

BlueSeer Documentation

Version 5.0

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1 Quick Installation Guide

Note: You do **not** need java installed to run BlueSeer. The package comes with the java 1.8 JRE enclosed within. The execution of BlueSeer is independent of other Java installations you may have on the target PC or any environmental paths previously assigned. The packaged JRE is currently the 32 bit JRE version 1.8 which can run on both 32 bit and 64 bit architectures.

1. Download (blueseer.sqlite.v50.win.wJRE.exe) from the download menu on blueseer.com to your local PC.
 2. Double click to run the installer package (you may need administrator rights)
 3. Accept the default options and click finish when complete.
 4. When finished, you should have a shortcut on your desktop and/or Start Menu to launch the BlueSeer application.
 5. The login and password are 'admin' and 'admin' respectively. Enjoy :)
- You can send feedback to services@blueseer.com for any comments, questions, or concerns.

Note: The sqlite version has all the functionality of the multi-user version (mysql), but it is intended for single-user use only. The sqlite version uses a file type SQL database called 'SQLite'. The usage of SQLite allows for a more convenient installation of the application without having to have a pre-existing database installed. For multi-user use, you will want to choose the MySQL version of BlueSeer.

ENJOY!

2 Quick Setup

The below instructions provide setup information for *simple* 1) Retail usage, 2) Service Industry business, and 3) Personal finance scenarios. These instructions can be used to perform a quick setup of your installation to cover the most basic needs such as order entry and invoicing or reporting of miscellaneous income and/or expenses. For more advanced setups such as traditional manufacturing environments, see the detailed documentation.

2.1 Basic Retail Scenario

Perform the following steps in sequence:

1. Site Maintenance. Go to Site Maintenance Browse by entering 'siteb' in the navigational text-box on the main menu-bar. Click on the flag for record with site code 1000. This will bring up the site maintenance window. Change the Site Desc, addressing info, and logo file (if you have one) to match your companies info. Leave the remaining fields as-is. Then click update. Note: the logo file must be in the blueseer/images directory like bs.png is.
2. Item Maintenance. Go to Item Maintenance by entering 'item' in the navigational text-box on the main menu-bar. Click new and you will be assigned an item number. The primary fields to complete depend on the nature of your business. For a detailed description see the Item Master chapter below. However, if you are simply buying and selling the same item in a retail scenario, update the following fields with the appropriate values: Description, Sell Price, Purch Price, and choose Class Code 'A' (again...if you are retail based). All other fields can remain the same. Then click Add to commit the item to the database.
3. Customer Maintenance. Go to Customer Maintenance by entering 'cusm' in the navigational text-box on the main menu-bar. Click new and you will be assigned a customer number. Enter the Name and address information of your customer. You can leave the remaining fields as assigned by default. Then click Add to commit the customer to the database.

That's it....you're done with the basic setup. You can further proceed to create your first order/invoice by entering 'ordm' in the navigational text-box on the main menu-bar. Click new, choose your customer in the selection box, enter an optional PO Number and then go to the Lines Tab (do not click add...as you do not have any items assigned). In the Lines Tab, choose your Item Number, enter a quantity, and click 'Add Item'. Then return to the Main Tab and click Add to commit your order. You can then invoice this order by clicking on the invoice button in the same menu. This will commit the invoice and close the order. You can choose to print an invoice or packing slip from the appropriate print buttons in the same menu. You can review your aging accounts receivable (invoice due dates versus payments) and your financial accounts with navcodes such as arav and acba respectively. See the documentation for more information. Enjoy! :)

2.2 Basic Service Order Scenario

Perform the following steps in sequence:

1. **Site Maintenance.** Go to Site Maintenance Browse by entering 'siteb' in the navigational text-box on the main menu-bar. Click on the flag for record with site code 1000. This will bring up the site maintenance window. Change the Site Desc, addressing info, and logo file (if you have one) to match your companies info. Leave the remaining fields as-is. Then click update. Note: the logo file must be in the blueseer/images directory like bs.png is.
2. **Customer Maintenance.** Go to Customer Maintenance by entering 'cusm' in the navigational text-box on the main menu-bar. Click new and you will be assigned a customer number. Enter the Name and address information of your customer. You can leave the remaining fields as assigned by default. Then click Add to commit the customer to the database.

If you simply bill/invoice service work (non-inventory items), then you are done. You can now create your service orders and invoice. If you have inventory items, review step 2 in retail scenario section. You can further proceed to create your first order/invoice by entering 'srvm' in the navigational text-box on the main menu-bar. Click new, choose your customer in the selection box, enter an optional PO Number and optional remarks, choose 'order' in the Type drop down selection box and enter your Service Item in the text-box. You can then enter a price and an optional quantity (typically a value of 1 will suffice) and then click 'Add Item'. Once the service item has been entered click 'Add' to commit the service order. You can then invoice this order by clicking on the invoice button in the same menu. This will commit the invoice and close the order. To print the invoice, enter 'inbv' in the navigational text-box and click the flag beside the appropriate invoice number. You can then click the print invoice button. Also, you can review your aging accounts receivable (invoice due dates versus payments) and your financial accounts with navcodes such as arav and acba respectively. See the documentation for more information. Enjoy! :)

2.3 Personal Finance Usage

This is as simple as it gets. Perform the following steps in sequence:

1. Site Maintenance. Go to Site Maintenance Browse by entering 'siteb' in the navigational text-box on the main menu-bar. Click on the flag for record with site code 1000. This will bring up the site maintenance window. Change the Site Desc, addressing info, and logo file (if you have one) to match your personal preference. Leave the remaining fields as-is. Then click update. Note: if you use your own logo, the logo file must be in the blueseer/images directory like bs.png is.

That's it....you're done with the basic setup. For personal finance usage, you will primarily be using only two menus within the Quick Cash main menu. Enter the navigational code 'cash' in the text-box on the main menu bar. This menu contains 5 panels that should meet all of your requirements for reporting everyday transactions. The other menu that you will use is navigational code 'cashb'. This is the reporting tool that provides information on the entries you made in the 'cash' menu.

For more specifics regarding the Quick Cash menus and detailed instructions, see the table of contents entries for Quick Cash and review the subject matter in the Quick Cash chapter.

Some example usage of this scenario are people who want to monitor and track their expenses and or miscellaneous income. Store owners, Job Shops, Religious organizations, non-profit organizations and any other entity who has a need to track their expenditures and income will find this aspect of BlueSeer beneficial.

3 Navigation Codes

Each menu has a navigation code that allows you to quickly access any given menu without having to point and click through the menu hierarchies. For example, you can quickly navigate to the Item Master Maintenance screen by typing the navcode "item" in the navigation textbox on the menubar. The relevant navcodes for each menu can be viewed in the "navcode List" report under the Help menu. The list is provided below. Not all menus will have navcodes (some are Menu Links), but all maintenance screens and relative browse/reports will have a unique code.

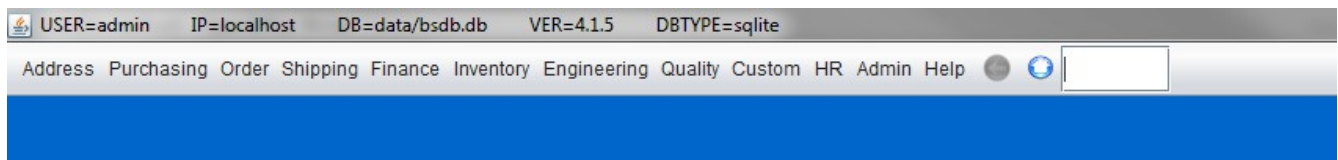


Figure 2.3 navcode List

Menu	navcode
About	about
AcctBalSumYTD	absy
AcctBrowse	accb
AcctMaint	accm
Address	
AddrLabel	addl
Admin	
APagingView	apav
APControl	apcc
APMenu	
ARagingView	arav
ARControl	arcc
ARMemoMaint	armm
ARMenu	
ARPaymentBrowse	arpb
ARPaymentMaint	arpm
ARTranRpt1	artr
BankBrowse	bankb
BankMaint	bank
BOMMaint	bomm
BOMMenu	
BOMTree	bomt
BrowseUtil	
CalendarBrowse	calb
CarrierBrowse	carb

CarrierMaint	carm
CashTran	cash
CashTranBrowse	cashb
CashTransactionMenu	
ClockApprovalMaint	clap
ClockAutoMaint	clam
ClockChartByCode	clor2
ClockChartByDept	clor1
ClockChartByEmp	clor3
ClockChartByWeek	clor4
ClockCode66Browse	cl66
ClockCodeBrowse	clcb
ClockCodeMaint	clcm
ClockControl	cloc
ClockDetailRpt	cldr
CostReports	
CostRoll	roll
CurrencyMaint	curm
CustControl	cusc
CustEDIBrowse	edcmb
CustEDIMaint	edcm
CustMaint	cusm
Custom	
CustomerMenu	
CustomerReports	
CustPriceMaint	cprm
CustPriceReport	cprb
CustReport1	cus2
CustXrefBrowse	cuxb
CustXrefMaint	cupm
DefaultMaint	defm
DemdToPlan	dm2pl
DeptBrowse	depb
DeptMaint	depm
DiscreteOrderPerWeekDollars	orc2
DiscreteOrderPerWeekUnits	orc1
DOBrowse	domb
DOMaint	domm
DOMenu	
ECNBrowse	ecnb
ECNMaint	ecnm
EDIControl	edic
EDILoad	edip
EDILog	ediz
EDIMenu	
EDITPBrowse	edtb
EDITPDocMaint	edtdm
EDITPMaint	edtm

EDITransactionLog	edil
EmpBrowse	empb
EmployeeMaster	empm
Engineering	
ExchangeMaint	excm
ExpenseMaint	expm
FcstToPlan	fc2pl
FileOrderLoad	orlo
Finance	
FOBrowse	forb
FOMaint	form
forecast13weeks	fore13
ForecastBrowse	foreb
ForecastMaint	fore
FreightBrowse	frtb
FreightMaint	frtm
FTPMaint	ftpm
GenCodeBrowse	genb
GenericCodeMaint	genm
GLAcctBalSummaryByPeriod	acba
GLAcctBalSummaryByYear	acby
GLCalMaint	calm
GLControl	glcc
GLIncStmtDef	insd
GLTranMaint	gltr
GLTranRpt1	gltrb
Help	
HR	
HRTrainingMenu	
IncomeStatement1	inst
IncomeStatementYear	insty
InvAdjustmentsMenu	
Inventory	
InventoryAdjustment	inva
InventoryCtrl	invc
InventoryReportsMenu	
ItemBrowse	itemb
ItemLevelCalculate	mrpx
ItemMaint	item
ItemMenu	
ItemRoutingRpt	itr
ItemSearchMenu	itms
LabelBrowse	lblb
LabelFileBrowse	lblfb
LabelFileMaint	lblm
LabelMenu	
LabelsContGeneric	lblg
LedgerBalanceExport	glbe

LedgerReportsMenu	
LedgerSetupMenu	
LocationBrowse	locb
LocationMaint	locm
LocationTransfer	loaj
MassLoad	load
MenuBrowse	menub
MenuMaint	menu
menuscreen	blank
MRPBrowse	mrpb
MRPMenu	
navcodeBrowse	navcodes
noStdCostBrowse	cosn
OEEntry	oeee
Order	
OrderBrowse	ordb
OrderControl	ordc
OrderMaint	ordm
OrderReports	
OrderSource	orsc
OrderSourceBrowse	orsb
OrdLineBrowse	orlb
PanelBrowse	panelb
PanelMaint	panel
PaymentMaint	appm
PayControl	payc
PayProfileBrowse	ppfb
PayProfileMaint	ppfm
PayRollBrowse	payb
PayRollMaint	pay
piechart custAR	sales2
piechart salesbycust	sales1
PlanMiscMaint	plan
PlantDirectoryMenu	pdir
POBrowse	purb
POMaintMenu	purm
POSBrowse	posb
POSControlMaint	pose
POSMaint	posm
POSMenu	
PostGLTrans	post
PrinterBrowse	prntb
PrinterMaint	prnt
ProdByWeekFGDollars	prdr3
ProdByWeekFGUnits	prdr2
ProdCodeBrowse	prcb
ProdCodeMaint	prcm
ProdEntryByPlan	prodp

