed to the printer. The system allows the entry of a cash customer sale but on-account payments cannot be entered except through cash receipts entry. Multiple Invoice Entry sessions can take place simultaneously, each with unique batch numbers that can be updated independently without affecting other batches.

### Other transactions

Users can adjust an invoice already posted by adding or subtracting from its total through an adjustment transaction. A distribution is made on the sales journal and the item will

then appear in the invoice query like any other transaction. Other transactions include credit memos and debit memos.

### **Cash Receipts Entry**

Cash receipts feature a specific bank account designation and a deposit amount that is balanced by the program to all individual cash receipts. Batch entry of cash receipts is available beginning with version 3.4. An unusual feature is the ability to enter a cash payment and distribution for a brand new customer and add them to the file at the time of cash entry. Once a customer is identified, a search key allows selecting the specific invoice to pay (search by customer ID, name or invoice number). The user enters the amount, discount, and check number for each payment. The cash receipts journal can be used as a deposit slip since it shows deposit total and bank code along with individual customer numbers and check numbers.

### **Reports**

The gross profit report can optionally be printed after the sales journal. It shows the sales code, commission rate, and cost of goods sold and profit, by division. Mailing labels can be sorted and printed by: customer number, sort code, zip, type, name, and salesperson to aid with customer communications. Aged receivables may be printed by the same sort criteria. Invoices posted to a future accounting period can optionally be excluded from the aged receivables report. The aging report is date-sensitive. The cash expectation report shows payments due scheduled by four user-entered aging dates. The scheduled date can be according to terms or by average payment days.

Aging is a good collection follow-up report since it has the contact and phone number as well as expected payments. The customer sales analysis report includes: period to date, year to date, and prior year data by customer range, and salesperson qualified by a specific minimum amount. Any of the three periods can be compared on the report. While data is only in summary form, in some systems sales history is only available with an order entry module. The sales commission report has the invoice total, commission rate, amount subject to commission and commission due. The monthly cash receipts report will print cash received by deposit day and bank.

The invoice history report can be sorted by invoice, order or customer and has details for all transactions. (Reprint invoices themselves from the Invoice History inquiry.) While it includes data for all transactions, it would be helpful to have a report like this for specified transaction types only. The customer trial balance recaps all A/R invoices, receipts, and adjustments that affect the customer's balance during a specified period. The A/R analysis report includes the number of invoices and percentage in each aging category. The sales tax report allows reporting "as of" a specific date. This is useful for

accommodating timing differences. Sales tax reporting may optionally track invoice detail information by tax code. Sage MAS 90 also allows for a remittance stub to be printed on statements including remittance customer number, remittance customer name, remittance statement date, remittance balance due, and four miscellaneous headings.

### **Graphics**

Accounts Receivable Analysis graphics are available as bar chart (3d), bar graph (2d), line chart and area chart. The graph displays three aging amounts over 5 periods. Details include total due, % past due over current/prior period, rolling average and average invoice amounts. A Print Preview displays the graph to the screen prior to printing or it may be copied to a clipboard.

## **Sales Order Processing**

### **Pros**

- integration with V-Technologies Starship shipping software
- module is aggressively and continuously upgraded
- handles full array of order types including drop ship
- can use tab feature to customize data entry
- handles special and nonstock items
- automatic calculation of freight charges
- historical information can be retained
- supports shipping by warehouse

### **Cons**

- can post entries only to current or one future period
- must print sales journal before posting items
- no billing of lading
- back orders cannot be automatically closed

### **Version 4.10**

The new release includes integration between Sales Order and Job Cost. Each order can now be assigned a job number. Each line on the order can similarly reference a cost code and type.

### **Setup**

This module has a number of unusual features including split commissions and a freight computation table. Similar to other Sage MAS 90 applications, there are many optional settings. These include defaults for warehouse, a password required to override price, whether to allow on-the-fly additions of item codes during order entry, checking for quantity on hand during data entry and G/L sales posting by division. There are also options to retain lot/serial sales history, and sales history by customer type. For freight calculation a 15 character shipping code can be created along with a weight table with charges by range of weights. Five character ship zones can either be the zip code (similar to a UPS chart) or a custom chart. Thus UPS shippers can

precisely compute freight charges. Freight can also be a specific charge by weight.

Item Code	Description	Ordered	Unit Price
1 6655	PRINTER STAND W/ BASKET	3.00	179.000
2 8953	UNIVERSAL 3 1/2" SSDD FLEX DSK	100.00	4.228
3 ARS-9101	ART SPECIALTY WALNUT CNDL LAMP	1.00	89.950
4 GB-EL04MS-25	RJ-11 4 WIRE MOD CABLE 25 FT	10.00	4.613
5 *	HANDLING CHARGES	.00	.000
6 /C02		.00	.000 REFL
7		.00	.000

Warehouse: U/M, PL  
 Tax Class: DC   
 Disc %: 0.000  
 DS   
 CM   
 SE   
 Cost: \*\*\*\*\*  
 Sales Account:  
 Cost Account:  
 Total Amount: 1,195.88

*Sample Sales Order Entry Screen*

The new V 4.10 grid based screens within Sales Order Entry allow for much faster data entry. Data entry screens can be individually customized by user. When adding User Defined Fields, the layout of the grid entry is much easier to manipulate than all previous versions of Sage MAS 90. Users can rearrange their data entry screens so that more common fields are conveniently located at the top of the data entry list. Users with higher resolution screens can take advantage of the ability to resize the screen as well as maximize the width. All of these layouts are maintained on a per user basis and do not require any advanced skills beyond the ability to drag and drop a field.

Shipping addresses can now be flagged as residential. This feature allows for smoother integration with shipping software.

Customer purchase order numbers are validated against past ones to prevent duplication. Additionally the customer ship to address has an added email field which is used by the optional Starship shipping software to produce email shipping notifications.

Prior to version 4.10, only three tracking numbers were shown on an invoice or history lookup. Now all tracking numbers (when more than 3 exist) are shown.

## Order entry

Order entry has a tremendous number of processing options. The system will auto assign the next order number or a user may enter their own number. When requesting the order entry function the user is given a number of defaults to accept or change for that data entry session. These include: a default order date, order type, ship date, and ship via, whether to print pick tickets, FOB, warehouse and number of labels to print. This may be convenient for start-up assistance.

Order types include: backorder, master, repeating, quote and standard. Backorders are for outstanding backorders when starting up the system as backorders are normally created as a by- product of shipping incomplete orders. Sage MAS 90 provides for optional batch entry and edit of orders and invoices. Purchase Orders can also be initiated from sales order activity. When editing orders or entering invoices, users have the ability to search for a sales order number by customer number, customer name, purchase order number, or telephone number. Customer numbers in sales order or invoice entry may be searched for by customer name, user-defined sort field, zip code, or telephone number.

## Shipping

Sage MAS 90 integrates with Starship from V-Technologies to handle your packing and shipping needs. The Starship modules processes shipments sent via UPS or FedEx. Other carriers may be added for an additional fee.

When your warehouse staff completes the fulfillment process, they click on the Starship button to automatically start the shipping process. A separate Starship program appears and the data entry screen is populated with all the relevant order information from Sage MAS 90. If desired, an electronic scale can be used to further automate the process. When data entry is complete the user prints the shipping label and saves all information for later transmission to your carrier.

Reports are available that list the contents of each package shipped or just a summary of the qty of packages being shipped.

New inventory items, salespersons, sales tax codes, terms codes, miscellaneous item codes, charge codes, and comments may be added "on -the-fly" during sales order and invoice entry. A special feature enables splitting the order's commission among up to five salespersons, by assigning a percentage to each. Data entry features a 15 character customer PO, and a 30 character comment line. For each entry session a user can specify whether to print the sales order, print a pick ticket, and the number of ship labels to print. After entry of header information there is a

confirmation. At that point, the customer record, credit information, or a memo record is selectively available.

### **Line Item Entry**

The item code can be keyed in directly or, using point and shoot, found from lookup tables. Users can search for items by description, product line, vendor, or by any of four user-defined fields. Alias item numbers can also be used for lookups. The system can display the default sales and cost of sales accounts, product line, price code and cost to be used. The default discount, commission and tax status for the line item displays and any may be changed. (Changing the price can be password protected as a setup option.) The default description is shown or a new one can be entered. Extended descriptions may contain up to 99 lines of 50 characters.

New inventory items can be added "on-the-fly" during line item entry. Customer's previous history of purchases, including what was purchased, when, quantity and price can be displayed. This can include quotations, orders and invoices. A line item can also be a comment or miscellaneous item. The latter are used for other than inventory items and can have 99 lines of 50 characters standard descriptions, commission and sales tax status, a standard charge, and sales, cost of sales and inventory accounts, standard unit cost and price and other values. The user enters the order quantity and either accepts or changes commission status, tax status or the drop-ship code for each line. A drop-ship line will not commit inventory.

The user may override the price level and look at the price table for that item. Having price table access at this point is ideal when taking phone orders and needing to review or negotiate pricing with customers. At the quantity ordered field the system will display the quantity available for that item at the warehouse indicated. If the quantity ordered exceeds the quantity available (and the warning option was elected at setup), the system alerts the user to either: accept, stock balance (ship what's available), use an alternate item, use another warehouse location (if using the multi-warehouse option), cancel or backorder the difference.

To assist in allocating stock, the look up function will show the price table. Each inventory item may suggest up to 8 alternate items. A promised date per line item is available. After line items are completed, the third screen shows the discount rate and amount, taxable amount, non-taxable amount, sales tax, and the commission rate, some of which can be changed. The user may enter a deposit amount and check number for prepayments. Credit card information from the customer record is displayed. A separate field is available for an authorization code. The system will even compute the freight amount per the ship zone and weight entered.

### **Printing Documents**

After an order is entered it may be printed individually or printed later, along with other orders, in batch mode. It can also print pick ticket (sales orders show prices, pick tickets don't) and then print labels, including COD labels. Picking tickets may be sorted by bin location, item number or by sales order line number. Label printing is very flexible as the user may choose the number of labels across a page and the space in between to accommodate various sizes. A default printer may be specified for sales order, invoice, picking sheet, shipping label, and C.O.D. label printing. This is extremely useful for dedicating a printer for forms printing independent of the printer used for reports, etc.

### **Invoice Entry**

Invoicing mode is performed automatically or manually. Invoicing provides a number of defaults which can be used to facilitate entry including: invoice date, invoice type, ship date and warehouse. Once an order is pulled up for billing, any header information can be changed. Once the header information is approved the whole order is complete and the user can immediately create billing totals or ship partial. The system is extremely flexible and will allow shipping more than the ordered quantity as well as negative quantities in inventory. Invoice types are: standard, credit memo, Debit memo, and cash (good for walk-in type orders).

The only difference in cash vs. standard invoice is that the cash account is debited instead of A/R for the cash invoice. Once the order is totaled the user is warned if the credit limit has been exceeded and then sees a screen with customer credit data.

Repetitive (recurring) invoice entries such as monthly charges or COBRA payments can be defined. Cycles are entered to specify the type or frequency. Start and stop dates are available to insure the billings occur during a specific period. The system maintains fields for amount billed to date, unbilled balance, number of times billed, and date of last billing.