ProdEntryMaint	prod
ProdRptDet	prdr1
ProdSchedMaint	schm
ProdSchedRpt1	prscr
ProductionMenu	
ProductionReports	
Purchasing	
QPRBrowse	qprb
QPRMaint	qprm
Quality	
ReceiverMaintMenu	recm
RecvBrowse	recb
RecvByPOBrowse	recbp
ReqAmtByAcctChart	req3
ReqAmtByDeptChart	req1
ReqBrowseAll	reqb
ReqBrowseApproved	reqz
ReqChartsMenu	
ReqControl	reqc
ReqFreqByUserChart	requ
ReqMaint	reqm
ReqPendingApproval	req2
ReqPendRpt1	rqpr
RequisitionMenu	
RoutingBrowse	roub
RoutingMaint	roum
RoutingMenu	
SchedOrdBrowse	schb
ScheduleMenu	
SchemaBrowse	schema
ScrapChartDolByCode	scrp1
ScrapChartDolByDept	scrp2
ScrapChartDolByPart	scrp3
ScrapChartQtyByCode	scrp4
ScrapChartQtyByDept	scrp5
ScrapChartQtyByPart	scrp6
ScrapEntry	scrp
ScrapMenu	
ScrapPerWeek	scripw
ScrapReports	
ScrapRpt1	scrr
ServiceOrderBrowse	srvb
ServiceOrderMaint	srvm
ShiftBrowse	shfb
ShiftMaintenance	shfm
ShipConfirm	shcf
ShipMaint	shpm
ShipperBrowseDet	shpbd

ShipperControl	shpc
ShipperInvoiceBrowse	shpb
ShipPerWeekDollarsChart	shpr1
Shipping	
ShipReports	
ShipUnconfirm	uncf
SiteBrowse	siteb
SiteMaint	site
SystemControl	sysc
TaskBrowse	tasb
TaskMaint	tasm
TaxBrowse	taxb
TaxMaint	taxm
TCAdminMenu	
TCReportsMenu	
TermsBrowse	termb
TermsMaint	term
TimeClockAdjust	tima
TimeClockEntry	time
TimeClockMenu	
TrainingMaint	tram
TrainingRpt1	trnr
TransBrowse	tran
TransportationMenu	
TreeMaint	tree
UnPostedTransRpt	ungl
UOMMaint	uomm
UserBrowse	usrb
UserMaint	usrm
UserPermsMaint	uspm
VendBrowse	venb
VendControl	venc
VendMaint	venm
VendorMenu	
VendPriceMaint	vprm
VendPriceRpt1	vprb
VendXrefMaint	vdxm
VendXrefRpt1	vdxr
VoucherBrowse	vocb
VouchMaintPanel	vocm
WareHouseBrowse	wahb
WareHouseMaint	wahm
WhereUsedUtility	where
WorkCellBrowse	wkcb
WorkCellMaint	wkcm

4 Import Data

It is sometimes necessary to enter mass amounts of new master data into the system. This situation can result from a fresh implementation or a new product line (with a large number of items). BlueSeer offers a 'Mass Load' menu that will allow certain menus to be loaded from a pre-defined import file. This import file must match exactly the required number of fields and field types of the appropriate menu you are attempting to load. The list of supported menu imports are :

- Item Master
- Customer Master
- Customer Ship-To Master
- Customer Cross-reference Master
- Customer Price Master
- Vendor Master
- Vendor Cross-reference Master
- Vendor Price Master
- Inventory Adjustment
- Generic Codes

The Import Menu can be accessed by navigating to the Admin tab and clicking on the 'Master Data Import' menu. Alternatively, you can access by entering 'load' in the Navigation Text-box on the main menu bar. Figure 4.1 below shows the import master data screen.

The Master data import menu has a drop-down list of acceptable menus that can support import load files. To determine the required format of the menu you wish to load, choose the menu option in the drop down and click 'Define'. The definition of the fields including type and validation stance will be displayed in the text box. Note: All import files are delimited by a colon ":".

Once you have created the appropriate import file for the appropriate menu, you can check your import file by choosing the menu to load in the drop-down field and clicking 'Audit Only'. This will provide feedback of any errors in your file. If there are no errors, click 'Audit and Load', and the import file will be loaded into the appropriate menu. There is a toggle box labeled 'Menu Integrity Override'. If this is checked, the system will load the file without any validation of foreign keys required in other menus. **THIS IS NOT RECOMMENDED.** The validation is necessary to ensure that fields within your import file that have an impact on other menus have the pre-defined values that are already loaded in the system. For example, if you enter a UOM in your item master import load that does not already have a UOM master record set up, then the integrity of the data between the two tables has been compromised and subsequent processing programs will fail to process the data accurately. We offer this override option only for convenience of demonstration and feasibility to load items with unknown foreign keys. It is possible to load with the override engaged, and manually edit the tables at the SQL level to engage the appropriate foreign keys, but this requires meticulous care and the appropriate skill level.

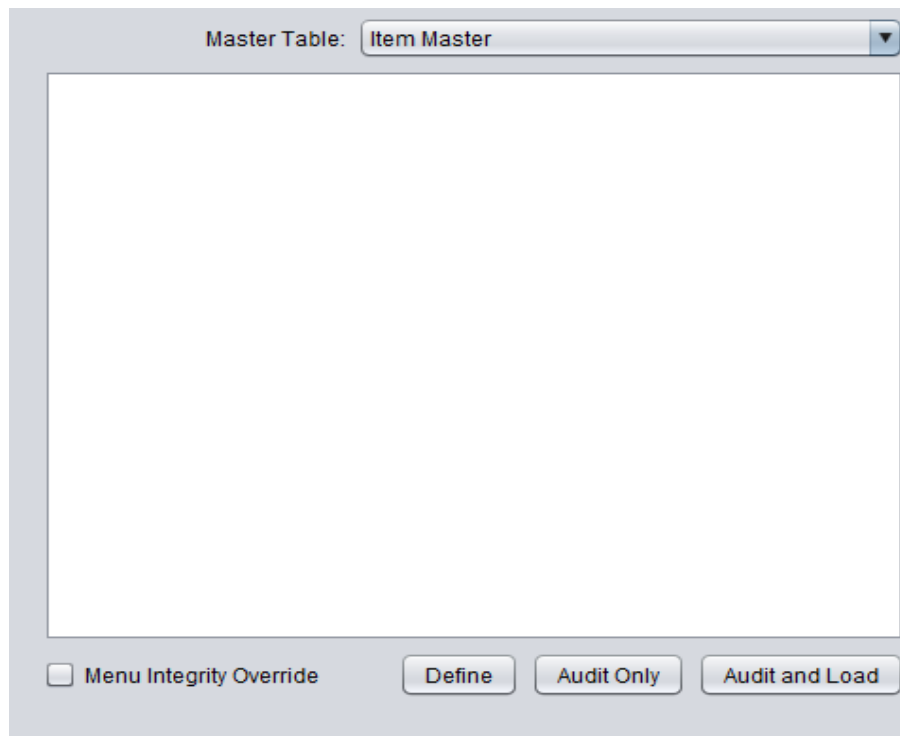
With regards to loading the 'Generic Codes' table, there are certain standards that must be met particularly when attempting to load records that are used by BlueSeer in drop-down lists for various menus. For example, if you are wanting to load the 'states/provinces' for countries that have unique 3

char ISO codes, you must enter the 'code_code' field precisely as BlueSeer requires in the customer master, vendor master, and other menus that use the 'state' drop-down list. In this example, code_code must equal 'state' (lowercase). An example of a legitimate file would be :

state:KY:Kentucky
state:VT:Vermont
state:SC:South Carolinaetc.

Consult the Generic Codes chapter for more information regarding this topic and the appropriate keys required for successful loading.

Figure 4.1. Master Data Import Menu



4.1 Item Master Import Definitions

The item master import file has 29 fields that must be present in the import file. The delimiter must be a colon : separating the 29 fields. There is a sample file for demonstration purposes located at data\sampldir\itemmstr.txt in the BlueSeer root directory. Figure 4.1.1 shows an example file with three items (records) in it and 29 fields separated by a colon. Table 4.1.2 has the field names and definitions and allowed formats. Mandatory fields must have non-blank values. Validated fields must contain a value that is already in the Master table referred to by the Validation Column in the below table.

Figure 4.1.1

```
10-1001:Coyote Jetpack:1000:M:9999:MAINLOC:MAIN:1:4.00:3.40:3.40:0.00:0.00:FG:UNKNOWN:NODRAW:NOREV:NOCUSTREV:NOCMMMENTS:EA:.123:.125:1:500:400:1:1:1:
10-1002:RoadRunner shoes 2:1000:A:9999:MAINLOC:MAIN:1:4.00:2.30:2.30:0.00:0.00:FG:UNKNOWN:NODRAW:NOREV:NOCUSTREV:NOCMMMENTS:EA:.123:.125:1:500:400:1:1:1:
10-1003:Acme Anvil:1000:P:9999:MAINLOC:MAIN:1:4.00:1.00:1.00:0.00:0.00:FG:UNKNOWN:NODRAW:NOREV:NOCUSTREV:NOCMMMENTS:EA:.123:.125:1:500:400:1:1:1:
```

Table 4.1.2

Note: If values are not mandatory, they can be left blank...but must have 28 fields.

Field	DataType	Size	Mandatory	Validated	Validation
ItemNumber	String	30	Yes	No	
Description	String	50	Yes	No	
Site	String	10	Yes	Yes	Site Master
ClassCode	String	1	Yes	Yes	M, P, or A
ProdLine	String	4	Yes	Yes	ProdCode Master
location	String	20	Yes	Yes	Location Master
Warehouse	String	20	Yes	Yes	Warehouse Master
LotSize	Integer	11	No	No	
Price(Selling)	Decimal	14	No	No	
Price(Purchase)	Decimal	14	No	No	
Cost(Material)	Decimal	14	No	No	
Cost(Overhead)	Decimal	14	No	No	
Cost(service)	Decimal	14	No	No	
Type	String	20	No	No	
GroupCode	String	30	No	No	
DrawingNbr	String	30	No	No	
Rev	String	30	No	No	
CustomerRev	String	30	No	No	
Comments	String	500	No	No	
UOM	String	10	Yes	Yes	UOM Master

NetWt	Decimal	10	No	No	
ShipWt	Decimal	10	No	No	
LeadTime	Integer	11	No	No	
SafetyStock	Integer	11	No	No	
MinOrdQty	Integer	8	No	No	
IsMRP (1 or 0)	String	1	Yes	Yes	1 or 0
isSched (1 or 0)	Boolean	1	Yes	Yes	1 or 0
IsPlan (1 or 0)	Boolean	1	Yes	Yes	1 or 0
RouteCode	String	30	No	Yes	Routing Master

4.2 Customer Master Import Definitions

There are 33 fields in the customer master import data definition. All fields must be separated by a colon. (.)

Note: If values are not mandatory, they can be left blank...but must have 33 fields.

Field	DataType	Size	Mandatory	Validated	Validation
CustCode	String	10	Yes	No	
Site	String	10	Yes	Yes	Site Master
Name	String	10	Yes	No	
AddrLine1	String	30	Yes	No	M, P, or A
AddrLine2	String	30	Yes	No	
AddrLine3	String	30	Yes	No	
City	String	30	Yes	No	
State	String	2	Yes	Yes	State Master
Zip	String	10	Yes	No	
Country	String	50	No	No	
Group	String	50	No	No	
Market	String	50	No	No	
CreditLimit	Integer	8	No	No	
OnHold	Boolean	1	Yes	Yes	0
Carrier	String	50	No	Yes	Carrier Master
Terms	String	30	No	Yes	Terms Master
FreightType	String	30	No	No	
PriceCode	String	10	No	No	
DiscCode	String	10	No	No	
TaxCode	String	10	No	No	
SalesPerson	String	50	No	No	
AR Account	String	10	Yes	Yes	Account Master
AR CostCenter	String	4	Yes	Yes	CC/Dept Master
Remarks	String	500	No	No	
Misc1	String	100	No	No	1 or 0
Bank	String	10	Yes	Yes	Bank Master
Currency	String	3	Yes	Yes	Currency Master
Logo	String	100	No	No	
JasperFile	String	100	No	No	

(Packing Slip)					
JasperFile (Inv)	String	100	No	No	
LabelFormat	String	100	No	No	
Phone	String	15	No	No	
Email	String	60	No	No	

5 Sales and Distribution

5.1 Customer Maintenance

The Customer Master is key to many of the subsequent operations within BlueSeer and is the cornerstone of most of the functionality of the Order-to-Cash life cycle. Setting up the Customer Master and its dependent menus correctly will establish the necessary defaults in subsequent menus such as order entry, shipper creation, and invoicing. A well-constructed customer master will reduce data entry in many of these order-to-cash dependent menus that follow.

5.1.1 Customer Maintenance Prerequisite Setup

The following is a list of Maintenance screens that contain data that is used by the Customer Maintenance Menu in the form of drop down selection options. These drop-down lists are populated at start-up by selecting the appropriate master tables of each drop-down type. All of these drop-downs have a default value pre-installed with the initial install of BlueSeer, and while you can use these defaults, you will probably want to add or edit the existing values to match your needs.

- ◆ Account Maintenance
- ◆ Dept/Cost Center Maintenance
- ◆ Carrier Maintenance
- ◆ Terms Maintenance
- ◆ Bank Maintenance

5.1.2 Customer Master Record Entry (navcode: cusm)

To add a customer, Click on the Menu 'Customer Maintenance' under Address| Customer Menu. The Customer Maintenance screen will appear. You can also enter 'cusm' in the navigation text box and you will be forwarded to the customer master menu screen. It is necessary to add a new customer code that represents the bill-to association of this customer record. Each customer code is unique. Therefore, only one customer code per bill-to record is allowed. An error will be generated if an attempt to enter the same code for two different bill-to customer records.

The default customer code is a sequential number automatically generated by the application upon clicking 'New'. Alternatively, you have the option of entering your own customer code as well. The customer control menu (navigation code "cusc") governs the automatic code creation. Unclick the auto-generate field in the customer control menu to stop the auto-generation of the code. You can then enter a custom code of your choice.

To add a new customer code, simply enter the code in the 'CustCode' field. The customer code can be any alphanumeric characters with a max character length of 10 characters. Enter all the associated data in the appropriate textboxes and/or dropdown lists. Once all the necessary fields have been entered, click 'Add' to commit the customer master record to the database. A dialogue box will appear indicating a successful addition or an error for any field validation issues. Note, it is not possible to

enter any shipto code information or contact information until the customer master record has been committed. The ShipTo and Contact information is relative to the customer billto code and cannot be declared without association to a legitimate existing customer code.

Several fields are 'required' fields. Most of the required fields are drop-down lists, so it is necessary to choose the correct drop down option. You must enter a valid account in the 'Account' field. The Account field represents the AR Sales account you wish to associate this BillTo code with. This value will be validated against the accounts that were entered into Account Maintenance under Finance|Ledger Setup. The Cost Center is another validated text-box. The CC must be a legitimate value found in Department/CC Maintenance under the Finance|Ledger Setup Menu. A generic cost center of 9999 can be entered if multiple cost centers are not required by your site. Code '9999' should be available in Department/CC Maintenance as a result of the BlueSeer install. Figure 5.1.1 and 5.1.2 are screen shots of the customer maintenance screen before and after entering a new record.

Once you've entered a new Customer Master record, you can retrieve the record by one of two options. You can enter the code directly into the customer code field and press enter. If a legitimate code is entered, the record will be retrieved and the code field will become deactivated with a blue foreground color). If you enter an invalid code, the code field will show red foreground text. Alternatively, you can click on one of the search buttons “magnifying glass”. These buttons will take you to a search menu where you can enter a search string to find the exact record you are looking for. The string can be search by “Begins with”, “Ends With”, or “Matches”. If you simply click 'FindIt' with no string, it will return all records. Figure 5.1.3 shows a screen shot of the Search menu. Each record in the search criteria is returned with a select button (Flag icon). Clicking the Flag icon button will return you to the Maintenance screen from which it was called along with the relative record data you clicked on. You can then proceed to review, update, or delete (in some cases) the retrieved record. Note: Some maintenance screens will not allow you to delete the record from the Maintenance menu due to the associated nature of other tables that are related to this record. You will need to use a special delete utility to delete these type of records.

5.1.3 State/Province Setup

The State/Province drop down list on the customer master menu is controlled by generic codes that you can enter for various state or provinces of specific countries that you may do business within. The three character ISO standard code is recommended, and as a result, only the first 3 characters of the generic code you enter will be placed in the drop down list. The US states are provided by default. To enter other state/province values, go to the Generic Code Maintenance menu under the admin main menu or enter the appropriate navcode (navcode: genm). Enter the value 'state' in the field labeled 'code'. Enter the 2 or 3 character abbreviation in the 'key' field, and enter a description of the key in the 'value' field. Once this information is entered, click add to commit the record. This state/province record will now be visible in all the drop down lists of the various menus that have the 'state' drop down list. The below figure 5.1.4 shows the Generic Code Maintenance menu with a sample entry for Geneva, Switzerland.

Figure 5.1.1

This screenshot shows the 'Customer Master Maintenance' form with tabs for 'Main', 'ShipTo', and 'Contact'. The 'Main' tab is active. The form contains various input fields for customer information. On the left, there are fields for 'CustCode', 'Name', 'Line1', 'Line2', 'Line3', 'City', 'State' (set to 'AB'), 'Zip', 'Country' (set to 'USA'), and 'Remarks'. On the right, there are fields for 'DateAdded' (2019-02-25), 'LastMod' (2019-02-25), 'Group', 'Market', 'Carrier' (USPS), 'CreditLimit' (0), 'Price Code', 'Terms' (N00), 'SalesRep', 'Freight Type' (PICKUP), 'AR Account' (20000000), 'Disc Code', 'CostCenter' (1300), 'Tax Code', 'Bank' (BK), 'Currency' (USD), 'Inv Format', 'Label Format' (generic), and 'Shp Format'. There is also an 'On Hold' checkbox. At the bottom right, there are buttons for 'Delete', 'Edit', and 'Add', and a checkbox for 'Create Shipto Same as Billto'.

Figure 5.1.2

This screenshot shows the same 'Customer Master Maintenance' form, but with data entered in the 'Main' tab. The 'CustCode' is '200001', 'Name' is 'Test Customer', 'Line1' is 'blah blah', 'City' is 'Dillon', 'State' is 'SC', and 'Zip' is '29536'. The right side of the form remains the same as in Figure 5.1.1. A message dialog box is overlaid on the form, displaying an information icon, the text 'Added Customer Record', and an 'OK' button.

Figure 5.1.3

The screenshot shows a software application window with a menu bar at the top containing: Address, Purchasing, Order, Shipping, Finance, Inventory, Engineering, Quality, Custom, HR, Admin, Help. Below the menu bar is a search section with a 'Text Search:' label, a text input field, a 'Find It' button, and three radio buttons: 'BeginsWith' (selected), 'EndsWith', and 'Match'. There is also a 'CSV' button. Below the search section is a table with the following data:

select	Code	Name	Line1	City	State	Zip	Country
	200001	Test Customer	blah blah	Dillon	SC	29536	USA

Figure 5.1.4

The screenshot shows a dialog box titled 'Generic Code Maintenance'. It contains three text input fields: 'Code' with the value 'state', 'Key' with the value 'GE', and 'Value / Desc' with the value 'Geneva'. To the right of the 'Key' field is a 'Get' button. Below the 'Value / Desc' field are three buttons: 'Add', 'Update', and 'Delete'.

5.1.4 Customer Master Field Definitions

5.1.5 Customer Ship-To Maintenance

To add a customer shipto record, click on the menu 'Customer Master' under Address| Customer Menu. The Customer Maintenance screen will appear. All shipto records are assigned to a particular

billto record. Click one of the search buttons in the customer maintenance screen, and retrieve the customer billto record that is the parent of the shipto record you wish to add. Once you have the billto record in the customer maintenance screen, click on the 'New' button next to the 'ShipCode' text box in the shipto address panel of the customer maintenance menu. This will enable the shipto address fields for you to enter. Enter a *unique* code in the 'ShipCode' text box and then enter all relevant information in the appropriate address boxes within the shipto panel. Once complete, click 'Add' in the shipto panel to commit the new shipto record. You can then retrieve the newly added shipto record by clicking the search button next to the 'ShipCode' textbox and retrieving the record you just entered. Figure 5.1.5 shows the customer maintenance screen for adding a new shipto code 'TEST' for Customer 'ACME'.

Figure 5.1.5

The screenshot displays a software interface for customer maintenance. At the top, there are three tabs: 'Main', 'ShipTo', and 'Contact'. The 'ShipTo' tab is currently selected. Below the tabs, there is a 'ShipCode' field containing the value '143547', followed by a search icon and a 'New' button. Below this, there are several input fields for address information: 'Name' (containing 'Test Shipto'), 'Line1', 'Line2', 'Line3', 'City' (containing 'Florence'), 'State' (a dropdown menu showing 'SC'), 'Zip' (containing '28701'), and 'Country' (a dropdown menu showing 'USA'). At the bottom of these fields are 'Edit' and 'Add' buttons. A 'Message' dialog box is overlaid on the screen, featuring an information icon and the text 'Added Customer Shipto Record', with an 'OK' button at the bottom right.

5.1.6 Customer Contact Maintenance

To add a customer contact record, click on the menu 'Customer Master' under Address| Customer Menu. The Customer Maintenance screen will appear. All contact records are assigned to a particular billto record. Click one of the search buttons in the customer maintenance screen, and retrieve the customer billto record that is the parent of the contact record to be added. Once the appropriate billto record is selected, Enter the contact type, phone, contact name, fax, and email fields with the appropriate information and then click the 'AddContact' button in the Contact specific panel of the customer maintenance menu. A dialogue box indicating the addition of a new contact record will appear. The new record will also appear as a row in the table at the bottom of the Contact Panel. There is no limit on the number of contact that can be added. With each additional contact added, a new row will appear in the table. To edit a contact record, click on the row within the table. Upon clicking the row, the entry fields above will be occupied with the appropriate data. Edit the fields as necessary, and click 'EditContact'. This will commit the new data to the record and refresh the table. To delete a contact, the procedure is similar to the edit procedure. Click (highlight) the row within the table that is desired to be deleted, and click the 'DeleteContact' button. This will remove the record from the

database and refresh the contact table. Figure 5.1.6 below shows the addition of a new contact record for the 'ACME' billto code.

Figure 5.1.6

MainShipToContact

ContactTypeSales▼Phone444-4444Fax999-9999EditContactAddContactDeleteContact

ContactNameJohn DoeEmailJohn.Doe@jd.com

ID	Type	Name	Phone	Fax	Email
----	------	------	-------	-----	-------

5.2 Customer Cross Reference Maintenance (navcode: cupm)

Customer part cross reference allows one to associate an internal item part number to a customer's part number. This association is important for many customer specific menus within BlueSeer. Creating customer cross references to the internal parts facilitates the automation of the order loading process by creating a list of customer specific part numbers (and customer specific prices ...see customer item price maintenance) when the sales order is created for a specific customer. This prevents the manual entry of customer part numbers and customer prices. Correct entries in the customer cross reference menu also facilitates loading orders automatically with the EDI module. Inbound EDI orders from any customer typically have the customer's part number within the document, and it is necessary to cross-reference this customer part number to the appropriate internal part number so that the order can load successfully.

To enter a customer cross reference record, enter 'cupm' in the navigation textbox or go to 'Address'|'Customer Menu'|'Customer Xref Maint'. Choose the appropriate customer code 'CustCode' in the drop down selection and then enter the customer item in 'cust item' textbox. Once the customer item is filled in, press the 'tab' key to move to the internal item drop down list. Note: if there is no cross reference previously established, a message will appear below the customer item field indicating 'Adding New Record'. However, if there is already a cross reference record for this customer code / customer part number combination, then there will be a message indicating 'Record Exists'. The other fields are optional to enter. Once the fields have been entered, click the 'Add' button, and the customer cross reference record will be committed. A screen shot of the enter a new record in the customer cross reference menu is provided below.

Figure 5.2.1

The screenshot displays the 'Customer Cross Reference Maintenance' window. It contains several input fields and a set of action buttons. The 'CustCode' field is a dropdown menu currently showing 'ACME'. The 'Cust Item' field is a text box containing 'somecustomerpart'. Below this field, the text 'Adding New Record' is displayed in blue. The 'Internal Item' field is a dropdown menu showing '10-1001'. Other text boxes include 'Cust Item Alt' with 'alternateitem', 'Sku Number' with 'skunumber', 'UPC Number' with 'upcnumber', and 'Misc' with 'blah'. At the bottom right, there are three buttons: 'Update', 'Delete', and 'Add'.

Field	Value
CustCode	ACME
Cust Item	somecustomerpart
Internal Item	10-1001
Cust Item Alt	alternateitem
Sku Number	skunumber
UPC Number	upcnumber
Misc	blah

5.3 Customer Item Price Maintenance (navcode: cprm)

Customer prices for customer specific items can be created and/or edited in the Customer Part Price Master under 'Address'|'Customer Menu'|'Customer Price Maintenance'. Once inside the Customer Price Maintenance menu, choose the appropriate CustCode from the drop down list. If there are any previously associated item/price records for this custcode, they will appear in the 'Applied' list. You can click on these records in the applied list to show the price for any item within the list. To enter a new record, choose the appropriate item in the drop down list and then 'tab' to the price field and enter the price. The price must be in decimal format "#.##". Each price list is specific to the uom and currency that is applicable. Choose the appropriate uom and currency for the item. Once you enter the required fields, click 'Add' to create the associated price record. It will appear in the Applied list.