### **Backorders**

If the quantity shipped is less than the ordered amount, the system will place the difference into the backorder field automatically (if the item is authorized to have backorders). Backorders can be created for any line item. Additional line items can be added at the point of invoicing, something that can happen fairly often in some companies for last minute order changes. The system displays an alert if the entry quantity exceeds the book quantity of stock. At that point the options are to either: accept, backorder, balance (use what is available), use alternate warehouse, or use alternate item(s) if any are available. The system assists the

user in all this with the ability to see essential item data as well as any alternate item information.

The final screen shows taxable and discount amounts and invoice total. To edit an invoice, select the section needed: header, lines, or total screen. The user may also look at credit information, look at a memo created specifically for that customer, print the invoice or delete it. Any data can be changed at invoicing.

### **Sales Kit Processing**

Kits are a group of items which are priced and sold together. These parts are other inventory items. When a sales kit item is entered for order entry or invoice entry the system tells what is available from stock for that kit. The user can then tell the system to order the sales kit item from stock or from the individual components that make it up. If ordering from the components, they will be automatically added to the order (for picking purposes) after the sales kit line item. Once these items have been added to the order, the user may make changes to component information (like substituting a different item as a component). The user can also change the quantity information for a component or add or delete a component line.

Sales kits themselves cannot be components of other kits. Sales data is updated only with the kit item; components of sold kits are added to the quantity issued in the item file. Sales kit lines may be optionally excluded from printing on picking sheets.

### **Lot and Serial Distributions**

Sage MAS 90 has a powerful function for lot or serial distributions. This will be of interest to manufacturers or processors who sell by lots or to distributors who handle a significant volume of serialized inventory. When entering a lot or serial item during invoice entry, the user must distribute the total quantity shipped for the item to one or more lot/serial numbers. Lot/serial numbers must be entered one at a time until the total quantity for that line item is distributed. A mesSage displays showing the quantity remaining to distribute.

Once the quantity remaining to distribute is zero, the user can proceed to enter the next line item. There are several ways of speeding up lot/serial entry. The list entry feature will display the lot/serial items on file for the current item. The user only needs to enter the quantity next to the corresponding lot/serial number. The F4 key initiates the distribution entry feature that will display the lot/serial numbers that have already been distributed for the current line item. The F3 key will search for a specific lot or serial number. The F5 key will distribute a quantity to a range of serial numbers. It does this one by one until the whole quantity for the line item is used up or until serial numbers are exhausted.

### **Invoice Printing/Posting**

Invoice forms may be customized and printed at the point of billing or later in batch mode. The sales journal, and, optionally, the backorder report and transaction register (postings by G/L account) are then printed. The backorder report has items listed on backorder by customer with the quantity ordered, shipped and backordered. The sales journal must be printed before updating files. COD labels can also be printed separately. Posting can be either to the current accounting period or to the next period only. Batches of invoices may be automatically generated from Sales Orders. In addition, multiple Invoice Entry sessions can take place simultaneously, each with unique batch numbers, that can be updated independently without affecting other batches.

### **Inquiry Functions**

On-screen query is very powerful in Sage MAS 90. Customers may be viewed by customer name, customer ID, Zip code or telephone number. A user can see file data, memos, invoices or orders for those customers. There is also the invoice history query by customer number, name or sales order which will show a summary of invoice information and line item data. The item query shows basic pricing data, on hand, on order, on backorder, and available. A nice convenience is that the price table can be viewed from invoicing without having to go into Inventory Management.

### **Reports**

For reporting there is a vast array of information available. These include: open sales orders, open orders by item, a backorder report by customer or by product line, and an item report by product line, salesperson and warehouse. The open order by item list shows on order, backorder, and value. The monthly sales recap can be by product line, warehouse and item with totals by warehouse only, or by division only. The lot/serial number history report - maintaining this data is an installation option - is sorted by item or customer. The sales order recap includes the order number and status with comments and a dollar total. There is also date-sensitive, detailed sales tax reporting.

## **Accounts Payable**

### **Pros**

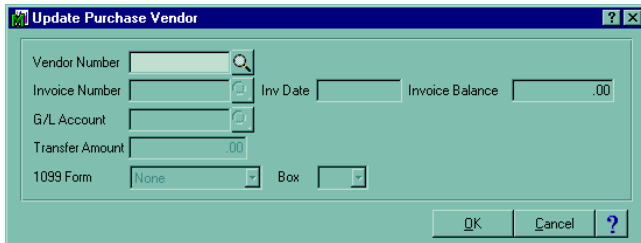
- AP to AR clearing capability
- version 4.3 adds alphanumeric check numbers
- custom checks, reports (v4.3), laser 1099's and vendor labels
- unlimited vendor memos with ability to specify pop-up during data entry
- virtually unlimited invoice & check history
- flexible settings on vendor terms codes
- Sage MAS 90 Custom Office

- can integrate with Time and Billing module

**Cons**

- not a voucher system
- accrual basis only
- version 4.3 did not increase any field lengths
- no field for PO number in invoice entry
- cannot integrate AP with both Job Cost and Time and Billing

If your company pays many of its bills via credit card, you'll be delighted to know that you may now automatically transfer payment amounts from your credit card vendor to the appropriate accounts payable vendor



*During Invoice Data Entry, you may automatically transfer payment values from a credit card vendor to the appropriate vendor for proper tracking of purchase values and 1099 information*

Accounts payable is capable of handling departmental processing, recurring invoice entry, and discounts as earned (gross invoice amount) or lost (net invoice amount). Users can elect to either post AP expense detail (to GL) in detail, in summary or by account number. AP may be integrated with the Time and Billing module or job cost but not with both modules at the same time in the same company code.

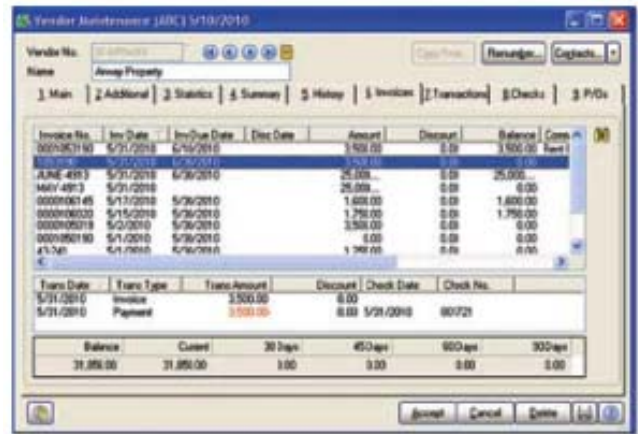
Sage MAS 90 Custom Office allows the merge of vendor information to quickly create custom documents, mail merges, and modify Sage MAS 90 screens all without programming.

**Setup**

There is an option to retain check history for up to 99 months (recommended) and to retain paid invoices for up to 999 days (recommended). Up to 99 terms of payment can be created. Discount dates can be either a selected number of days from the invoice date or a given day of the month, and the final due date can be the end of the month. A minimum number of days may be specified for calculating invoice due date and discount due date using the day of month method.

**Vendors**

Each vendor features, among other items, the following data: sort field, terms code, temporary (one-time) status, telex number, default G/L account, vendor reference number, and hold payment status. The user-definable sort field is ten characters long and enables reports to be printed in sort field order. For example, a user could enter an abbreviation of the vendors' industry to sort reports by type of business. Recent additions include international addresses, and credit card information. Each vendor record may have multiple contacts which contain names, addresses, telephone, memos, e-mail and URL addresses. While adding new vendors, the zip code entry will populate the city/state fields.



*Example of Sage MAS 90 Vendor Maintenance data*



*AP Invoice Entry is Now Grid Based Beginning With Version 4.3*

Vendor query allows searching for records by vendor name, sort field or zip code. It shows purchase and check history as well as outstanding invoices, purchase orders and memos. Memos allow entry of vendor correspondence or

instructions on handling the account. A vendor Delete, Renumber, Merge utility assists in maintaining the vendor files with the inevitable housecleaning chores. These account number changes will flow through all transactions. A master file audit report maintains a log of all change to the Vendor master file.

### **Invoice Entry**

Features of invoice entry include adding a vendor (and/or a new terms code) on the fly, reviewing vendor memos and putting an invoice on hold. Invoice numbers are verified for uniqueness, protecting against duplicate invoices for the same vendor. When entering an invoice record, the system first supplies the vendor's normal expense account for the full invoice amount, but this can be changed by entering any expense accounts and distribution amounts. If a vendor is a 1099 vendor, an indication of 1099 earning type can be made per invoice.

Following invoice entry, an invoice register will print with the total amounts to be posted to each general ledger account for each division. A unique feature of A/P is that if a prepayment has been entered using the manual check entry program, the prepayment amount may be applied against the invoice balance when the invoice is entered in invoice data entry. A very useful feature is the ability to enter and print an AP check, from the manual check entry function, without having to go through the usual invoice entry step.

Multiple Invoice Entry sessions can take place simultaneously, each with unique batch numbers that can be updated independently without affecting other batches.

### **Invoice Adjustment**

Invoice records which have been posted and are in the open items file may be adjusted by entering an adjustment entry. An adjustment amount is entered (negative amount if a debit adjustment) and distributed. The adjustment is treated as a separate posting, but is applied to the original invoice in the open items file. Repetitive (recurring) invoice entries such as monthly rental charges or insurance payments can be defined. Cycles are entered to specify the type or frequency. Start and stop dates are available to insure the billings occur during a specific period. The system maintains fields for amount billed to date, unbilled balance, number of times billed, and date of last billing.

### **Automatic Check Processing**

Invoices are selected for payment by range of vendors, invoice due date, and discount date. There is also an option to only select invoices with available discounts. Invoices can be added or deleted from payment or partial payment can be specified. The bank account to be credited for the batch is specified. In the event of a printer problem, the check run can be restarted with a specific vendor and check number. Checks and vouchers can be customized with the forms

design feature, which is used to customize vendor mailing labels and 1099 forms. Fully spelled out amounts will print on checks.

Starting with version 4.3 the manual check number can now be alphanumeric which is a boon for those users needing to record bank transfers.

Checks may be printed out by a range of vendors. A default printer can be specified for check printing, manual check printing, form 1099 printing and vendor mailing labels. Multiple checks per vendor can be printed in the same check run (e.g. Separate check for each invoice). In order not to waste checks, an extended stub option may be used. This will only print payment detail on one check and the remaining detail will print on blank paper.

To accommodate laser check printing, up to 5 parts may be defined. Each part can print up to 99 copies, contain its own title and be directed to a designated printer.

1099 forms print will report YTD purchases data on a calendar year basis independent from the fiscal year. Multiple 1099 templates may be maintained to accommodate multiple forms such as 1099-MISC. and 1099-INT.

### **Reporting**

Reports can be range selected and sorted by vendor number, name or zip code, or the sort field created in the vendor file.

Beginning with version 4.2, all reports in Accounts Payable are Crystal Reports based and may be modified by the user. There are also report settings which can be saved at this level for easier recall during subsequent printing.

The check register history report lists all checks for the month, including manual and void checks. The aged invoice report displays the amount due to each vendor, broken down by individual invoices into current and four user-definable aging categories. Rather than displaying only open invoices, the same report can be run for paid or all invoices. Therefore, it can serve as a payments activity report, a cash requirements report, or both. A summary total line per vendor can be printed and invoices posted to future periods may optionally be excluded from the report. The Aged Invoice Report is date-sensitive.