Discounts can be created and/or edited in the same screen as the Part Price records. Discounts can be entered in Customer Part Price Master under 'Address'|'Customer Menu'|'Customer Price Maintenance'. Once inside the Customer Price Maintenance window, choose the appropriate CustCode from the dropdown list within the 'Discount Maintenance Window'. If there are any previously associated discounts, they will appear in the 'Applied' list. To enter a new record, enter a unique key in the 'key' text field. Then 'tab' to the percent field and enter the percent of the discount. This discount will be applied to all orders for this customer at the line item level. The discount percentage must be in decimal format "#.##". Once you enter the percent, then click 'Add' in the Discount Maintenance window to create the associated discount record. It will appear in the Applied list. Figure 5.3.1 provides a screen shot of the Customer Price Maintenance screen.

Figure 5.3.1

The screenshot displays the 'Customer Pricing Maintenance' window, which is divided into two main sections: 'List Price Maintenance' and 'Discount Maintenance'.

List Price Maintenance:

- Cust / GroupCode:** A dropdown menu with '200001' selected.
- Item:** A dropdown menu with '50000001' selected.
- UOM:** A dropdown menu with 'EA' selected.
- Currency:** A dropdown menu with 'USD' selected.
- Price:** A text field containing '0.00' with a yellow background.
- Applied:** A large empty text area for displaying records.
- Buttons:** 'Add', 'Update', and 'Delete' buttons are located to the right of the 'Applied' list.

Discount Maintenance:

- Cust / GroupCode:** A dropdown menu with '200001' selected.
- Key Desc (unique):** An empty text field.
- Disc Percent:** An empty text field.
- Applied:** A large empty text area for displaying records.
- Buttons:** 'Add', 'Update', and 'Delete' buttons are located to the right of the 'Applied' list.

Note that once you click 'add', the application will immediately commit the price (in green background) and display the record in the 'Applied' listbox. The record will be a delimited value that includes the item, uom, and currency. See Figure 5.3.2.

Figure 5.3.2

Customer Pricing Maintenance

List Price Maintenance

Cust / GroupCode200001

Item50000001

UOMEA

CurrencyUSD

Price4.44

Applied50000001:EA:USD

Add

Update

Delete

Discount Maintenance

Cust / GroupCode200001

Key Desc (unique)

Disc Percent

Applied

Add

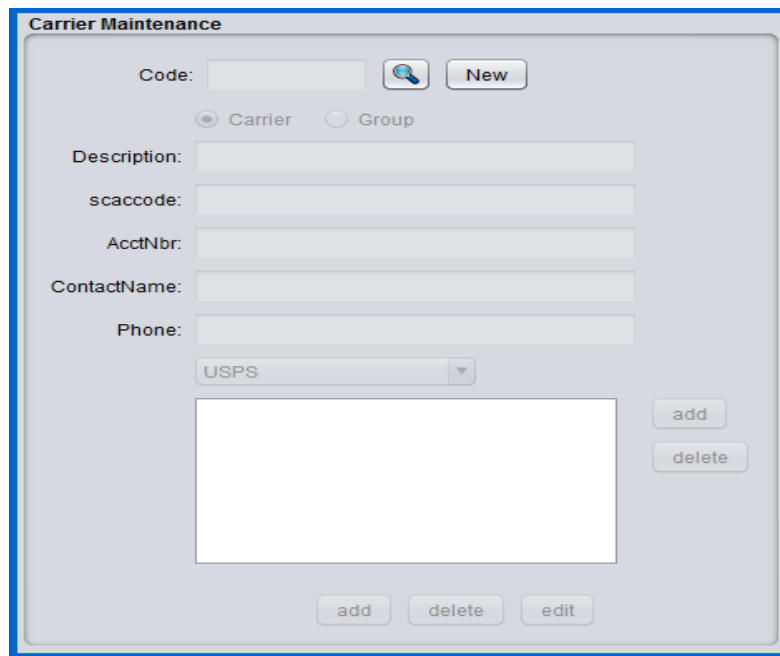
Update

Delete

5.4 Carrier Maintenance (navcode: *carm*)

Carriers (SCAC) codes can be created in Carrier Maintenance for any necessary carrier regardless of modal transport (truck, rail, ship, etc). The Carrier Maintenance menu provides a limited number of fields to maintain specific information about any given carrier. The associated fields to the carrier code are typically informational only. The 'scac' code, however, can appear in shipper, invoice, and bill of lading prints, and outbound EDI documents. These carrier records are available as drop down list values in a variety of customer and vendor specific menus (customer master, order entry, receiving, shipping, etc). To add carrier code, go to Carrier Maintenance under 'Address'|'Customer Menu'|'Carrier Maintenance'. The choice of carrier code is arbitrary and can be up to a maximum of 8 characters. The carrier code should not be confused with the scac code. The scac code is typically not arbitrary and is specific to the carrier. In many cases, creating your carrier code with the same value as your scac code is good practice. Most scac codes are between 4 and 6 characters however. You can add an additional description to the code to associate a name with the new record. After entering all the associated fields, click the 'Add' button, and the carrier record will be committed. Once the record is committed, it will be available in the various menus mentioned earlier that may have the 'carrier' drop down list.

Figure 5.4.1



The screenshot shows a web-based form titled "Carrier Maintenance". At the top, there is a "Code:" input field, a magnifying glass icon, and a "New" button. Below this are two radio buttons: "Carrier" (selected) and "Group". The form contains several text input fields: "Description:", "scaccode:", "AcctNbr:", "ContactName:", and "Phone:". Below the "Phone:" field is a dropdown menu currently showing "USPS". To the right of the form fields are two buttons: "add" and "delete". At the bottom of the form, there is a large empty rectangular box and three buttons: "add", "delete", and "edit".

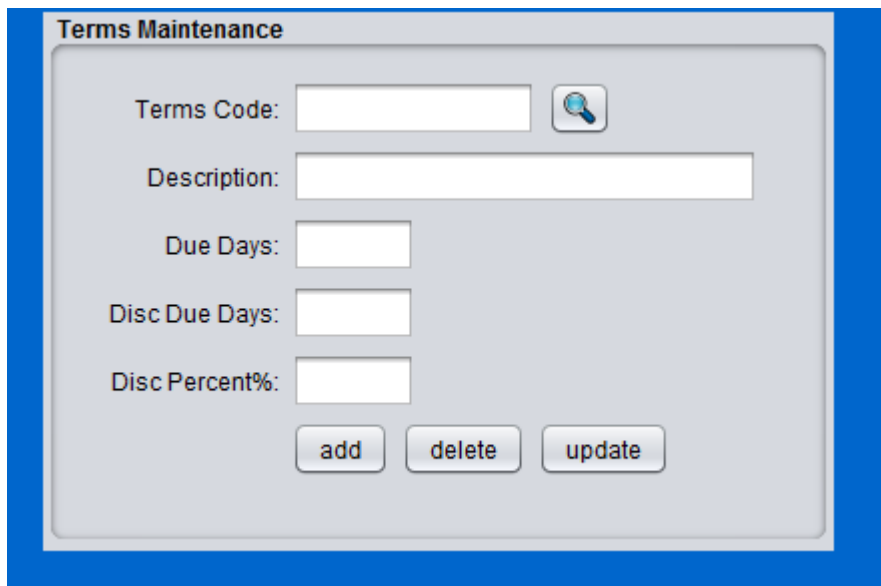
5.5 Terms Maintenance (navcode: term)

Terms of payment for customer orders are maintained in Terms Maintenance under 'Address'|'Customer Menu'|'Terms Maintenance'. Each terms code created has an associated number of days before payment by your customer will be due. This due date is calculated from the invoice date of the invoice applied to the shipment. The terms code can be any 8 character code of your choice. Example codes are N30, N60 for net 30 days due and net 60 days due respectively. A descriptive field is provided for more detailed explanations of the respective term code. Enter the code, description, and number of due days applied to this code. For example, if the terms agreement is 30 days from day of invoice, Enter "N30" for the terms code (or Net30 depending on your preference), a description, and the integer 30 in the due days field.

Once the terms code is defined in Terms Maintenance, it can be chosen from a drop down selection box in the Customer Address Master record. Typically, each customer has a fixed terms length which is agreed upon before shipment(s). Choose the appropriate terms code for each of your customers and apply in the customer maintenance screen. Once set in the customer master, any sales orders or schedules for this specific customer will have the terms field automatically pulled from the customer master and applied to the order. You do have the option to change the terms code per individual sales order in the Order Maintenance screen. However, the default terms code for the initial order will be pulled from the customer master.

An optional Discount Due Days can be applied to the terms code in Terms Maintenance. You can offer a discount of whatever percentage you choose if the customer pays the invoice early. You can set the number of discount due days for each terms code that you wish to apply a discount. If you do not wish to apply a discount for early payment, then set discount due days to 0 and discount percentage to 0. As an example, if you wanted to offer the customer a 3% discount if they pay in 45 days instead of 60 days (which is their original due date terms), then set Due Days as 60, Discount Due Days as 45 and Discount Percentage as 3%. Note: Set the discount percentage as a legitimate percentage and not as the decimal equivalent. For example, enter '3' and not '.03' for the discount percentage. Do not enter the percent sign. Figure 5.5.1 below shows the Term Maintenance screen shot.

Figure 5.5.1



The screenshot displays the 'Terms Maintenance' window. It features a title bar with the text 'Terms Maintenance'. Below the title bar, there are five input fields arranged vertically: 'Terms Code:' with a text box and a magnifying glass icon to its right; 'Description:' with a wider text box; 'Due Days:' with a text box; 'Disc Due Days:' with a text box; and 'Disc Percent%:' with a text box. At the bottom of the form, there are three buttons: 'add', 'delete', and 'update'.

5.6 Order Maintenance (navcode: ordm)

The Order Maintenance menu found directly under the 'Order' Menu contains the functionality to add, edit, and delete sales orders. It accommodates two types of orders: 1) Discrete(spot) type Sales orders and 2) Scheduled(blanket) type orders. A large number of fields within the order maintenance are pre-defined based on information entered for other Maintenance Screens (example: customer/shipto master, customer specific part numbers, customer specific part pricing, etc). The following section describes some of these pre-requisite data setups that are necessary for efficient operation of order entries.

There are several maintenance menus that need to be setup prior to creating a sales order. The minimum setup pre-requisite is the Customer Master bill-to and ship-to information. The procedure for entering your customer bill-to and ship-to info can be found in the Customer Maintenance section of the documentation. The customer item cross reference data and the customer item pricing data should also be setup prior to creating an order for a specific customer. This setup is necessary to ensure that customer part numbers and pricing (including relevant discounts) are applied in the drop down selection fields without having to manually look up each line item specific information. Choosing a part number in the drop down list should automatically establish the customer part number and the correct pricing and discounts to be applied once the customer cross reference and customer item prices have been established. Figure 5.6.1 shows the screen shot of the Order Maintenance Menu.

5.6.1 Sales Order

The primary method for entering a sales order is by using the order maintenance menu. You can enter 'ordm' in the navigational text-box on the main-menu bar to enter the order maintenance screen or you can click 'Order'|'Order Maintenance' on the main-menu bar. Figure 5.6.1 shows an example of the order maintenance menu. Sales orders are typically discrete unique orders that have unique purchase order number from your customer. Sales orders can be entered manually or can also be created via EDI 850 transaction with your customer / trading partner if the EDI mechanics are setup for the specified customer. The sales order will typically have a unique PO, delivery date, and specific items and quantities that are to be shipped as a single order.

To enter a sales order, you must have previously created a bill-to in customer maintenance. Clicking 'new' in the order maintenance screen will highlight the customer and ship-to drop down selection boxes in red background (see figure 5.6.2). You must choose a Customer and optionally choose a ship-to or choose <new> in the ship-to selection box to manually enter a new ship-to address. Entering a new ship-to address in this manner will also create a permanent ship-to record associated with this customer.

After clicking 'new' all of the relevant fields will become enabled for editing. The key field will be automatically assigned a next sequence number that will be used as the sales order number. After you've chosen your Bill-to / Ship-to combination, you have the options to enter in a PO (provided by your customer), Ship Via (the carrier you choose), and a Due Date that this order is expected to ship among other fields in the 'Main' tab. There is a remarks field as well to enter any remarks necessary to support the order and is visible on subsequent documents such as packing slips and invoices. Note: You cannot click 'add' at this time until at least one item has been entered. Figure 5.6.3 shows typical usage of the Main Tab within the order maintenance menu.