The cash requirements report shows invoices due along with totals for any three consecutive user definable periods. Options include aging by invoice discount date or average days to pay, selecting only invoices with discounts available, and whether or not to include "hold payment" invoices. The vendor purchase analysis report contains extensive purchase history. It displays the purchases, percentage of total purchases, payments, and discounts taken and lost for each vendor (by number or name), all on

a current period, month-to-date, year-to- date, and prior year basis. In addition, the vendor listing gives the current balance, last purchase and payment date, and last check number and amount by vendor number or name.

The accounts payable analysis is useful for accounts payable managers. It reports statistics for the current versus prior periods: total accounts payable, percentage change from the prior period, total number of invoices, and the amount and percentage of total due for the first and second aging categories. The accounts payable trial balance report lists all invoice balance data detailed by transaction. The original invoice amount and all payments, adjustments, etc. are listed in detail. This report is date sensitive and can be printed "as of" a specified date. A similar report is provided for purchases for the period detailing all invoices and adjustments through invoice data entry and manual check entry.

**Graphics**

Accounts Payable Analysis graphics are available as bar chart (3d), bar graph (2d), line chart and area chart. The graph displays three aging amounts over 5 periods. Details include total due, % past due over current/prior period, rolling average and average invoice amounts. A Print Preview displays the graph to the screen prior to printing or it may be copied to a clipboard.

**Inventory Management**

**Pros**

- sales kits
- powerful pricing options
- physical count process with freeze ability
- automatic unit of measure conversion
- Sage MAS 90 Custom Office
- can elect whether to keep sales history by item

**Cons**

- no link to inventory from AR or AP

This module will have special appeal for multi-location operations who are looking for extensive pricing options (including specific contract pricing by customer), bill of materials and/or strong physical inventory control features.

**Setup**

System parameters include multiple warehouses with a designated G/L segment for divisional accounting or profit center reporting. A powerful feature is reordering by warehouse. In fact, the key inventory management reports can be qualified by warehouse as well as product line and item. Inventory sales can be based on calendar months or fiscal periods. For ordering analysis purposes quantities on purchase order or work order may be included or excluded.

Fifteen units of measure and associated conversion factors may be used. Sales commissions may be calculated by inventory item allowing a greater commission rate to higher profit items. Commissions can be based on percentage of: cost, gross profit, price or standard. A base commission amount can also be entered. There are up to four inventory categories available for special sorting on reports.

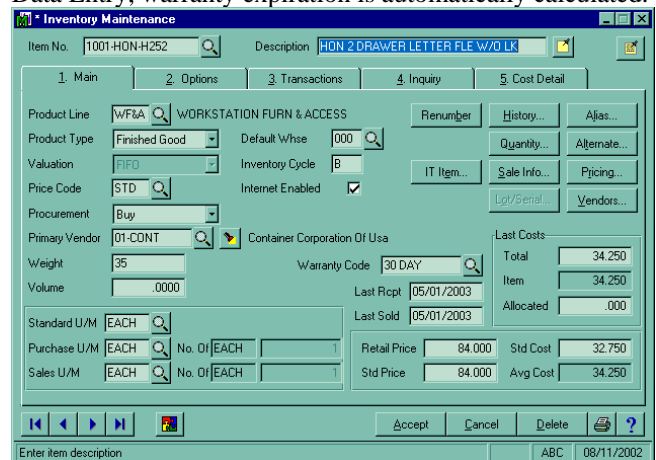
**Pricing Methods**

The pricing hierarchy works as follows: First there is the price schedule for each item. This schedule, designated by a four character price code, can have one of the following pricing methods associated with it: cost markup, markup percent, price discount amount, or percent discount amount. Each price code has five pricing tiers (for quantity breaks) and can, optionally, have up to nine price levels. The levels represent different markup/markdown schedules based on a price level code assigned to each customer. Thus levels are useful when groups of customers can be put on similar price schedules (through accounts receivable maintenance).

The user may use item pricing with the above mentioned tables or use customer specific pricing (e.g. For contract pricing) where each customer is assigned a price code and a price level for the item. This allows the ultimate in pricing flexibility since each customer can have a custom price per item. If a simple system is all that is needed, then a single price code and quantity pricing schedule for each item can be used. In lieu of price codes or customer specific pricing the system will use the standard price for the item.

**Warranty Tracking**

Sage MAS 90 allows for tracking of warranties for each item in Inventory. During Shipping Data Entry or Invoice Data Entry, warranty expiration is automatically calculated.



*Warranty tracking available to Sage MAS 90 Inventory*

Information on warranty expiration is available to be printed on all relevant forms – including Sales Orders, Invoices, or Packing Slips. Once you have updated your

invoices, warranty expiration is available through Invoice history. The new RMA module also reads the warranty expiration date and warns you automatically of any attempts to return an item with an expired warranty.

### **Product Line Options**

Sage MAS 90 allows as much flexibility for products lines options as it does for item options. Thus each product line can be assigned a product type, valuation factor, backorder status, tax status, trade discount flag, detail retention of history option, commission method and rate, along with accounts for inventory, cost of sales, sales, returns, adjustments, purchase clearing, and a price code. "Make," "Buy," or "Subcontract" may be indicated as the procurement type.

### **Item Maintenance**

There are 5 tabs to choose from on the item maintenance screen. (However, the user may enter a new item with basic information using one screen. There is also a copy function that can use an existing item to create a new item.) These deal with constant data, sales history, inventory query, reorder information and the like. The item file itself is very extensive. Using the product code options, it is possible to skip some of the default data entry fields for a new item.

First there is the descriptive and constant data which involves things like the item type (finished goods, raw materials, make, buy, discontinued or kit). Item descriptions can be up to 99 lines of 50 characters. Sage MAS 90 offers a fairly powerful bill of materials functions for small make-for-stock or job shop manufacturers. There can be two vendors with lead times in the item file for reorder purposes. There are up to four category codes for special reports. Cost methods include standard, average, LIFO, FIFO, serial, and lot. Other settable options are commission type and rate, backorders allowable flag, sale event and dates, and whether to keep detailed sales history for the item.

A considerable amount of sales history can be tracked including quantities sold, \$ sold, cost of sales and prior year for each of up to 13 periods. Sales can be tracked by warehouse if multiple warehouses are used. The inventory query screen has the retail price and costs with the following quantities: on hand, on purchase order, on sales order, on backorder, committed and available. The cost detail screen shows a history of product receipts and costs. This can be very useful when justifying inventory prices used during an audit. The transaction detail screen shows the date, type (sales, issues, receipts and adjustments) reference (30 character description), quantity, and cost data.

The purchase order history screen references the order number, date requested, vendor, warehouse, amount ordered, received, backordered by transaction and the total

for the item. Therefore it is easy to recap transactions affecting a particular item. After entry of receipts the user may want to run the backorder fill report to see what items currently on backorder can be shipped per incoming receipts to allow warehouse staff to cross-dock those items. The sales order query shows: order number, customer, order date, warehouse, and quantities ordered, shipped, backordered and totals. Both purchase order and sales order history allows you to drill down into that transaction. Smaller firms may find this kind of capability more detail than they can really handle but companies that have many items and many orders should find it very useful for tracing customer orders and inventory transactions.

Another handy inquiry feature is to be able to look up outstanding purchase orders for an item through inventory. The PO module must, of course, be installed and integrated with IM. An Item Delete, Renumber, Merge utility assists in maintaining the item file with the inevitable housecleaning chores. Changing the item numbers will flow through all transaction details. A master file audit report maintains a log of all change to the Item master file. Alias item numbers may also be established to track vendor/customer part numbers. Each inventory item can designate up to 8 alternate items.

### **Global Pricing Changes**

There are very powerful functions that can change costs or prices for product lines, product code ranges, price codes and vendors. The various methods for changing costs are: % cost, dollar change, last cost, and average cost. For price changes the options are: % price, dollar change, % cost, cost + amount. Retail, standard or both prices can also be designated to be changed.

### **Global Costing and Other Changes**

A Utility within Product Line Maintenance allows changing any of the product line defaults, such as valuation method, commission rate, price code, etc. and through an 'APPLY' feature will ripple through all items in that product line making the requested changes.

### **Sales Promotions**

Sales promotions with start/end date and discount % or new price can be set up. These sale events apply to selected or all items and the system will compare sale price to regular and use the lowest price for the date range specified. Sales promotions can be applied to a range of items, product lines, price codes, and vendors.

### **Physical Count Function**

Physical count sheets can be printed in order of item code or description for a range of warehouses, item codes, bin locations, cycle codes, or product lines. Some of these printing options are ideal for companies that require cycle

counting. There is also the option to print a worksheet only or a worksheet and freeze items or freeze items only. The freeze feature allows proceeding with the physical count process without interrupting the normal sales order entry process.

After the inventory is taken a physical count entry program lets the physical count quantity, by bin location and item range, be entered. The variance report compares the physical count with the book figure and shows any over/short figures. The Sage MAS 90 Bar Code Master module allows collection of Physical Count Data by scanning bar codes with handheld computers which can be imported into physical count entry.

### Reports

Inventory reports will print to the screen, printer, file or to a deferred print file. These reports can scroll up and down and left and right. Most reports can be sorted by item, product line, description, or one of the four user-defined category codes. Inventory management reports can be printed for items selected by Procurement type. These can then print by range of items, product lines, and product types. With the stock status report the following can be selected to print including: item, constant data, price data, bin location and reorder data with or without warehouse detail. Item labels may be sorted by category plus bin location and warehouse, range of items, and product type. Multiple copies of labels that can be used as count tags can also be printed.

Label printing offers the ability to print Bar Codes on labels printed in the Inventory, Bill of Materials, Purchase Order and Work Order modules. Bar code types 39 and 128 are supported. Ten printers are definable for printing bar codes. Also receipt labels may be printed for items received as part of the transaction journal update. Inventory and receipt labels may include the item number, bin location, retail price, and standard price of an item printed in bar code format. Labels also may include procurement type and procurement description of an item. The Bar Code Master module prints labels for lot/serial items.

The reorder report will print for items needing reorder only, and shows last reorder date, minimum order amount, maximum on hand, and the recommended order. Reorder quantities are based on one of three methods; economic order quantity, maximum order quantity and reorder point. The turnover report provides for picking items on an exceptions basis with turns of less than or greater than a specified percentage, by product line, by warehouse and item range. The turnover rate is computed using average inventory and sales YTD.

A trial balance report shows current quantity as well as quantity information as of the start of the current period.

This is a helpful report in reconciling inventory to General Ledger. Sales analysis reports can be sorted by item, product line, vendor, warehouse, bin, and PTD or YTD sales amounts. This report shows the quantity sold, cost of sales, gross profit, and percentage of profit. It is easy to quickly compare the quantity sold, and returned, this year, this period and for the prior year. The sales history report shows quantity sold, dollars sold, profit, and quantities by period for the current and prior year sorted by product line and item. The stock status and valuation reports can optionally suppress printing of items with zero quantity on hand.

### Return Merchandise Authorization

Sage MAS 90 has an RMA module which completely integrates with the Sage MAS 90 Inventory, Sales Order and Purchase Order modules.

*Return Merchandise Authorization*

With RMA, you may completely track all customer returns from within Sage MAS 90. The RMA module will read in existing invoice and warranty information and allow you to select the appropriate items to authorize for returns.

Returns can have their replacement items cross-shipped or you can generate papers for your receiving department to use when the RMA item is received.

Sage MAS 90 RMA

Use of the RMA module requires the Sales Order and Inventory module. The use of Purchase Order is optional – however its use will allow for automatic re-order of replacement items from the originating vendor.

## Job Cost

### Pros

- includes estimating
- good integration of job cost with PR, AP, IM, AR
- full billing capabilities with retainage
- very flexible job/phase/cost code setup
- excellent for basic job costing needs
- simple to use

### Cons

- no certified payroll without with TimeCard module
- no AIA billing

Among the 23 Extended Solution enhancements included in the 4.05 release:

- Benefit posting by department
- Unlimited earning codes by department
- Deduction posting by home department
- Employee name as posting comment from Timcard
- Wage expense posting by labor code
- Select vendors for payment by value in sort field
- A/P registers sort by vendor name
- Significantly more control over A/P comment postings
- Cash accounts by division in A/P check printing
- Ability to select vendors with specific balances for payment in A/P
- Can omit printing Jobs with no activity from Job Transaction Detail Report

This module provides a selection of features and reports which make it suitable for many firms that want to track project costs, revenues and estimates. It consists of job cost, job billing and job estimating. Its weak points, for some contractors, are lack of union reporting, inability to produce dual payee checks and no AIA formatted bills.

Job Masterfile Screen

Like other Sage MAS 90 modules, the job cost system allows the user to design the system to more closely fit their individual needs. Some options include the ability to design the format of cost code segments, to set up sub-jobs, or the capability to allow: job and subcontract change orders, posting to GL for different types of direct cost entries, and automatic application of overhead on a daily or monthly basis. There is also the option to do cost accounting by job or job type. Timecard for Sage MAS 90 is a powerful complement to the Payroll and Job Cost modules. The user can enter employee's time card data on any schedule desired without affecting the payroll data entry files. Information may be posted to Job Cost independently from Payroll. This provides up-to-date job cost information without having to wait for the next pay cycle. TimeCard also includes a Certified Payroll Report.

Sales tax, terms and salesperson codes may be added on the fly during job billing entry. Additionally a job memo feature has been added to allow supplementary information to be stored for each job with a unique memo code. This information is then retrievable during job cost data entry. Data entry features the ability to create many useful defaults and very complete on-line inquiry for master and transaction file information making the system easy to use. Jobs can be assigned a seven digit ID, three digits of which can be for a sub-job for reporting related jobs. It is possible to set up a job through job master file maintenance or job estimate maintenance.

Master file information includes, besides usual descriptive data, estimator, manager, job type and a user defined sort field (all are used for sorting reports), accounting method (percent complete or completed contract) which drives the timing of automatic GL posting for billing transactions, and billing method (none, time and materials, and fixed contract) used to determine the timing, amount and format of billing. The retention percent is also recorded as a default for the calculation of retainage in job billing.

Billings for jobs can be accomplished within the job cost module. This function updates the AR and GL modules for client receivables and general ledger postings respectively. Cash receipts against open invoices are done through AR. Service related invoices, not requiring a work in progress (WIP) entry, can be entered through the accounts receivable module and posted to jobs for billing amounts and retention. If the AR module is not available, billing and cash receipts can be recorded in job cost as a job posting entry. All these transactions appear in job cost transaction reports identified by source.

Multiple invoice formats can be created and stored in the job cost module. Fixed contract job invoices are automatically calculated based on the revised contract amount times the current reported percent complete minus retainage and prior billings. Time and material job invoices can automatically reflect all unbilled cost transactions or charge only cost transactions up to a user defined cutoff date. Job billing data entry allows editing the header, line detail and totals on an invoice before printing. Miscellaneous charges and comment lines can be added to the invoice. This function also produces credit and debit memos which can be applied against specific invoices. The default invoice format can be customized through the "Form" command in the job invoice printing program. Adjustments can also be made directly to open invoices. The audit trail for these adjustments is weak as no record of it ever appears in the customer account although the transaction appears in the general ledger.

Billings automatically update the appropriate GL accounts even if jobs are set up for a mixture of time and materials and fixed contract billing. Time and material jobs are automatically billed by marking up costs or units captured in cost code records. Time and material jobs can be partially billed by selecting individual work in process transactions to be billed, not billed, or deleted. Cost codes can be up to nine digits with a maximum of three segments. This allows two levels of detail within a "phase."

Many reports summarize figures by the "phase" segment of the cost code. Each cost code can be associated with up to twelve cost types. Cost types further detail cost codes for classes of expense. Sage MAS 90 allows up to twelve cost types: six standard (labor, material, subcontract, overhead,

burden, and equipment) and six user-defined types. Each cost code/cost type may be set up to bill in detail or summary and to be taxable or not. Inventory issues can be costed to jobs.

### **Retainage**

Both accounts receivable and accounts payable handle retainage in every screen which records payments and invoices for job related transactions. Retention amounts are posted to the appropriate accounts. Both modules report retainage in aging and cash reports and transaction journals and registers. Accounts payable can report open invoices by job and payment selection can be by job number with the option of paying any retention balance. Indirect costs associated with direct labor posted to jobs can be calculated by establishing a burden rate for labor postings made in the job cost module.

Burden rate information is assigned to job types. This information includes rate, the cost code(s)/cost type the burden will be posted to, the burden debit and credit accounts and the calculation method (which can be a percentage of cost or a rate per hour). If job cost is integrated with the Sage MAS 90 payroll module, burden is calculated automatically through labor code maintenance in the payroll module.

### **Overhead Calculation**

Calculating overhead can be done automatically on a daily or monthly basis using a percentage of direct expenses. Each job type/cost type can be assigned an overhead percentage rate, and cost code(s)/cost type for posting GL overhead accounts. The printing of the daily overhead allocation register calculates overhead and provides an audit trail for these transactions. This report indicates by source (e.g., JC, AP, and PR) for each job: cost amount, overhead rate, overhead amount, and GL accounts posted for each cost type calculated for that job.

### **Contract Information**

Contract information includes original and revised estimates and contract amounts. A useful audit feature is that if the system is set to take contract change orders, a user can only update the revised contract field through the entry of job change order detail. Each change order record shows the date, amount and a comment of user-determined length. On-line job inquiry indicates summary and detail information for a job description, contract information, change orders, cost codes and billing records. Other on-line data includes percent complete, billed to date and payments to date. The ability to view cost, billing and change order detail on screen is particularly convenient.

Billing and payment detail includes: date, transaction type, source, reference, comment, transaction amount and retention amount. The user enters a starting date and the

system provides all detail up to the last transaction posted. Cost code costs can be viewed for PTD, YTD, and JTD for amounts and units with corresponding percentage of estimates. All reports can be viewed on 132 column screens. Cost analysis for current and projected variances from estimates and profitability analysis is based on completion status information entered for the whole job and for each cost code/cost type. A job field report worksheet can be printed to facilitate data entry. The whole job percent complete can be automatically applied to all cost code/cost types which then can be selectively edited. Alternatively, each cost code/cost type can be updated individually independent of the completion percentage for the whole job. In addition, each cost code/cost type, for which a unit of measure has been established, can be updated for units completed. This allows the calculation of a cost/unit for each cost code/cost type.

Budgets can be established through direct entry for each job and each cost code/cost type within a job or this information can be transferred from an estimate file. Estimates may be copied from already existing estimates and then edited if necessary. Item pricing maintenance establishes item codes for individual cost elements or assemblies of up to 12 cost elements. Each item is defined for cost type, unit of measure (U/M), unit cost, markup method and rate, unit price and a factor which is used to convert the U/M of an element of an assembly into the TAKEOFF U/M for that assembly. Items can also be associated with a default cost code. New unit cost information for an existing item can be automatically applied to all assemblies containing that item, if desired. If the inventory module is available the item pricing file will automatically be updated with current inventory item prices and costs for selected product lines, price codes and vendors for all or a range of inventory item numbers.

### Reports

Job estimates can be printed in four formats with an optional recap which summarizes each estimate by cost type and calculates sales tax, burden and overhead in order to show the total estimated cost and price for the job. Material requirements are printed for one or a range of estimates. The system offers an excellent selection of reports analyzing costs, billings, profit, scheduling, work in process, subcontractor information, estimates and job transaction detail. Most reports can be sorted in several different ways for ranges of different parameters.

In summary, The Sage MAS 90 job cost system offers many of the features a contractor will want as well as convenient on screen access to job summary and detail information, excellent documentation, and flexible reporting. While the system is very powerful and flexible it is still relatively easy to set up and use.

## Payroll

### Pros

- multi-state/department
- customize checks
- strong direct deposit functions
- user modifiable tax tables
- unlimited earnings and deduction types
- Sage MAS 90 Custom Office
- indefinite retention of check history

### Cons

- no piece rates
- does not post accruals to AP for payment
- no certified construction payroll without TimeCard module
- cannot “real-time” post labor transactions to Job Cost module without additional module
- requires enhancement to generate Direct Deposit file for transmission to bank

Payroll integrates with job cost and bank reconciliation as well as general ledger. A very flexible direct deposit capability is available. With this feature, each employee may distribute his net pay to up to eight separate bank accounts. The distribution may be a fixed amount, percentage of net pay or a percentage of gross pay.

Direct deposit transactions may be transmitted to banks or financial institutions. TimeCard for Sage MAS 90 is a powerful complement to the Payroll and Job Cost modules. Employee's time card data can be entered on any schedule desired without affecting the payroll data entry files. When the payroll is ready to run for the period, the entries are transferred to Payroll Data Entry.

Additional capabilities include: additional management of employee benefits, retention of check detail, payroll expense allocation between periods and an audit register of any changes made to the employee file. Departmental security may be initiated to restrict users from viewing or processing designated departments.

### Setup

Up to 36 bank accounts are supported. Federal and state tax tables are offered by subscription, updated annually, and may be modified by the user. Local tax tables can be designed by the user. When implementing the system during the year, payroll history is entered using the manual check entry process. Security may be established by department. An unlimited number of earnings codes are definable, each with its own pay rate or amount and expense account. Earnings codes are of the following types: regular, overtime, sick pay, vacation pay, miscellaneous, taxable tips, and earnings excluded from tip

calculations (when determining tip differential below minimum wage).

Unlimited deduction codes are also definable. The first deduction code is pre-defined for tips. Deductions can be of two types: employee deductions or employer contributions. Employer contributions credit an accrual account and debit a specified contribution expense account. The deduction rate set up in the deduction table will be supplied by default in payroll processing unless another amount is specified in the employee record. In addition, deductions can be calculated as: a fixed amount, percent of gross, amount times the number of regular hours worked, amount times total hours worked and percentage of net wages. The deduction amount can be defined as equal to up to three earnings codes.