Once the 'Main tab' information of the order has been established, you can now click on the 'Lines tab' and enter the item level specifics for this order. The 'item number' drop down selection box is assigned by default from any item defined in the item master as item code 'M' or 'A' (Manufactured or Asset). If you have defined items in the item master they will appear in this drop down selection box

along with assignments of the Description and List Price as recorded in the item master. However, you can override this default behavior by creating customer specific items and customer specific pricing. If any customer specific items exist, they will be automatically pulled into the item number drop down selection box as well as any auto assignment of any customer specific pricing. The customer specific pricing will take precedence over item master pricing if customer specific pricing exists. See customer xref maintenance (navcode=cupm) and / or customer price list maintenance (navcode=cprm) for the menus to create these records and consult the documentation on the usage of these menus.

Once you've chosen your item, the description, default uom, list price, disc, and net price will automatically be assigned from association of either item master default records or customer specific records. You then need to enter a quantity and click 'Add Item'. This will record your item in the item table as shown in Figure 5.6.4. You will also notice the summation of total lines, quantities, tax, and amount at the bottom of the Lines Tab. Adding or deleting items from the item order table will update the summaries at the bottom automatically.

You also have the option of entering summary discounts, charges, or taxes at the bottom of the Lines Tab. These discount/charges are applied as a summary level adjustment and are 'in addition' to any discounts/prices at the item level. These summary adjustments will be reflected in the Total amount of the invoice and are displayed on the invoice print as well. To enter a summary adjustment, choose either discount or charge in the drop down selection box, enter an appropriate description of the type of charge/discount and the appropriate amount. NOTE: Depending on whether the type is charge or discount will have an impact on the type of amount and the 'label' of the field (the label will change from 'amount' to 'percentage' depending on which type was selected. If Discount is the type chosen, the amount applied will be a percentage of the overall order. If the type is Charge, the amount will be flat rate amount. For example, if you wish to add a discount to the summary of 10%, you would enter '10' in the field labeled 'percentage'. This will apply a 10% discount to the overall Sales Order total amount. If you would like to enter a 'charge' of \$40 , then you would enter '40' in the amount field, and a flat charge of \$40 will be applied in addition to the total Sales Order amount.

Once you have entered all items for this sales order and any summary adjustments as necessary, then proceed back to the main tab and click 'Add' to commit the order. Upon clicking 'add', the order will commit to the database, and immediately be retrieved giving a status message of 'order has not been shipped'. This indicates that you have created an order but have not shipped nor invoiced the order.

In a simple business scenario, You have the option of immediately invoicing this order if the order will ship complete. In these situations where you do not need to go through steps of creating a shipper (because of partial shipment of the order), you can simply click the Invoice button in the bottom left corner of the menu, and the order will automatically be invoiced. The status label will indicate that the order has been invoiced and the order is now closed for further operation. The print invoice button and the print packing slip button will be enabled to print the documents accordingly.


If your business requires a formal shipping process because of partial shipments or separation of duties or delays in shipment processing after the order has been created, then you will want to create a shipper from the sales order and invoice the shipper. See Shipper Maintenance in the documentation section.


Sales Orders are typically for inventory ordering / invoicing. If you have a non-stock item or you would like to invoice for a service you performed, go to the Service Order menu by entering the navcode "srvm" in the navigational text-box. This menu is intended for more service oriented order/invoicing schemes, but does allow for a mixture of service items and inventory items. See the service order portion of the documentation for more detail on the subject.

Figure 5.6.1

MainLinesSchedule

Order Maintenance

Key 

bill-to 

ship-to

Code

Name

Addr1

Addr2

City

State

Zip

Email



Contact


Phone

Misc



☐ Blanket?

Site:

Due Date  

PO Number 

Status

Ord Date  

ShipVia

WH

Tax Code

Currency

☒ Allocation? ☐ is Sourced?

Remarks

Figure 5.6.2

MainLinesSchedule

Order Maintenance

Key10005

New

Clear

bill-to

ship-to

Code

Name

Addr1

Addr2

City

State

AK

Zip

Email

Contact

Phone

Misc

Add ShipTo

☐ Blanket?

Site:1000

Due Date2020-03-09

PO Number

Status

open

Ord Date

2020-03-09

ShipVia

WH

Tax Code

Currency

☒ Allocation?

☐ is Sourced?

Remarks

Invoice

Print Invoice

Print PackingSlip

Print Order


Delete


Update

Add

Figure 5.6.3

Order Maintenance

Key 

bill-to  cash generic

ship-to

Code

Name Email



Addr1 Contact




Addr2

City Phone

State Zip Misc

☐ Blanket?

Site: Due Date  

PO Number  Status Ord Date  

ShipVia WH Tax Code

Currency ☒ Allocation? ☐ is Sourced?

Remarks

Figure 5.6.4

Main
Lines
Schedule

Lines

Description
test item
ListPrice
Plant/WH
Item Number
50000001
uom
EA
Disc%
Location
Qty Ship
QOH Unallocated=-25.0
NetPrice
Misc
Add Item
Del Item

Line	Part	Qty	UOM	ListPrice	Discount	NetPrice	QtyShip	Status	WH	LOC	Desc	Tax
1	500000...	22	EA	4.0000	0.0000	4.0000	0	open			test item	0.0

Summary Discounts, Charges, and Taxes

discount
Desc
percent
add
delete

Type	Desc	Value	Amt
------	------	-------	-----

Total Lines: 1
Total Qty: 22
Total Tax: .00
Total \$ 88.00
USD

5.6.2 Service Order / Quote

The Service Order menu is intended for service oriented ordering/invoicing or situations where you have non-inventory and inventory items mixed on the same order. This menu is ideal for individual businesses or small companies that provide a service (lawn care, auto servicing, etc) in which an invoice will be need to provide the customer with the details of the work complete as well as the total cost (sales price) of the service. This menu also allows a quoting option to create quotes as necessary and to convert quotes into legitimate orders. This service order menu is similar to the standard sales order menu with only a few differences in navigation. The mechanics of this menu favor a business model where a sequence of events are expected such as quoting, ordering, and invoicing in that order. However, you can mix and match these types of service orders as necessary. The default behavior is to create a quote, convert the quote to order, and invoice order in that chronological sequence.

The service order menu can be found by entering 'srvm' in the navigational text-box on the main-menu bar. Similar to the standard sales order menu, you must have a customer previous set up in customer maintenance in order to use the service order menu. To add a new service order and/or quote, click the new button and choose the appropriate customer code. The job site selection box is a drop-down that has possible job site locations associated with this customer code. Note: you can add a new job site by going to (navcode='cusc') and entering a ship-to for the customer code in question. Once you've chosen your customer and job site, you can enter an optional PO number and remarks. The Type field defaults to 'quote', however, you can set this to 'order' if you wish to skip the quote process and just enter a service order. Typically, you would create the quote, and subsequently use the 'QuoteToOrder' button to convert to an order upon successful agreement/confirmation of the quote by the customer.

To enter detail into the service order, you must choose one of the two radio buttons of choice. The button 'Service' will enable the service related text-boxes. The Inventory radio button will enable the inventory related item selection boxes. You can mix and match these options as necessary. After picking one or the other, click 'Add Item' to add the detail to the item table. Once you've entered all the item detail necessary, click 'Add' at the bottom of the application to commit the order. Note: if you left the type as 'quote', a quote record will be created, and the QuoteToOrder button will be highlighted in yellow as shown in figure 5.6.8. Upon confirmation of the quote, you can click this button, and the quote will be converted into an order to be processed. If you entered as type = 'order' and bypassed the quoting process, the 'invoice' button will be enabled, and you can choose to invoice the order at any time. The print button at the bottom will print a 'quote' if type = 'quote' and a service order if type = 'order' once the record has been committed.

With regards to entering service type items, the price entered will be the base price and subject to the number of quantity/hour entered. For example, if you enter \$45 in the Price field and a Unit/Hour of 5, then the total price for that service item will be \$225.00. Likewise for the Inventory type detail, the total price is subject to the quantity multiplied by the unit price.

To see or print the invoices (or save to PDF) for these service orders, enter 'invb' in the navigational text-box. You will be able to retrieve the invoices by date and bill-to for a range of invoices. Click the 'basket' icon to see the detail of each invoice/shipper. Click the 'flag' icon to enter the invoice detail and print the invoice or save to a PDF as necessary. Figure 5.6.10 shows an image of the invoice print.

Figure 5.6.5

Service Order Maintenance

Key

New

Clear

Site 1000

QuoteToOrder

Invoice

Customer

Crt Date 2020-03-09

Due Date 2020-03-09

☐ PaidInFull?

Job Site

PO

Type quote

Crew

Status open

Remarks

☐ Service ☐ Inventory

Service Item

Item

Unit/Hour 0

Qty

UOM

Price Price is per uom

Price 0.00

Add Item

Del Item

line	Part	Type	Desc	Order	Qty	Price	UOM
------	------	------	------	-------	-----	-------	-----

Total Lines

Total Hrs

Total

Print

Delete

Update

Add

Figure 5.6.6

Service Order Maintenance

Key50003

New

Clear

Site1000

QuoteToOrder

Invoice

Customer

Crt Date2020-03-09

Due Date2020-03-09

☐ PaidInFull?

Job Site

PO

Type

quote

Crew

Status

open

Remarks

☒ Service

☐ Inventory

Service Item

Unit/Hour

0

Price

Price is per uom

Item

Qty

UOM

Price

0.00

Add Item

Del Item

line	Part	Type	Desc	Order	Qty	Price	UOM
------	------	------	------	-------	-----	-------	-----

Total Lines

Total Hrs

Total

Print

Delete

Update

Add

Figure 5.6.7

Service Order Maintenance

Key Site

cash generic Crt Date

Customer Due Date

cash placeholder BR549 Highway SE Dillo...

Job Site PO

Type Crew

Status

Remarks

☐ Service ☒ Inventory

Service Item

Unit/Hour

Price *Price is per uom*

Item

Qty UOM

Price

line	Part	Type	Desc	Order	Qty	Price	UOM
1	Oil Change	S		50003	1.0	45.00	EA
2	50000001	I	test item	50003	3.0	4.00	EA

Total Lines Total Hrs Total

Figure 5.6.8

Service Order Maintenance

Key Site

cash generic Crt Date

Customer Due Date ☐ PaidInFull?

cash placeholder BR549 Highway SE Dillo...

Job Site PO

Type Crew

Status

Remarks

☒ Service ☐ Inventory

Service Item

Unit/Hour Item

Price Price is per uom Qty UOM


Price

line	Part	Type	Desc	Order	Qty	Price	UOM
1	asdf	S		50004	4	44	EA

Total Lines Total Hrs Total

Figure 5.6.9

56.08%




BILLTO:
cash generic
Dillon SC 29536

JOBSITE:
cash placeholder
BR549 Highway SE
Dillon SC 29536

Page 1 of 1
Order Nbr: 50006
Create Date:

MFG Company
Dusty Way Canyon Road
Dodge City KS 65455


50006

Remarks: test service order

Contact:	Ref Nbr:	Terms: N00	CustCode: cash	Misc:
----------	----------	------------	----------------	-------


Item	Qty/Hrs	NetPrice
Lawn Care Service	5	\$ 50.00

Summary

Total Price (USD): \$ 250.00


Page 1 of 1

Figure 5.6.10



56.08%

▼




BILLTO:
cash generic
Dillon SC 29536

MFG Company
Dusty Way Canyon Road
Dodge City KS 65455

SHIPTO:
cash placeholder
BR549 Highway SE
Dillon SC 29536

INVOICE



2120
Page 1 of 1

Inv Nbr: 2120
Inv Date: 2020-03-09

Remarks: test service order

Carrier:	Ref Nbr:	Freight Class:	BOL:	Misc:

Item	CustItem	Description	PO Nbr	Qty	NetPrice	MatlTa	ExtPrice
Lawn Care	Lawn Care	null		5	\$ 50.00	\$ 0.00	\$ 250.00

Summary

Total Gross Price: \$ 250.00

Total Price (USD): \$ 250.00

5.6.3 Searching Orders

To search for a specific order, there are several search buttons (magnifying glass) that will allow one to search for order records based on the field next to the search button. There is a search button for the order number, customer bill-to, order date, due date, and purchase order number. So, for example, to search by PO number, click on the search button next to the PO Number. This will send you to the browse screen. You can either enter a text string to search by or you can click 'Find It' without a search string. The latter will bring back all records. The former will bring back any records associated with the search string. You can choose the type of search to be 'begins with' , 'ends with', or 'match'. If records are returned, the browse screen will show each record with a select button beside the record. Clicking on the select button will return you to the order maintenance screen with the appropriate record selected. Another search option would be to search by due date of the order. For example, if you wanted to know all orders that are due in March of 2015, you would enter “2015-03” with the “begins with” option selected. This would return all orders regardless of customer with the due date beginning with “2015-03”. Note: All order dates and due dates are of the format “YYYY-MM-DD” where the hyphen is mandatory.