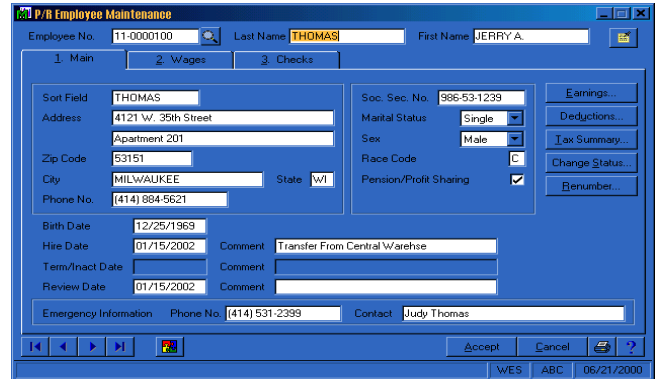
A deduction can be given a total sum amount. After being used up, a warning message will be given but the deduction can be taken anyway. This safeguards against forgetting to end a deduction. Each deduction can be applied automatically to pay records or entered in individual pay records. Deductions may be automatically added to a range of employee records. Labor codes are used to identify the type of work performed by each employee. These codes are used to produce the labor distribution report which recaps labor costs by labor code. Additionally, worker's compensation codes can be created to handle amounts based on: number of hours worked, days worked, percentage of gross earnings, or fixed amount.

Tip allocation reporting allows entry of the receipt amount for each employee during payroll entry. The allocated tip amount (8% is the default) is calculated and compared to the reported tip amount. The difference between the calculated tip allocation and the reported tip amount is printed on the W-2 form. Earned income credit rates are maintained in separate state tax tables. If an employee earns it, the credit will be applied on employee paychecks as a negative deduction. The ability to process Fringe Benefits allows the entry of taxable non-cash fringes to be entered and tracked for proper withholding, reporting and printing on the W-2's.

**Employee Record**

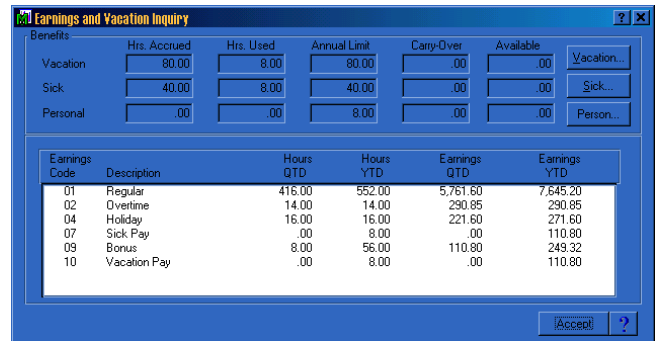
Each employee may be assigned to a department by incorporating the department code into the employee number. Each department has its own payroll expense and liability accounts. Also, most reports give subtotals by department. Hire, review, and termination date fields have a comment line, plus a memo maintenance option permits multiple memos for each employee. Several other unique employee data items are pension/profit sharing status, emergency information (who to contact), two pay rates, a sort field used for sorting reports, labor code, and whether

the standard federal tax calculation can be overridden in data entry.



*Employee Maintenance Screen*

On-line employee information is available showing check history and quarter-to-date and year-to-date earnings, deductions, and taxes and vacation and sick leave hours accrued and taken. Additionally, the system allows the maintenance of three benefit accrual types. Two of these are system defined as vacation and sick pay. The third can be defined by the user i.e., personal time). Multiple benefit schedules can then be defined for establishing the accrual methods and rates for the benefit types. Complete benefit reporting is also automatically available.



*Each employee file shows not only the earnings but can track up to three different types of benefits – vacation, sick and a third user-defined method.*

**Payroll Process**

A pay process is first set up by specifying the pay cycle code, pay period, days and weeks worked if different from the default value calculated, whether deductions and taxes should be automatically applied, and one earnings code which will be automatically applied to all pay records created during the pay process. For instance, if the earnings code for regular earnings is chosen, all payroll records will automatically include regular earnings for the time period selected in the payroll process set up. Payroll records are then created by the automatic payment selection process

and individual records can be modified, added, or deleted using the selective payment feature.

### **Automatic Payment Selection**

Employees are qualified for selection by employee number, labor distribution code, and hourly vs. salaried pay. The standard hours for the pay cycle is entered and used for employees without a specific number of hours set up in the employee file. A second earnings code can be specified which will be automatically applied to the payment records in the same manner as the one specified in the payroll process. Any further type of earnings must be entered to individual records using the selective payment entry process described below.

### **Selective Payment Entry**

Payment records can be added and records created in automatic entry can be deleted or modified before the check register is updated. Manual checks are also entered with this process by entering the check number and tax information. Employees can be listed and searched by entering leading characters of the employee number or name. Multiple checks (e.g. bonuses, advances) can be created for a single employee by specifying the record as a second, third, etc., entry. Data items in the lines that are supplied by default from the employee file (but may be changed) are the state and local tax code, department, labor code, workers' compensation code, pay rate, and hours. With these changes, payroll expense can be distributed to multi-state and local taxes, and multiple departments, labor codes, and workers' compensation. And because each earnings code can have its own expense account, an employee's time can be distributed to multiple accounts.

Deduction lines are automatically added or can be manually added into the pay records. Taxes can be either automatically computed or entered manually. A unique feature allows salaried employees regular hours to be allocated to another earnings code such as holiday.

### **Payroll Audit Reports**

The payroll audit reports (payroll data entry audit report, and earnings and deduction registers) are only available before check printing. The labor distribution report shows hours and amounts for each type of earnings for each employee individually and totaled by labor code. The expense summary contains two sections; displaying employer's withholding taxes for each tax jurisdiction and the workers' compensation amounts for each state. An option controls whether to post the general ledger payroll journals in summary or detail by employee. If there are payroll checks that were issued in a different month from when the work was actually performed, or when the payroll falls across months, the payroll expense may be split for General Ledger posting purposes.

### **Check Printing**

A pre-check register prints a summary of all standard and manual checks entered for the current pay cycle before checks are printed. Checks can be custom formatted using the form design function. If a check printing process is interrupted, it may be resumed by specifying the next employee number. There is the option of printing a single payroll check or a range of checks. Also two check stubs may be printed to facilitate laser printed checks. Checks will print with amounts fully spelled out. After check printing and until the check register is updated, payroll records can be modified and checks reprinted.

### **Reports**

Reports can be sorted by employee number, social security number, sort field or last name. The check register lists both computer printed and manually written checks. The earnings and deductions report shows, month-to-date, quarter-to-date and year-to-date hours and amounts for each code. Mailing labels and W-2 forms can be custom formatted. Vacation and sick leave data is available showing vacation and sick leave hours and amounts allotted annually and taken. The workers' compensation report lists for individual employee, and subtotals by workers compensation code, the number of checks written and the taxable hours and wages and the tax amount. The report can be run for a range of states, workers compensation codes, and employee numbers.

The payroll system meets requirements for W-2 magnetic media reporting. The W-2 printing program allows up to three Box 17 labels and their associated amounts to be printed. Box 17 labels may be assigned to specific deductions codes. There is an option to print up to two miscellaneous earnings and two miscellaneous deduction codes on W-2's. Deductions may be designated to reduce taxable wages for federal, state and local taxes as appropriate. An employee may have more than one pension deduction. The deduction amount can be based on percentage of gross, hours worked, or a fixed amount.

A pension plan deduction register will automatically print after the deduction register and the pension deduction will appear on the quarterly government report and the W-2 reports. The Medicare tax is calculated and reported separately from the FICA tax on all reports. The Medicare tax is printed separately on the check stub. The quarterly pay period recap report provides a summary of payroll wages and taxes per pay period and department for the current quarter. The payroll check history provides a listing by employee of each check written for a specified period.

Check history can be retained indefinitely. A potentially significant omission for job cost users is the lack of a certified payroll report (however, this is available with the TimeCard module). The quarterly governmental report will

allow printing in a format readable by optical scanners. This report includes an employee's hire date if it is within the current quarter. The forms printing program allows a default printer to be specified for check printing. Three default forms are available for printing checks on laser printers. A default printer may be specified for W-2 form printing, quarterly governmental reports, and quarterly 941 form printing. This allows a dedicated printer to be loaded with special forms.

## TimeCard

This module offers employers the ability to enter time card data on any schedule desired. When payroll is ready to run for the pay period, entries are transferred to payroll data entry from the TimeCard program eliminating duplicate data entry.

*Timecard facilitates easy entry of daily time – and allows for posting of time to Job Costing without having to produce a payroll run.*

Each time card entry handles earnings codes, labor codes, workers comp, state and department worked and calculated pay for the associated earnings code, a certified payroll is available with this module.

## Purchase Order

### Pros

- automatic creation of PO's based on inventory reorder
- back order fill report shows which orders can be filled
- handles all types of POs including drop ship
- Sage MAS 90 Custom Office
- allows for landed cost entry
- strong integration with AP, IM

### Cons

- cannot set receiving tolerances

- no EDI function– third party solutions expensive

The setup file features a number of options including whether to automatically generate invoice entries in accounts payable as a result of purchase order receipts. Both purchase and receipts history by vendor and item can also be maintained. A default warehouse for receiving can be established along with a default materials requisition, freight and sales tax account code. Vendors may be assigned multiple ship-to addresses for convenience in ordering for multiple locations. Batch entry and edit of purchase orders is optional. PO's may also be generated from sales order activity.

*Purchase Orders automatically integrate with both Accounts Payable and Inventory Management.*

## Transaction Processing

If inventory management is installed, the user may automatically generate a purchase order for items whose on hand quantity is at or below the reorder point setup in the inventory file. This is done from a program selection screen letting the user pick a range of vendors, items and/or product lines to order automatically. A PO is created for each vendor that has an item for reorder when the auto reorder register is printed. The open PO file is then updated.

## Purchase Order Entry

This program is used to enter information for regular purchase orders, "blanket" master orders (order partials of large order), repeating orders, drop ship orders and material requisitions (internal orders). PO is integrated with job cost for commitment type accounting as purchase orders for jobs will update the job file. PO's integrated with Work Order Processing to order items or outside processing for specific work orders. As data is entered, vendor information is retrieved from the vendor master file in accounts payable. If inventory management is installed, items, costs and units of measure are retrieved to provide automatic cost calculation

for items ordered. Each PO is divided into four parts: header, address, lines and totals.

The header includes vendor information such as ship-to address and terms, the address contains the purchase address, the item detail lines include the description, quantity, unit cost and total cost of each item ordered. There is total information for taxable and nontaxable amounts, freight, and sales tax amounts and the total for the order. Defaults such as order date, type, date required, ship via, ship to, FOB, and warehouse may be defined for batch entry. Each user may also specify tab stops.

1099 information may be entered specific to each order to ensure proper year end 1099 printing. The user can also enter a new vendor or inventory items while in the PO entry screen.

A unique feature useful for ordering is the ability to see all item data relevant to a reorder on the PO screen. The item description, reorder method, EOQ, reorder point, quantity on hand, currently on order, on sales order and on back order are all displayed to help decide how much to order. Selecting recommended quantity will automatically order the system generated quantity or else a manual quantity can be entered. Inventory items, miscellaneous charge codes and terms codes may be added on the fly during purchase order entry. Additionally inventory item memo inquiry and vendor memo inquiry may also be performed during data entry. Alias item numbers may be used to lookup items by vendor part #'s.