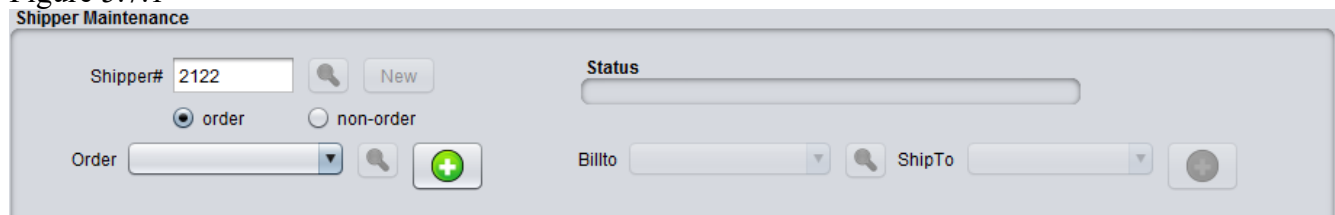
5.7 Shipper Maintenance

Shipper maintenance allows you to create a discrete shipper for one or more orders that you have previously created. The Shipper Maintenance menu offers two convenient methods for establishing the shipper. The most widely used method is to load the shipper from one or more sales orders or schedules. You can add as many orders as necessary with the only stipulation that the ShipTo (and therefore the BillTo) must be the same for all orders. The other method is to construct a non-stock shipper for items not in inventory or service related sales. Once the shipper is created, you can then print packing slips and/or pick tickets for pack staging or inventory movement. Once the shipment is physically complete and ready to be transported, the final action of confirming the shipper can be executed, which essentially commits the sales to the ledger and accounts receivable aging.

5.7.1 Shipper From Sales Order(s) (navcode: shpm)

To add a shipper from a previously established customer sales order, go to the 'Shipping'|'Shipper Maintenance' Menu. Click 'New' to initiate a new shipper. This will generate the next sequential number and assign it to the shipper# text-box. You will then choose the 'order' toggle box which will enable the order drop down list while disabling the bill-to/ship-to drop down option. See Figure 1.10 below for the 'order' selection option.

Figure 5.7.1

The screenshot shows the 'Shipper Maintenance' window. At the top left, the title 'Shipper Maintenance' is displayed. Below it, there is a 'Shipper#' text box containing '2122', a magnifying glass icon, and a 'New' button. To the right of this is a 'Status' text box. Below the 'Shipper#' box, there are two radio buttons: 'order' (which is selected) and 'non-order'. Below the 'order' radio button is an 'Order' dropdown menu. To the right of the 'Order' dropdown is a magnifying glass icon and a green plus icon. To the right of the 'non-order' radio button is a 'Billto' dropdown menu, a magnifying glass icon, and a 'ShipTo' dropdown menu. To the right of the 'ShipTo' dropdown is a magnifying glass icon.

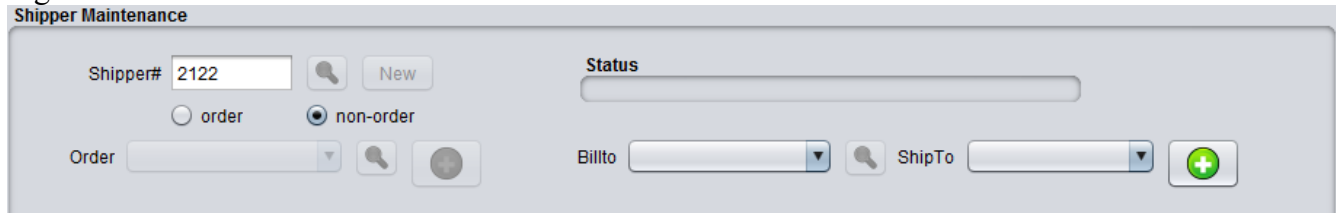
Next, choose the appropriate order number in the drop down list that you wish to ship and click the button with the green 'plus' icon next to the order field. This action will load the order header and all **open** line item information into the shipper fields and shipper item table. If there are items in the 'Detail' window that you do not want, you can highlight that item (row) and click 'Del Item'. If necessary, you can go back up to the order field, enter another Sales Order Number and click the 'plus' icon again. The additional sales order **must** have the same ship-to Code as the previous order.

Once you have all your line items added to the Detail Item Table, you can then adjust the Header fields (ShipVia, Trailer, Remarks, etc) as necessary before adding the order. Once all Header and Detail fields are complete, click 'Add' at the bottom of the menu and your shipper will be complete. The entire menu will 'reload' with the newly created shipper, and the 'status' field will indicate that this shipper has not yet been confirmed (in red text). You can now proceed to create a packing slip by clicking 'Print Shipper' at the bottom of the menu. At this point, you have created a shipper, but you have not invoiced this shipper. Once the shipment is ready for transport go to the 'Shipper'|'Shipper Confirm' Menu to commit your new shipper to the books. You can then return to the Shipper Maintenance screen where you can print an invoice as necessary. Once confirmed, the status will indicate that the shipper is already confirmed (in blue) and no further editing or adjusting of this shipper is allowed. Figure 1.10 gives the screen shot for the Shipper Maintenance menu.

5.7.2 Shipper From Non-Order (Service or Non-Inventory)

To create a shipper for a service or non-inventory item, click 'New' button. Then choose the 'non-order' toggle box which will enable the bill-to and ship to drop down fields while disabling the order drop down field. See Figure 1.11 for a screen shot of the selection process.

Figure 5.7.2



The screenshot shows the 'Shipper Maintenance' form. At the top left, there is a 'Shipper#' field with the value '2122' and a 'New' button. Below this, there are two radio buttons: 'order' and 'non-order'. The 'non-order' radio button is selected. To the right of the radio buttons is an 'Order' dropdown menu. Further right, there is a 'Status' field. Below the 'Status' field, there are 'Billto' and 'ShipTo' dropdown menus. A green plus sign button is located to the right of the 'ShipTo' dropdown menu.


Once bill-to and ship-to are enabled, choose the bill-to and ship-to from the appropriate drop down selection lists. Then click the 'plus sign' button to the right of the ship-to drop down list. This will enable the header and detail fields for data entry.

You can then proceed to enter your header information and detail line item information. Note that since this shipper is constructed from a non-order, you will have to explicitly enter the item, ship qty, PO nbr, and price. The item can be a service description such as 'service performed per work order' and provide an arbitrary price for the service. The ship qty in this case would be '1'. Once all the necessary information is entered, click add to commit the shipper.

Figure 5.7.3


MainLines


Shipper Maintenance

Shipper# 


☐ order ☐ non-order

Status

Order 


Billto  ShipTo

Header

Site 


ShipTo Addr

UserID

Shipdate 

Ref

Misc

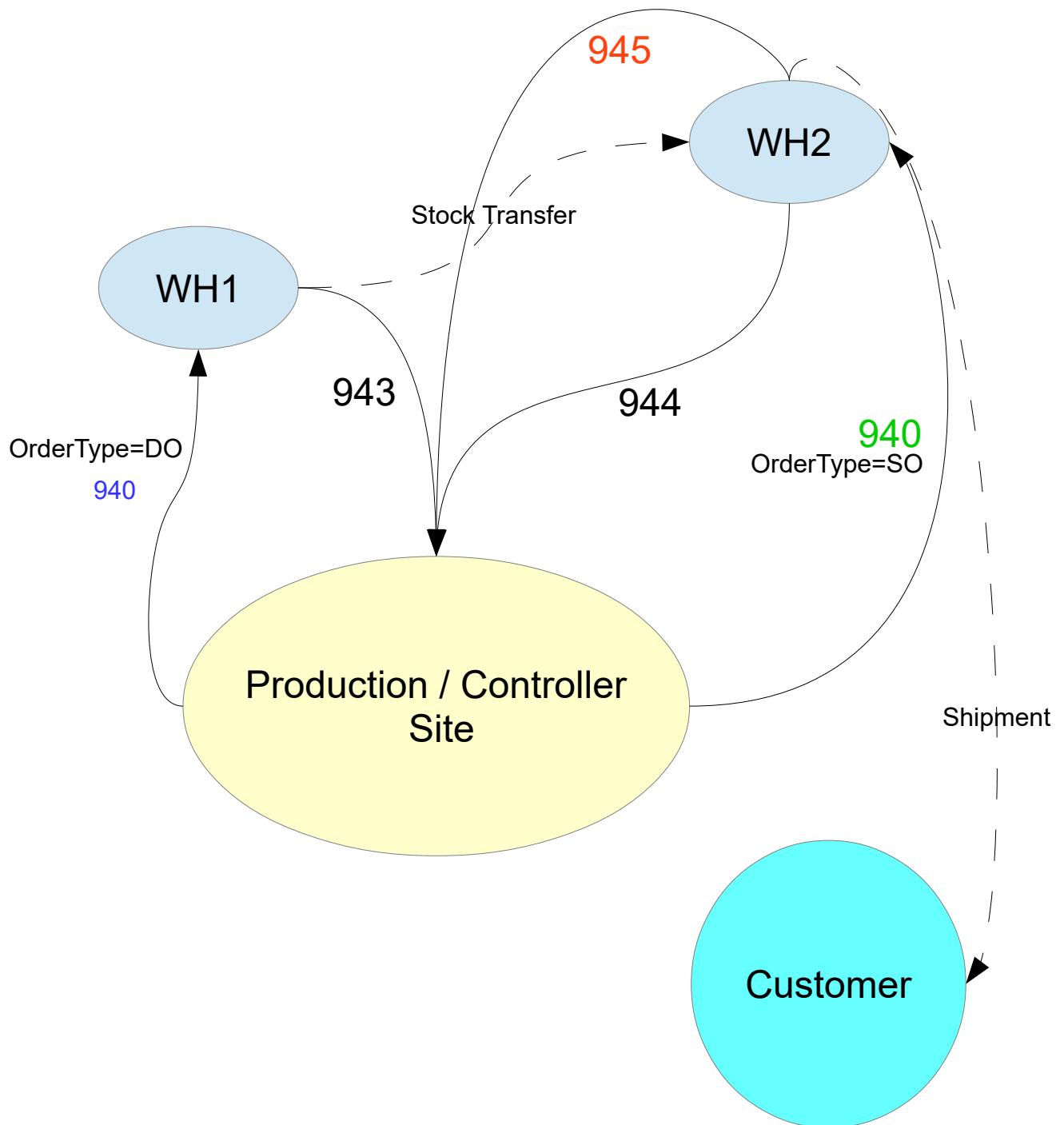
ShipVia 

Misc2

Trailer

Remarks

5.8 Warehouse Transfer Order



6 Purchasing

6.1 Vendor Maintenance

To add a vendor, Click on the Menu 'Vendor Maintenance' under Address| Vendor Menu, or you can enter 'venm' in the navigation text-box. It is necessary to add a new vendor code that represents the remit-to association of this vendor record. Each vendor code is unique. Therefore, only one vendor code per remit-to record is allowed. An error will be generated if an attempt to enter the same code for two different remit-to vendor records. To add a new vendor code, simply click the 'New' button and a next sequence number will be assigned as the vendor code. Note: It is possible to enter a non-sequential sequence number by toggling off the auto-assign checkbox in the Vendor Control Maintenance screen. If you choose to manually create a vendor code, the vendor code can be any alphanumeric characters with a max character length of 10 characters.

Once the code has been entered, then proceed to enter all the associated data that is appropriate for this vendor. Most of the drop-down selection boxes have default values assigned, but you can choose provided values as necessary. Once all the necessary fields have been entered, click 'Add' to commit the vendor master record to the database. A successful entry message will be indicated in the message bar or a dialogue box will appear with any problems from the data entry. Figure 5.1 shows a screenshot of the Vendor Maintenance Menu and associated fields.

Note, it is not possible to enter any contact information until the vendor master record has been committed. The contact information is relative to the vendor remit-to code and cannot be declared without association to a legitimate existing vendor code.

Once you've entered a new Vendor Master record, you can retrieve the record by clicking on one of the magnifying glass search buttons. These buttons will take you to a search menu where you can enter a search string to find the exact record you are looking for. The string can be searched by "Begins with", "Ends With", or "Matches". If you simply click the *FindIt* button with no string, it will return all records. Each record in the search criteria is returned with a select button (flag image). Clicking the select button will return you to the Maintenance screen from which it was called along with associated data relative to the record clicked. You can then proceed to review, update, or delete (in some cases) the retrieved record. Note: Some maintenance screens will not allow you to delete the record from the Maintenance menu due to the associated nature of other tables that are related to this record. You will need to use a special delete utility to delete these types of records.

Several fields are 'required' fields. Most of the required fields are drop-down lists, so it is necessary to choose the correct drop down option. You must enter a valid account in the text-box labeled *AP Account*. The AP Account field represents the financial ledger account you wish to associate this remit-to code with. This value will be validated against the accounts that were entered into Account Maintenance under Finance|Ledger Setup. The Cost Center is another validated text-box. The CC must be a legitimate value found in Department/CC Maintenance under the Finance|Ledger Setup Menu. A generic cost center of 9999 can be entered if multiple cost centers are not required by your site. Code '9999' should be available in Department/CC Maintenance as a result of the BlueSeer install.

6.1.1 Vendor Maintenance Field Definitions

This is a list of various vendor maintenance related fields that warrant further description :

- **Group** (text-box) This field allows the vendor code to be assigned to a specific group or set for reporting purposes. A collection of vendor codes belonging to a larger set. This field is optional.
- **Market** (text-box) This field is also used for reporting purposes to conglomerate vendors into an additional set other than 'group'. This field is optional.
- **Bank** (drop-down) This is the default bank code that is assigned during vouchering for any accounts payable transactions for this vendor. Upon payment to vendor, this field defines the cash account (associated with this bank record) that will be debited.
- **Currency** (drop-down) This is the default currency code used for this vendor for all purchase transactions including vouchering and payment. Values in this drop-down field are defined in currency maintenance.
- **Carrier** (drop-down) This is the default carrier used for purchase orders and receiving for this vendor code. Values in this drop-down field are defined in carrier maintenance.
- **Terms** (drop-down) This is the default terms used for all purchases and applied payment schedules for this vendor code. Values in this drop-down field are defined in terms maintenance.
- **Price Code** (text-box) This field can be used to define a 'group' pricing code that can be applicable for one or more vendors. If this field is defined with a code, any new purchase orders created will look in the vendor price maintenance tables for price records associated with this code. This will allow multiple vendors to be assigned the same price code for certain items if desired. Note: if this field is defined, it overrides the price lookup by vendor code. This field is optional.
- **Discount Code** (text-box) This field is reserved for future use.
- **SalesRep** (text-box) This field is used for informational use only. It appears in various reports. This field is optional.
- **Tax Code** (text-box) This field is reserved for future use.
- **AP Account** (drop-down) This is the default Accounts Payable account that will be used for all GL transactions associated with this vendor code for the purpose of receiving, vouchering, and payments.
- **Cost Center** (drop-down) This is the default cost center (dept) that will be used for all GL transactions associated with this vendor code for the purpose of receiving, vouchering, and payments.

Figure 5.1

MainContact

Vendor Master Maintenance

VendCode

New

Clear

DateAdded

2020-01-06

LastMod

2020-01-06

Name

Line1

Line2

Line3

City

State

AK

Zip/Post Code

Country

USA

Phone

Email

Group

Bank

BK

Currency

USD

Carrier

USPS

Price Code

SalesRep

AP Account

30000000

Misc

Remarks

Market

Buyer

Terms

N00

Disc Code

Tax Code

CostCenter

1300

Delete

Update

Add

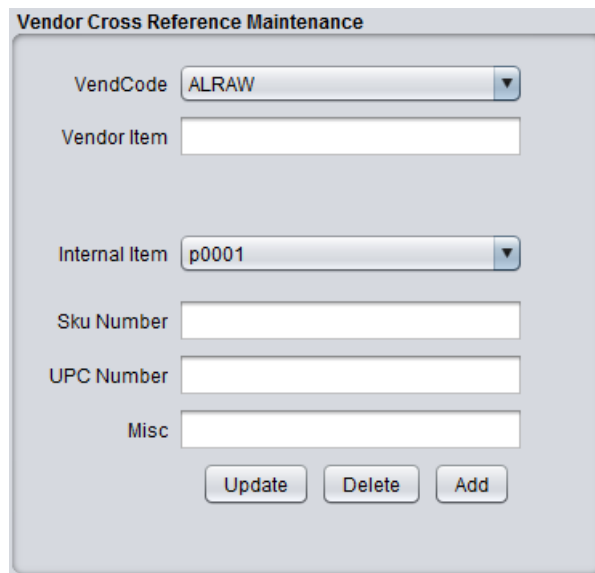
6.2 Vendor Item Cross Reference Maintenance

You have the option to enter vendor specific part nomenclatures for your internal items. Most vendors have their own naming convention for any given part, and you have the option to create cross references of your vendor's part numbers to your internal part number naming scheme. For example, if you have an item named 'partA' and your vendor identifies the same part as 'partV' then you will want to create the necessary records in Vendor Item Cross Reference Maintenance. Each of these cross references that you add will be vendor specific. For example, you can have the above cross reference 'partA' to 'partV' for multiple vendors where each reference is associated to a specific vendor code.

To enter a vendor cross reference record, go to 'Address'|'Vendor Menu'|'Vendor Xref Maint'. Choose the appropriate vendor code 'VendCode' in the drop down selection and then enter the vendor item in 'vendor item' text box. Once the vendor item is filled in, press the **tab** key to move to the internal item drop down list. Note: if there is no cross reference previously established, a message will appear below the vendor item field indicating 'Adding New Record'. However, if there is already a cross reference record for this vendor code / vendor part number combination, then there will be a message indicating 'Record Exists'. The other fields are optional to enter. Once the fields have been entered, click the 'Add' button, and the vendor cross reference record will be committed.

The vendor item cross reference is useful throughout the purchasing process. When entering a purchase order, the vendor specific part number will be automatically applied to the po line and will be visible for ease of identification without having to manually enter it each time you enter a new line item on the PO. The cross reference will also be visible on various reports and receivers during the receiving process. See Figure 2.2 for a screen shot of the vendor cross reference maintenance menu.

Figure 2.2



The screenshot shows a web-based form titled "Vendor Cross Reference Maintenance". The form contains several input fields and buttons. The "VendCode" field is a dropdown menu with "ALRAW" selected. The "Vendor Item" field is a text box. The "Internal Item" field is a dropdown menu with "p0001" selected. Below these are three more text boxes: "Sku Number", "UPC Number", and "Misc". At the bottom of the form are three buttons: "Update", "Delete", and "Add".

VendCode	ALRAW
Vendor Item	
Internal Item	p0001
Sku Number	
UPC Number	
Misc	
<input type="button" value="Update"/> <input type="button" value="Delete"/> <input type="button" value="Add"/>	

6.3 Vendor Item Price Maintenance

Vendor item price maintenance allows you to maintain a list of prices per item per vendor that can be used during the purchase order process. You have the option of entering a different price at the time of PO creation, or you can have the prices default from the vendor item price table for any item you enter on the purchase order.

Vendor prices for your items can be created and/or edited in the Vendor Item Price Master under 'Address'-'Vendor Menu'-'Vendor Item Price Maintenance'. Once you enter the Vendor Pricing Maintenance window, choose your VendCode from the dropdown list. If you have any previously associated item/price records, they will appear in the 'Applied' list. To enter a new record, enter the item in the item text field. Then 'tab' to the price field and enter the price. The price must be in decimal format "#.##". Once you enter the price, then click 'Add' to create the associated price record. It will appear in the Applied list. See Figure 2.3 for a screen shot of the Vendor Price Maintenance Menu.

Figure 2.3

The screenshot shows a window titled "Vendor Price Maintenance". It contains the following elements:

- Vend / GroupCode:** A dropdown menu with "ALRAW" selected.
- Item:** A dropdown menu with "p0001" selected.
- Price:** A text field containing "0.00", which is highlighted in yellow.
- Applied:** A large empty rectangular box for displaying records.
- Action Buttons:** Three buttons labeled "Add", "Update", and "Delete" are positioned to the right of the Applied list.

6.4 Purchase Order Maintenance

The purchasing module within BlueSeer is based on a simple discrete purchase order record. The PO record is the cornerstone of the purchasing module and it allows the receiving and vouchering of receipts from vendors against these records. The business use scenario for purchase orders is fairly straight forward. A purchase order is created for a vendor to deliver specific items and quantities of these items on a specific due date at an agreed upon price. The purchase order is referenced during receiving of the goods, vouchering of the receivers, and the subsequent payment of the voucher to the vendor.

6.4.1 Purchase Order Creation

To create a new Purchase Order, go to the 'Purchasing' parent menu and click 'Purchase Order Maintenance' to bring up the PO Maintenance panel. The OrderNbr field will be blank. Click the 'New' button to generate the next sequential PO Number that will be assigned to the OrderNbr text box. All the other fields will be enabled at this point. Then select the vendor associated with this PO and assign other header fields as necessary (Site, ShipVia, Remarks, etc). Once the header info has been entered, you can then choose an item from the PartNumber drop down list. **Note: The Vendor Cross Reference Master and the Vendor Item Price Master must be set up prior to creating a Purchase Order.** The PartNumber drop down list will be occupied with any items in the vendor cross reference table that associates items with specific vendors. Any items associated with the vendor chosen for this PO will be visible in the drop down list. (if there are no items, see Address->Vendor Menu->Vendor Xref Maintenance> and set up the appropriate records for this vendor). To continue, choose the part number in the drop down list. This action will assign the VendNumber field (per the Xref) and also assign the ListPrice, Disc%, and NetPrice fields accordingly with values pre assigned in the Vendor Price Maintenance menu. (If there is a 0.00 price, see see Address->Vendor Menu->Vendor Price Maintenance> and set up the appropriate price records for this vendor). The quantity field will initially be '0'. Enter the required QtyShip value expected for this PO for this item. Then, tab to the 'AddItem' button and click 'AddItem'. This will insert a record in to the detail table. (Note: To remove an item from the detail table, click (highlight) the desired row in the table and click the 'Del Item' button. This action will remove the row from the table and from the PO record). Once all the desired line items have been entered for this PO, click 'Save' to commit the PO. Figure 2.4(a and b) shows the screen shot for the example of creating a purchase order with pre-defined item master records. Note the blue text color of the VendorNumber field.

It is also possible to enter a purchase order for service or non-inventory items. The instructions are the same for entering these type of line items as it is for enter inventory items. You can manually enter a part number in the PartNumber drop down list. The VendorNumber part number will be occupied with this same PartNumber, but the text will be 'red'. Also, there will be no price generated, therefore, it will be necessary to manually enter the ListPrice, Disc% (if any) and then tab to the AddItem button and click. All other procedures are the same as for inventory items. Figure 2.5 below shows a screen shot of entering a non-inventory item in the purchase order. Note the red text color of the VendorNumber field.

Figure 2.4 (Main Panel for Purchase Order Maintenance –header info)

MainLinesSchedule

Purchase Order Maintenance

OrderNbr47650

New

Site1000

Vendor400002

ACME Vendor

ShipVia

Buyersomeone

Statusopen

☐ Blanket

Remarks

Due Date2019-07-10

DateCreated2019-07-10

UserIDadmin

CurrencyUSD

Print

Delete

Edit

Add

Figure 2.4B (Lines Panel for Purchase Order Maintenance –line/detail info)

MainLinesSchedule

PartNumber50000001▼

VendNumbercomponent

uomEA▼

Order Qty0

ListPrice3.3300

Disc%0.00

NetPrice3.3300

Add Item

Del Item

line	Part	VendPart	PO	Qty	ListPrice	Discount	NetPrice	QtyRecv	Status
1	500000...	compo...	47650	444	3.33	0.0	3.33	0	

Total Lines1

Total Qty444

TotCost1478.52

USD

Figure 2.5 (Non-inventory item in purchase order)

MainLinesSchedule

PartNumbernon vendor item▼

VendNumberthis is the service item

uomEA▼

Order Qty

ListPrice

Disc%

NetPrice

Add Item

Del Item

line	Part	VendPart	PO	Qty	ListPrice	Discount	NetPrice	QtyRecv	Status
1	non ven...	this is t...	47651	5	2.0000	0.0000	2.0000	0	open

Total Lines1

Total Qty5

TotCost10.00

USD

6.4.2 Purchase Order Search

To search for existing purchase orders, simply click one of the 'search buttons' associated with either purchase order number or vendor and the Browse Panel will appear. You have the option of searching based on text or you can click the 'Find It' button without text which will retrieve all POs. If the search button associated with the OrderNbr was clicked, the browse panel will do a search based on the text you entered for the Purchase Order number field. However, if you clicked the search button adjacent to the vendor drop down list, the search will be based on the vendor code. For example, if you enter 'ACME' in the text search box, the browse will return all POs associated with that PO. You can click the select button associated with the returned rows, and the browse panel will return to the PO Maintenance menu with the appropriately selected PO record.

6.4.3 Purchase Order Print

To print a PO, search for the desired PO and bring it up in the PO Maintenance Menu. Then, click the 'Print' button. If the appropriate PO is found, a new window will appear with the PO information to be printed. From this panel, you can either choose to print (which the printer dialog box will appear) or you can choose to save the document in PDF or other format. You must manually close the window when you have either saved or printed your document. The format of the PO print program is site specific and can be assigned and re-assigned in the Site Maintenance menu under the 'Admin' master menu.