Drop-ship orders direct link to sales order processing for handling direct shipments from the vendor to the customer. If sales order processing is used, the user may enter the sales order number during PO processing and the customer number and address will automatically be assigned as the ship-to address in the purchase order. The default GL code for the item purchased is displayed or a particular general ledger account can be entered for the item. Either a standard comment or a custom 50 character comment may be entered. A very useful feature is the ability to establish vendor price levels. These may be based on standard cost, quantity of purchase, or a specific discount method.

### **Requisitions**

These are orders for internal use. Printed requisitions provide acknowledgment of an order. When requested items are issued from inventory this is entered through the materials requisition issue entry program and the inventory on hand quantities are updated. All purchase orders entered can be called up and maintained whenever necessary. Both header and line item detail can be changed and a new PO printed.

### **Receiving**

The receipt of goods entry program is used to enter goods received against outstanding PO's. Optionally, invoice entry can simultaneously be entered when receiving goods. There is the option of receiving the PO as complete which will record the ordered quantity for each item as the received quantity. Any exceptions for items not received or partial receipts can be adjusted manually. Receipts of quantities larger than ordered may be entered. Security can be established to restrict this feature. A new unit cost for items received or a new total cost for the item can be entered along with lot or serial numbers.

Receipt of goods entry will accept job number and cost codes. In addition, receipts, returns and material requisitions are posted to the job cost system. Both Receipt of Goods and Invoice Entry allow C.O.D. payments. Receipt labels may be printed as part of the Daily Receipt registers/update if the inventory module is integrated. Receipt labels which are defined in the inventory module may include Bar Codes. Specific format and print options are defined under inventory. Multiple Receipt of Goods and Receipt of Invoice sessions can take place simultaneously, each with unique batch numbers, that can be updated independently without affecting other batches.

The Sage MAS 90 Bar Code Master Module allows collection of bar coded receiving data by scanning information using a handheld computer. This information can then be uploaded to the PC and imported into Receipt of Goods Entry.

### **Receipt of Invoice Entry**

This function is used to record invoices only and does not record the receipt of goods. The system will total the cost of a given PO (manual adjustments for incomplete receipts can be entered) and record the total as an invoice in the accounts payable system. The receipt of an invoice transaction will accept a job number and cost codes. Freight can be distributed to inventory by quantity, weight or cost allowing more accurate statements of gross profit.

### **Reports**

The system has a number of unique and useful reports. The automatic reorder register lists all items selected for reorder through the automatic reorder program. Purchase orders can be printed by type of order and range of order numbers. The forms design program allows creating multiple formats for printing PO's. There are also transaction registers for the receipt of goods, receipt of invoices, and a daily purchase journal. The Back Order Fill report lists, by item number and sales order, which back orders may be filled as a result of receipts entered. The Back Order Fill report includes work order information if the Work Order processing module is integrated.

The PO receipt/invoice variance register lists purchase order items with variations between the cost of goods received and invoiced and items for which the quantity received or invoiced exceeds the order quantity. There is an expected delivery report for outstanding PO's for any three consecutive periods plus a cash requirements report summarizing cash needs for any three consecutive periods. This report can include only open PO's or may include open invoices from accounts payable. A series of Purchase Clearing reports reconciles the liability account for purchases clearing with the actual items received with no invoice yet received.

Purchase commitments by job will show on the open purchase order by job report. The option of closing partially received orders based on a receipt variance percentage is given. Also an inquiry menu with user options for vendor, inventory and receipt history viewing is available.

## eBusiness Manager

### Pros

- significantly less expensive than competing products
- designed to be an out-of-the-box solution
- uses existing Sage MAS 90 data and functionality
- does not require customization

### Cons

- may be too "canned" for sophisticated users

Sage MAS 90's first attempt at integration with the Internet – eBusiness Manager -- shipped in the third quarter of 1999. Designed as a business-to-business system, the software allows companies to grant access to important customers or vendors via the Internet. Sage has made every effort to make the eBusiness Manager module a simple and inexpensive set up experience -- and stresses the ability for most users to "do it themselves without expensive web consultants."

To create this module, an ISAPI plug-in was developed for Microsoft Information Server (IIS). This plug-in redirects requests to the ProvideX® Web Server running behind a firewall. This structure provides for security sockets layer (SSL) and firewall configurations to ensure adequate security.

The internet.access module does not use up any Sage MAS 90 user licenses, so there is no limit on the number of users who can access your site at any one point.

There are initially two applets that are available – internet.inquiry and internet.order – with more planned for the future.

Currently eBusiness Manager is limited to the Sage MAS 90 product working solely with Windows NT and IIS. This module will eventually be rolled out for the UNIX versions of Sage MAS 90 with the appropriate web server interfaces. The ProvideX Web Server must operate on a Windows NT box.

The release of Level 3.50 also introduces another applet called .store. This applet allows for more anonymous customer handling and the use of credit card processing. Unlike the previous eBusiness Manager releases, the .store applet allows for NEW users to be easily setup and tracked by their email addresses – thus eliminating the need for someone to authorize them to enter the system.

## Report Master

### Pros

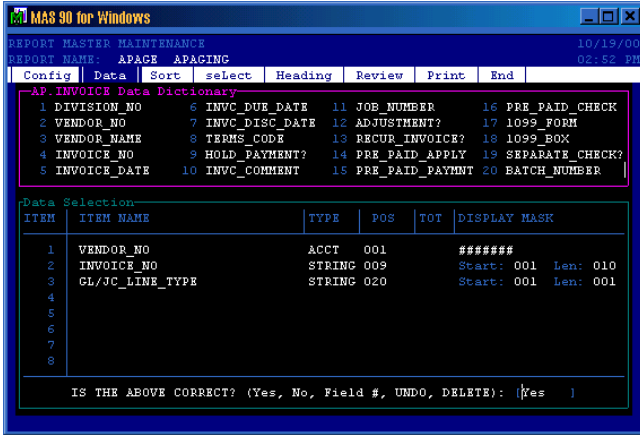
- easy to use, intuitive
- often significantly faster than Crystal Reports
- data dictionary built in
- can add custom reports to menu
- fast
- export reports to many file formats

### Cons

- Obsolete on all 4.x modules
- Still a DOS interface
- not a WYSIWYG report writer (Crystal reports is)
- no font control
- limited ability to link data files for more extensive reporting

**NOTE:** Report Master is considered obsolete. It will work with some older modules that have not been transitioned to the level 4.x Business Framework. In general Crystal Report Writer is the better way to create all custom reports and you should avoid creating any new reports in Report Master.

This is a fully-featured report writer that can be tailored to meet individual needs. With Report Master (RM) a user can design custom reports using data from virtually any data record within the Sage MAS 90 applications. It is possible to define a report that includes data items from linked files. It is a completely menu-driven system that uses the windowing concept to make it easy to select files and data fields for reports.



Report Master is one of the last modules that retains a DOS interface. Its functionality has largely been replaced by Crystal Reports; however it remains with the Sage MAS 90 package for backwards compatibility.

The steps to creating a custom report are:

1. assign report name
2. enter report configuration information - description, file name, width, lines per page, spacing
3. select specific items to be in the report chosen from the date file in item 2 or from a related file
4. define sort criteria - up to 16
5. define select criteria for inclusion/exclusion of specific data records in report
6. specify heading information

There is also a preview function to see the report layout before it is run. Calculated items can be included in reports and can be used for sorting and selection. Any arithmetic expression up to 60 characters can be entered to perform the four basic arithmetic functions and to establish calculation priorities.

One could, for example, calculate a monthly sales average for the quarter with  $(sales1 + sales2 + sales3)/3$ . Subtotal breaks may be created by the sort criteria with new pages created. Further, reports can be printed with full detail or with only total information. Selection criteria is very strong with the ability to use boolean operators and connectors. It is possible to perform selections by comparing a value in one data item to the value in another data item. Calculated fields may also be used with other calculations and may be sorted. All reports may be sent to the screen or to a file (to interface with a spreadsheet or word processor) or to a print spooler. Output can be to a dBase file format. A simple listing of data fields can be accomplished quickly by using the many default parameters for headings and spacing and just selecting the file and data fields needed.

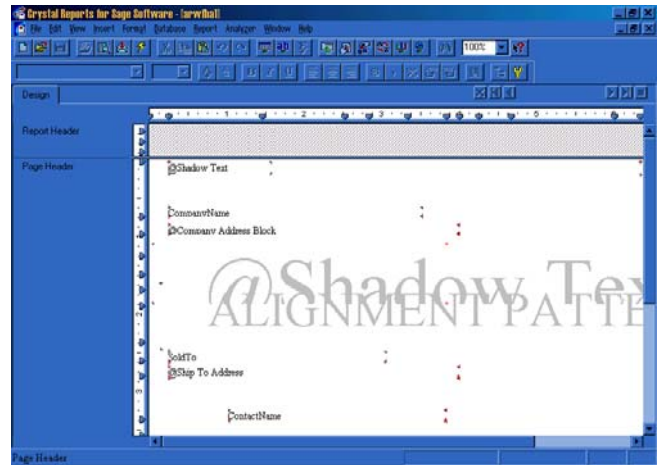
## Crystal Reports

### Pros

- industry standard report writer
- ability to link additional data files to repots
- exports reports to many data formats
- reports created with helpful wizards

### Cons

- VERY slow with large data files
- may not work well with CS version of Sage MAS 90 (Sage MAS 200) running over slower speed data lines – especially when printing graphical forms from sales order or purchase order
- customizing forms in Sage MAS 90 requires experienced user



Sage MAS 90 makes extensive use of Crystal Reports for its graphical forms. The user may modify every form. With a little practice, the modifications are a snap!



Brand new reports may be easily created within Crystal Reports using a report wizard.

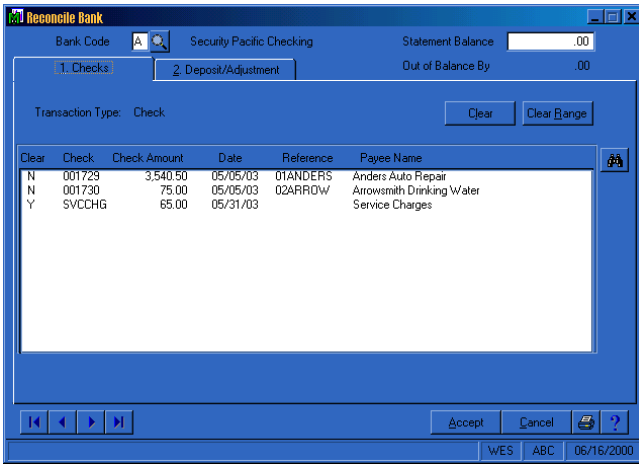
Crystal Reports is a powerful Windows based report writer that allows the creation of meaningful, real-time reports quickly and easily. With the ODBC driver, Crystal Reports

has direct access to all Sage MAS 90 data. There are several reports within each module that may be used or modified to suit each need.

Wizards can step through creating a new report. Selections are available for font type, size and text color, application of lines, borders and shading. Reports may be enriched with embedded pictures, graphs, diagrams and logos. They can be run unattended, at pre-determined times.

### Bank Reconciliation

This module is used to determine a company's current cash position as well as to reconcile the cash balance against the bank statement. Up to 36 bank codes can be set up which reference bank codes used in A/R, A/P and P/R. Miscellaneous cash transactions may be entered directly in bank reconciliation but also must be entered to G/L. Cash transactions from other subsystems and transactions within bank reconciliation are reconciled to the bank statement by noting them as cleared. A bank reconciliation register shows all transactions entered into the system for a date range, as well as a reconciliation summary. A transaction recap will also print items in chronological order.



*Bank Reconciliation receives data from Accounts Payable, General Ledger, Accounts Receivable and Payroll.*

The estimated cash flow analysis projects cash balances over four periods based upon current bank balances plus cash expected from A/R, and other sources, and cash required from A/P, P/R and uninvoiced purchase orders. The reconcile bank program will clear a range of checks or transactions. The Bank reconciliation recap report includes a transaction type summary with the number of transactions and a total for each type printed by bank code. The bank reconciliation register allows including either all, only cleared, or only non-cleared transactions. The estimated cash flow analysis provides for up to six additional lines for other receipts and disbursements entry. The estimated cash flow

analysis allows selection by either Invoice due date or "average due dates" for Accounts receivable and Accounts payable. Cash projection information will be included in the accounts receivable amount when Time and Billing is integrated.

### Bill of Materials

The Bill of Materials (BOM) is used to track components and miscellaneous charges which make up finished items and subassemblies. The system is powerful enough to handle multiple revisions of a bill, define bills with multiple configuration options and to track engineering change orders. This application is suitable primarily for companies with short lead times between order processing and production. It is not a full MRP system, and is not intended to be, as it does not track work in process and estimates of required production are not time phased. Sage also has Work Order Processing and MRP modules.

### Transactions

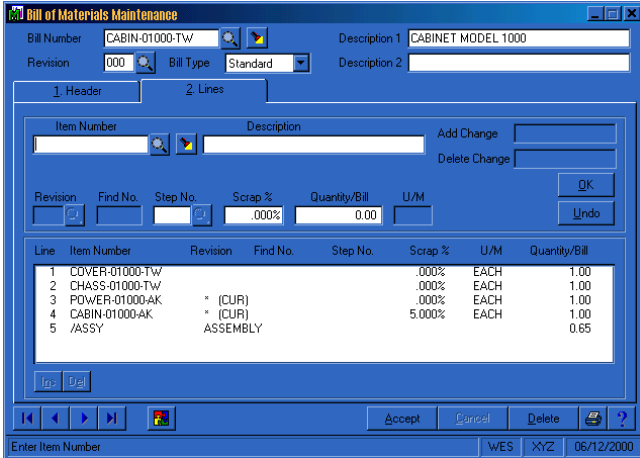
After the assembly of manufactured products has taken place, the production entry process is used to record the receipt of manufactured items into inventory and the use of component parts. During the entry process, bills are automatically exploded into component detail lines. Users can add, delete or change component items and override standard quantities. Miscellaneous charges and comments can be entered. Handling of lots and serial numbers is quite sophisticated. The manufacture of lot and serial items may be recorded during production entry and components used can be lots or serial numbers. The disassembly function is used to return component parts for disassembled items.

### Setup

As in all Sage MAS 90 modules, setup options are extensive. These include use of option bills which are various configurations of a standard bill that can account for things like size or color variations of a single finished product. This feature eliminates the need to define a separate bill for each possible configuration. Engineering changes can be tracked for each bill along with their effective dates. Phantom bills can be used as bill components. These are components grouped together for manufacturing purposes but not built for stock. Scrap percentages can be assigned to bill components, and yield percentage factors may be assigned to bills. These features are needed by process and repetitive manufacturers. Production history can be retained for audit trail purposes.

BOM can be integrated with general ledger for recording inventory, inventory adjustments and miscellaneous charges. The inventory management (IM) module must be setup before installing BOM. The BOM module provides automatic access to IM. Components used to produce

finished goods may be tracked as "issue" transaction separate from sales transactions. Sales kit processing will automatically add component items to an order entered using sales order processing and sales kits can be copied from inventory management if they have already been created. Miscellaneous charges let a user establish a standard cost per lot or standard cost per parent item. Miscellaneous charges are also used to record setup charges (once per production run) or miscellaneous charges can be according to the number of finished items produced.



*Bill of Materials allows for more complex creation of Inventory from multiple parts.*

**Bills**

Information for each bill is divided into heading information, describing the bill type and then into the component line items. To create a bill representing the parent item, it is necessary to identify its type (engineering, phantom, standard, etc.). It is also possible to enter a drawing number and drawing revision for engineering bills. A routing number integrates with the work center processing application. There may be up to 99 levels per bill. The bill component screen is used to enter line items for the current bill. A line item can represent either a component item, a comment line or a miscellaneous charge code added to the bill's cost. During data entry function keys may be used to find inventory items, engineering revision number, drawing number G/L cost accounts and miscellaneous charge codes.

**Reports**

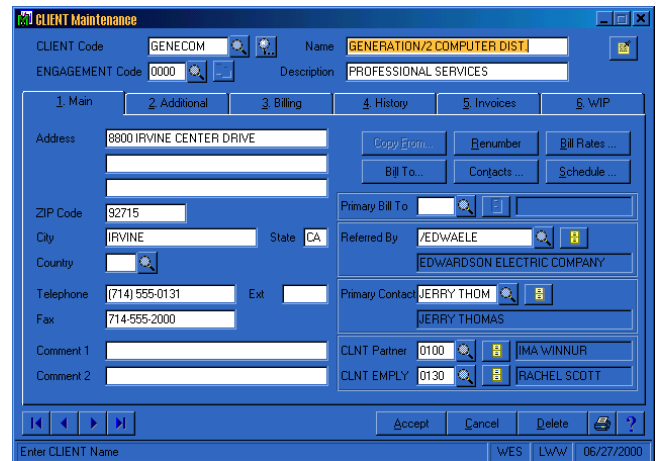
Inventory item information may be accessed directly from the BOM main menu. Picking sheets can be printed for a group of selected bill configurations. Required components may be listed in bin order or item number order. The cost roll-up register calculates the cost of each component using the average, last or standard cost method. The component requirement report forecasts the number of components

required to produce specified bill configurations taking into account yield and scrap percentages.

The gross requirements report identifies stock shortages. The costed bill of materials report shows individual component and total bill costs for a range of bills or for specific bill configurations. In addition the system will produce lot or serial number labels and a full range of reports showing bill make up including single level, summarized, indented where used and summarized where used lists.

When integrated with the Work Order Processing module, bills and routings may be assigned to each product to minimize the amount of manual entry required to enter work orders. Using Routings allows for the introduction of labor cost and other production considerations at a Work Center level. Sage also has an MRP module to provide timely purchasing information to the production and purchasing manager.

**Time & Billing**



*Time and Billing by Hightower is now fully graphical*

During 1999, Sage Software turned over the development and support of their Time and Billing software to Hightower, Inc – who is the original developer of the module and a long time Master Developer for Sage MAS 90.

This program has everything one would expect in a fully-featured T&B system that could be used stand-alone by accountants, consultants, and other professional service companies. Plus T&B has the added ability of integrating with Sage MAS 90 Accounts Payable, General Ledger and Bank Reconciliation. This review will concentrate on what is unique about the program instead of going over all its standard features.

### **Setup**

There is the option to keep detailed billing history, age invoices by day or month and substitute custom terminology for the usual terms of client, engagement, employee or work code. For example, one could substitute matter for engagement or task for work code depending on the nature of the business. There are nine levels of employees and nine billing rates possible for each employee. A specific employee billing rate can also be assigned for a given client/engagement.

Fee arrangements include the choice of: fixed, non-billable, progress, retainer, standard or not to exceed. To save time on making changes to rates, etc., global changes can be made to billing rate charges and to specified client information by a range of employees and clients. The program is also strong on budgeting and scheduling with the ability to enter budgeted dollars and units and rates, as well as projected start dates, down to the work code level.

### **Maintenance and Inquiry**

Sage provides a vast array of data, available through screen inquiry or printed reports about work in process, billing and payment history and budgeting and scheduling at the client/engagement level. The billing history reports billable/non-billable hours and amounts, billed fees and expenses, write-ups/write-downs and receipts. Budget history shows budgeted hours and dollars against actual. The detailed work in process (WIP) query reports the amount of work in process by employee, date, work code, hours, units and rate.

### **Time & Expense Entry**

Some remarkable features are "on-the-fly" entry of engagements, employees and work codes, plus the ability to enter extended comments to the text field to explain the billing charge. Prepared text can be entered from a text library and then edited. The complete extended text prints on the transaction expense journal. There is full editing of transactions until T&E items are actually billed. One quirk noticed in Time & Expense entry is that when an operator is asked to confirm an entry as correct, no transactions appear on the screen to look at. They must first go back one screen and then confirm the entries.

### **Integration with Accounts Payable & General Ledger**

When the flag is set for integration with AP (and AP is installed), there is a prompt to enter employee number, client and engagement during vendor invoice entry. This would typically be done when entering an expense incurred in behalf of a client. These expenses can be marked up according to a specified percentage. Once this data is entered it is immediately recorded to the WIP files in Time & Billing. When integrated with GL, work in process can be posted to GL. Firms such as CPAs, advertising and

public relations, can benefit from the integration of the time and billing function and accounts payable since they frequently want to "pass through" expenses to clients. It is rare to find a time and billing application that is this well integrated with accounts payable. Extended text memos can be maintained by client/ engagement with subject headings, memo date and a reminder date.

### **Billing**

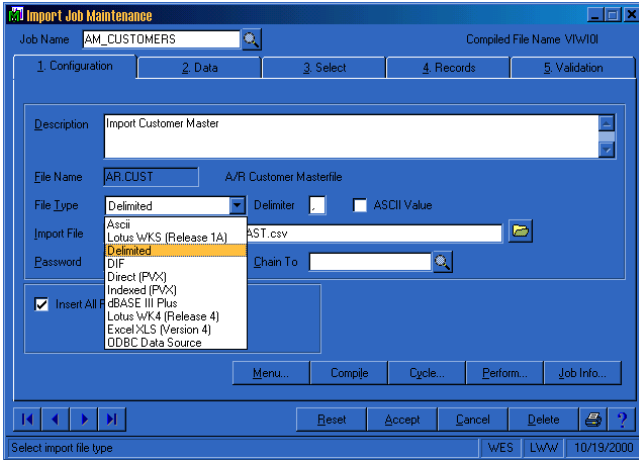
Write-ups and write-downs can be made at several levels: client/engagement, work code, category or individual transaction. The ability to write-up or write down by category is very unique. Billing can be by range of clients, engagements, partners and client types. There is a full screen billing format capability to position various fields on the bill. Billing formats can be customized to the client/engagement level. Billing transaction formats include: detail bill by date, summary by category, summary in total, progress bill by date and detailed or summarized retainer.

### **Reports and Analysis**

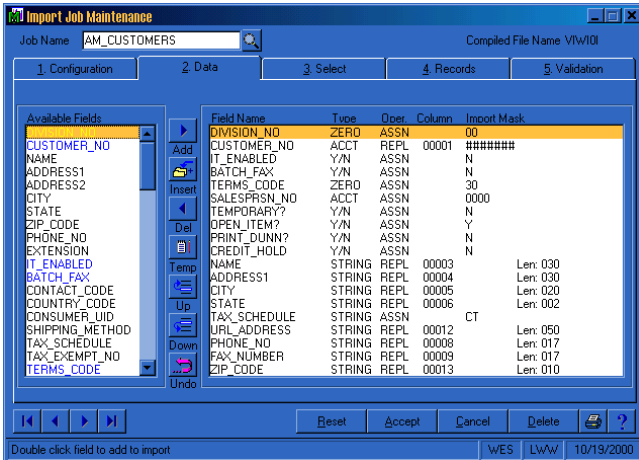
A vast amount of data is available for reporting - everything from billing and payment history to work in process to scheduling and budgeting. There is a group of "analysis" reports which are unusual. The productivity report covers: billable, non-billable hour's period to date and year to date, along with the standard rate and billed rate. The profitability report shows employee costs, expenses billed, expense cost, total billed total cost, and gross profit by client, employee, and category. Category reporting shows profitability for groupings of work. Fee analysis has period and year to date data on write-ups and write-downs for standard vs. billed rates. The WIP reconciliation report shows the beginning and ending balance of WIP along with billable amounts, billed amounts, write-ups and write-downs. Time analysis reports can be by client, employee or category. These reports provide billable information for up to 13 periods.

### **Visual Integrator**

Visual Integrator is the Windows based replacement for Sage MAS 90's Import Master. Much of the feature and functionality of the old DOS Import Master has been retained by Visual Integrator. The ability to use ODBC data sources has been added as well as many additional features to speed the import (and export) of data.



Visual Integrator can import 10 different types of file formats.



Visual Integrator imports into any Sage MAS 90 data file

Maintenance is used to define each import function. The function includes the destination data file and the specific fields of the file into which data will be imported. There is a data dictionary of all files with applicable fields that can be imported to. The equivalent data in the import file must then be located and then notify Sage MAS 90 whether it is by field or column position in the file (depending on the type of file). Having a data dictionary capability in the external system is a great help in performing this function.

Each item has its own import operation which can be an add or subtract value of the import field, replace value with import field, or perform any calculation using data from either or both files. There are also pre-defined import masks used to specify the format of account codes, phone numbers and dates. Record types or specific records in the import process can be restricted using a full array of boolean operators. After a complete import function is defined, it can be saved and recalled later. Each import function can be password protected.

Visual Integrator allows for much greater flexibility in the creation and execution of import jobs. You may automatically set an import job to run at a pre-determined interval or chain several imports together for greater flexibility.

**Importing Records**

The user first selects a stored import function and identifies the file name and path name to import. Sage MAS 90 checks the data to be sure it is compatible in terms of format as it imports the data. It will stop whenever a problem is detected but it is possible to continue if desired. The import master log will print the data imported or rejected. The sample data listing provides for reviewing the import operation before actually importing any data. It identifies each record with a sequential number and lists each data item by name that is being imported. This can be reviewed and necessary changes made before starting the import process.

**Point of Sale**

During 1999 Sage turned over the sales and support of their Point of Sale module to Hightower, Inc. All future support and enhancements will come directly from Hightower, Inc.

The Point of Sale module introduced by Sage is designed to meet the needs of the retail business. Point of Sale provides a unique method of entering on-line sales transactions including standard sales, fast sales, quotes and layaways. With integration to Accounts Receivable, Inventory, General Ledger, and Bank Reconciliation; credit sales may also be entered. Facilities for integration to cash drawers and credit card scanners are also provided.

**Setup**

Parameter options allow many of the features to be utilized even if being operated as a stand alone solution. Many of the items normally set up through other modules are provided for in Point of Sale such as salesperson, sales tax and customer maintenance. This also allows for additions and maintenance to be performed to these items without leaving Point of Sale. As with all Sage modules many items can be turned "on" or "off" by answers to parameter questions. For example, some of these questions allow the setup of the degree of verification that is performed during sales entry, such as quantity on hand checking, editing discounts and pricing, and how much reporting detail is required.

**Point of Sale Entry**

Data entry is designed for fast and easy processing. Multiple terminals/registers can be established. Opening and closing of registers is required. Register information is printed and a

reconciliation option allows analysis of the activity by register to verify the actual cash in the drawers. Defaults can be set to further speed up the sales entry process.

Different types of transactions may be processed. Orders can be placed and tracked for future delivery and billing. Quotes can be entered and printed per customer's request. Layaways can be entered to reserve items. Orders and Layaways can accept deposits and be changed to standard sales for invoicing. Standard sales are used for on account sales as well as those where other customer information is needed for verification such as credit limits. Fast sales are for processing transactions where no customer information is required.

Procedures for entering returns are available. Most of the standard line item entry options of the Sales Order module are available in Point of Sale line item entry. Inventory items can be entered when integrated to inventory. New items can be entered on the fly. Non stock items, miscellaneous charges and comments can also be entered. Multiple payment types including credit cards, cash, check or credit terms may be identified for sales. As with all Sage forms, multiple user designed formats can be maintained for each sale type.

### **Reports**

Extensive reporting is available with or without integration to other modules. Detailed customer sales history can be printed showing sales and profit for the year by period. Most of the reports normally available in Sales Order and Accounts Receivable such as salesperson, open order, and monthly recap reports are available. Quote and layaway can be printed for tracking purposes as well.

## **Fixed Assets**

Starting with version 4.3 and Extended Enterprise Suite, the Sage Fixed Assets (FAS) is available as part of the suite of applications that include – MAS 90 (or MAS 200) + SageCRM + Sage FAS = Sage EES (Extended Enterprise).

If you're interested in acquiring Fixed Assets, consider upgrading to EES if for no other reason than the pricing will likely be cheaper (depending upon # of users).

Be sure to inquire about the number of assets that you can record under the EES bundle. At the time of this review Sage was limiting the total assets to 1,500 (this may change in the future so if you're close to or over the 1,500 mark please be sure to inquire).

Sage MAS 90 for Windows now interfaces with the FAS for Windows fixed assets program. This combines the acclaimed depreciation expertise of FAS and the power of

Sage MAS 90's General Ledger. FAS provides automatic creation of AMT and ACE schedules and over 20 methods of depreciation. Once the depreciation is calculated, the General Ledger transactions are ported into Sage MAS 90 ready for the update process.

Assets may be viewed singularly or grouped together for fast, easy maintenance. Both the Asset Group View and Group Manager are useful tools for viewing asset groups. The Asset Detail view displays up to 7 books on one screen. The history tab provides a complete audit trail of the major events in an asset's life.

Power features include: bulk disposals with automatic gain/loss calculations, import and export of data, copy company data to another company, and scan in asset photos or documents.

There are more than 20 reports available with user-defined sort and range criteria on all fields. These reports would include General Ledger posting, Asset Basis, Quarterly Acquisition, Alternative Minimum Tax, FASB 109 Projection, Annual Budgetary Projection, and Forms 4562, 3468, 4255, 4626, 4797.

Optional entries include Asset notes for important details about each asset, extended description field, and extended user fields.

## **BUSINESS INSIGHTS ENHANCEMENTS**

### **NEW BUSINESS INSIGHTS EXPLORER MODULE**

Building on the success of the popular Business Insights Explorer module in Sage MAS 500, Sage MAS 90 and MAS 200 Version 4.2 includes Business Insights Explorer as the newest member of the BI suite. Business Insights Explorer takes inquiry, drill-down, drill-around and analysis to a whole new level.

New users as well as current users of to the Sage MAS 90 and MAS 200 system will benefit from the extensive set of usability and customization features included with Business Insights Explorer. Business Insights Explorer includes the following core features:

### **Preview**

The Preview option within Business Insights Explorer (BIE) allows a user to view key information about a specific entity such as customer or vendor, combined with related transaction header information such as invoices, vouchers, orders or projects. Filters can also be applied to any view, allowing the data displayed to be restricted according to user preference. By selecting a customer, for example, the context of the related view will automatically change to only show the rows that apply to the highlighted customer. The initial release of BIE for Sage MAS 90 will include all customer facing entities and transactions

including customers, contacts, sales orders, invoices and many more. Subsequent releases will include additional views.

This image illustrates the different previews that are related to a customer. In this example, it is displaying the list of open invoices for the customer American Business Futures.

### Explore

As an extension to the Preview option within Business Insights Explorer (BIE), the Explore option allows a user to “drill around” into data related to the original records and change the primary view and context of BIE to a new set of views. At the same time, context (e.g. the specific customer) is passed from the original starting point to the new set of views as a filter. For example, a customer service agent might receive a call from a customer regarding a recent transaction. After locating the customer, the agent can view recent shipments or invoice payments. After locating the specific invoice to be discussed, the agent may need additional information relating to that invoice such as the payments applied to it. This can be accomplished by drilling into the invoice to view applications against that invoice.

Another powerful feature of the Explore option is the ability to navigate to a related view that contains custom preferences and pre-defined filters. A good example would be a view that lists orders placed in the last 30 days. This customized view can then be saved for future use and navigation; when looking at any customer, the orders placed in the last 30 days can be quickly viewed.

### Tasks

The ability to act on information quickly is a critical advantage for any business. With the task management options provided by Business Insights Explorer (BIE), users will have an easy mechanism for quickly accessing key Sage MAS 90 tasks for the entity being displayed. Each BIE view contains a set of tasks that are related to the view, for example when viewing a customer, the tasks for updating the customer information, or creating an order are all readily accessible. When the Sage MAS 90 task is loaded, the appropriate context is maintained from BIE; for example, the customer code is set automatically if the order entry screen is loaded.

### Personalize

Customization and personalization features are an integral part with Business Insights Explorer (BIE).

Users have options for sorting, grouping, reorganizing and renaming columns within the grid as well as saving filtered views for future use. Uniquely, custom views can be used

within the Explore function so that they can be leveraged for navigation purposes from other related views.

### ACT! Link

Sage markets an Act! Link for integrating their popular Act! CRM software to Sage MAS 90 and 200.

Reviews on this solution are decidedly mixed; with most users finding that speed with anything except a nominal set of basic data is (very) slow.

If you are an existing Act! user with lots of data already in the program, you should first test your integration to Sage MAS 90 or 200 to verify the performance will be acceptable.

Companies seeking a new CRM system that will integrate to Sage MAS 90 or 200 should investigate the CRM product (SageCRM) which is included (and integrated) with the Sage Extended Enterprise Suite.

As described by Sage – the Sage MAS 90 and 200 ACT! Link enables you to provide superior service to your current customers while providing a seamless workflow for new sales opportunities. By leveraging the strengths of two industry leaders – Sage MAS 90 or 200 ERP system and ACT! by Sage contact management solution – your company can improve information sharing and gain efficiencies. For instance, a salesperson can answer a customer’s questions on the availability of an item with a few clicks of their mouse, without having to contact the warehouse, and close a sale immediately while the customer is on the phone!

In effect, Sage MAS 90 and 200 ACT! Link has real-time data sharing capabilities between front- and back-office systems. Sales can issue sales orders, perform customer inquiries, or view detailed orders and invoices from Sage MAS 90 or 200 without leaving their ACT! desktop. Operations can reduce overall costs by improving data integrity and eliminating costly back-office order processing errors.

Sage MAS 90 and MAS 200 allows you to integrate and connect the two halves of your business — raise your customer service levels, improve your customer retention rate, and increase sales.