7 Inventory

7.1 Product Code Maintenance (*navcode: prcm*)

The product code is a very important concept in blueseer because it controls the puts and takes of most of the financial accounting information collected within the application. All transactions essentially use the product code as a guide to control which GL accounts are targeted for any given transaction. As such, great care and forethought should be given to setting up the product codes for your products and the accounts that are associated with each product code. Product codes are typically controlled and maintained by the finance department. The finance department usually has the most to gain (or lose) with regards to proper (or improper) setup of the product codes.

There are 26 accounts that are associated with any given product code. These account types are labeled in the product code maintenance menu. Great care should be taken to ensure that the appropriate account is assigned to the correct field when adding or updating product codes. Inventory, Sales, Costs of Goods Sold (COGS), Purchasing, Variance are all accounting buckets that are controlled by the product code for each item that incurs a transaction. For example, any given item that is ordered, shipped, and invoiced to a customer will have the sales account and COGS account (as well as various inventory accounts) adjusted per the product code of the item being sold. All items in the item master, whether FG, RAW, or WIP are assigned a product code. This allows financial accounting tracking of the items and materials as they are processed for any given transaction within the day to day activities of the business entity.


To add a new product code, go to 'Inventory'|'Product Code Maintenance' and enter any 4 character code in the “prodcode” field. See Figure 7.1.1 for a screenshot of the Product Code Maintenance screen. The product codes are a maximum length of 4 characters (do not input spaces or tabs). Once you enter the code, you will need to enter all 26 account fields with 'valid' accounts. You can review your chart of accounts in Ledger Account Maintenance. You **must** enter a valid account for all accounting fields in the product code maintenance menu. Once you have completed all the fields, you can then click 'Add', and the product code and associated data will be committed. To edit a product code, you can simply go to the product code maintenance menu and enter the product code in question and click 'Get'. The fields will then be populated with the product code data. Once you've adjusted the fields you desire, click the 'Edit' button to save your changes.

There is a system default product code “9999” that is used by the system for 'default' behaviour when no product code is associated with various items. Do not delete this record code. However, you will have to adjust one or more account field values if you have entered a customer chart of accounts in the GL.

Figure 7.1.1

Product Code Maintenance

ProdCode



New

Description

Inventory Acct		COGS Mtl Acct		AP Usage Acct	
Inv Discrepancy		COGS Lbr Acct		AP Rate Var Acct	
Scrap Acct		COGS Bdn Acct		Matl Usage Var Acct	
Wip Acct		COGS Ovh Acct		Matl Rate Var Acct	
Wip Variance Acct		COGS Out Acct		Mixed Var Acct	
Inventory Change Acct		Purchases Acct		Cost Of Prod Acct	
Sales Acct		PO Receipt Acct		Outside Usage Var Acct	
Sales Discount Acct		PO Ovh Acct		Outside Rate Var Acct	
Job Stock Acct		PO Pricevar Acct		TBD	

Delete

Add

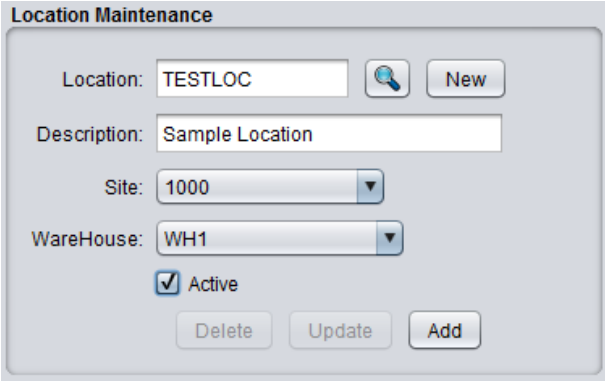
Edit

7.2 Location Maintenance (navcode: locm)

Location Maintenance provides a method to identify various physical locations within your business where inventory is maintained or transferred. These location records can identify 'actual' physical locations or represent a system holding category for inventory movement. The scheme for locations and their hierarchy within a site is the following: Each Site can have multiple warehouses and each warehouse can have multiple locations within it. So, defining a location in location maintenance requires the identification of a warehouse to associate it with. See figure 7.2.1 below for a screenshot of the Location Maintenance menu.

To add a new location ID, click 'New' in Location Maintenance. Then, enter a location code in the location field. You will then choose a site and a warehouse within a site and click Add. Note: both site records and warehouse records must be setup before you can enter a location.

Figure 7.2.1



The screenshot shows a web-based form titled "Location Maintenance". It contains the following fields and controls:

- Location:** A text input field containing "TESTLOC", followed by a magnifying glass icon and a "New" button.
- Description:** A text input field containing "Sample Location".
- Site:** A dropdown menu showing "1000".
- WareHouse:** A dropdown menu showing "WH1".
- Active:** A checkbox that is checked, with the label "Active".
- Buttons:** At the bottom, there are three buttons: "Delete", "Update", and "Add".

7.3 Warehouse Maintenance (navcode: wahm)

Businesses that have a significant amount of distribution channels within their organization can establish warehouse entities within their sites. The warehouse maintenance menu allows you to create individual warehouse entities that are associated with each site. Each site can have multiple warehouses. These warehouse records are used predominantly with the Distribution functionality within BlueSeer which allows a business entity to maintain product levels at specific warehouses and move/ship product from warehouse to warehouse or warehouse to customer.

To add a new Warehouse, you will first need to ensure that you have the appropriate site record established. Each new warehouse created is assigned to a specific site. The available sites to associated are visible in the Site drop down selection box. If there are no values in the selection box or you wish to add another site, go to Site Maintenance menu and add as appropriate.

Once you have your site maintenance records established, click 'New' in the Warehouse Maintenance menu and enter a warehouse 'id'. You can then enter a name and address information for your new warehouse. Choose a site to associate this warehouse to. Then, click 'Add' to commit your warehouse to the database. See figure 7.3.1 below for a screenshot of the Warehouse Maintenance menu.

Figure 7.3.1

The screenshot displays the 'WareHouse Maintenance' form. It includes the following fields and controls:

- WH ID:** A text input field containing 'WH1', followed by a magnifying glass icon and a 'New' button.
- Name:** A text input field containing 'Sample Warehouse'.
- Site:** A dropdown menu showing '1000'.
- Addr1:** A text input field containing '111'.
- Addr2:** An empty text input field.
- City:** A text input field containing 'Franklin'.
- State:** A dropdown menu showing 'TN'.
- Zip:** A text input field containing '38454'.
- Country:** A dropdown menu showing 'USA'.
- Buttons:** At the bottom, there are three buttons: 'Delete', 'Update', and 'Add'.

7.4 Item Master Maintenance (navcode: item)

Items can be added to the item master via the Item Master Maintenance Menu. You can access the item master menu by enter 'item' in the navigation textbox. You can also access the menu by choosing the "Inventory" main menu and then go to "Item Menu"|"Item Master Maintenance" menu. Some of the fields in this menu are merely descriptive, and some are used to categorize the items. However a few of the fields have a broader role and may control the functionality and behavior of other modules as they pertain to the specified item. The item number is by default automatically generated for you upon clicking 'new'. You can alternatively choose to enter your own item as well. You will have to uncheck the toggle in the inventory control menu labeled 'auto item number assignment'. This will prevent the systems from generating the item numbers, and you can then enter your own nomenclature for the items. Assuming you are entering your own numbers, to enter an item, simply enter a value in the part number field (do not use spaces) and choose the "class code" for which this item belongs. The class code governs whether or not the item is a manufactured item or a purchased item. There are only two class options, "M" and "P". If the item you are entering is a manufactured item, choose "M". If it is a purchased component (or raw material), choose "P". You can now click the 'Add' button, and the item will be added to the item master table. If you click 'Add' without adjusting any other data fields, you will have entered the item with 'default' attributes. However, you will probably want to enter additional fields to assign the appropriate attributes to your item. You can either adjust the fields prior to clicking the 'Add' button, or add the item and then use the 'edit' button to adjust the fields after the item has been entered. You can retrieve the item by entering the item in the part number field. If the item is legitimate, the foreground color will change to blue and the field itself will be deactivated once the record is retrieved. This will populate the maintenance window with the previously assigned attributes of the target item. If you enter an unknown item, the field foreground color will change to red indicating that the item is unknown.

You can also review a list of the items in the item master or search for item that have previously been added by clicking the "Item Menu"|"Item Master Search" menu under the Inventory main menu. You can click 'Search' as is for a complete list of items, or you can enter the first couple of characters to narrow the search before clicking 'Search'. A list of items based on your search will be shown, and you can click the 'Select' button associated with the target item to view all the detail of the target item in the Item Master Maintenance Window.

As indicated earlier, most of the fields in the item master maintenance screen are informational only. However, there are a few key fields that need to be discussed. The Product Code selection box assigns the appropriate product code to the item. Product Code Maintenance maintains the collection of product codes to choose from. This menu must be previously addressed before any product codes will appear in the product code selection box. The product code governs which GL accounts are chosen during specific transactions for the target item. If you have multiple products that can be grouped due to similarities in processes, markets, costs, etc., you will most likely want to add these items to the same product code. At a minimum, it is recommended to create two product lines, one for purchased items (raw components) and one for finished goods.

The "type" field in the item master menu is purely informational. The choices provided in the selection box can be added (or deleted) by using the Generic Code Maintenance menu to add or delete records with the "ItemType" code / key pair. For example, you can enter a new type called 'mytype' by going to Generic Code Maintenance and entering 'ItemType' in the code field and 'mytype' in the key field. When you go back to the Item Master screen, you will see a new option in the Type drop down selection labeled 'mytype'.

The unit of measure drop down selection box currently only supports "EA". A maintenance screen

to support more UOMs is under construction.

Both the selling price field and the purchase price field are informational only. You can enter these fields or leave them blank. These fields are generally used when the pricing is a simple specified price regardless of group or discount pricing and it is helpful to have the price listed here when viewing the other attributes of the target item. The actual pricing (whether it be customer or vendor pricing) is applied in the appropriate menus. See for customer pricing procedures or [vendpricemaint](#) endterm='vendpricetitle' for vendor pricing procedures.

The three cost fields (overhead, outside, and material) are of significant importance to purchased items (item of class "P"). The "material cost" field must be populated with the purchase price of the item. The material cost field is used by the costing module to roll up purchased item costs within a finished good product, so it is imperative that a cost be entered into this field. If there is any overhead or outside costs that apply to this purchased item, you can enter those costs as well in the appropriate fields. These costs will also be rolled up into the finished good cost of any product that consumes this purchased item.

Additional fields such as SafetyStock, MinOrdered, and LeadTime are used primarily by the modules MRP and Scheduling. These need to be set accordingly for the target items. You can choose to not submit the item to processing by MRP or Scheduling by unchecking the appropriate box.

Figure 7.4.1

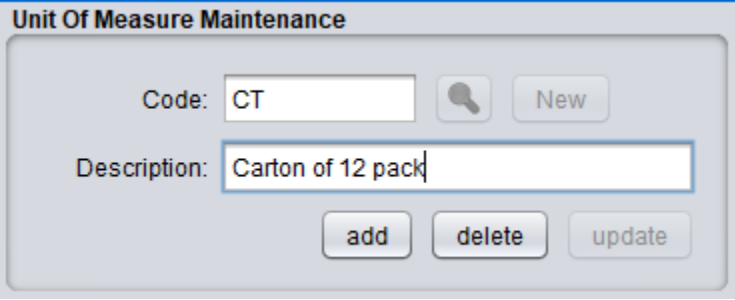
The screenshot displays the 'Item Master Data' form, which is used for managing item information. The form is organized into several sections:

- Item Master Data:** This section contains various input fields for item attributes. It includes fields for PartNumber, Description, UnitOfMeas (set to EA), Class Code (set to P), Site (set to 1000), Type (set to FG), Prod Code (set to 1001), GroupCode, LotSize, Warehouse, Location, Sell Price, Purch Price, Drawing, Eng Rev, Cust Rev, Overhead Cost, Outside Cost, Material Cost, Routing, NetWt, ShipWt, LeadTime, SafetyStock, MinOrdQty, and QtyOnHand. There are also checkboxes for MRP, Plan Orders, Scheduled?, and Alt BOM.
- Recent Inventory Transactions:** This section displays a table with headers: TranType, Date, TranNbr, and Qty. The table is currently empty.
- Location Quantities:** This section displays a table with headers: Site, Loc, Qty, and LastDate. The table is currently empty.

7.5 UOM Maintenance (navcode: uommm)

The Unit of Measure (UOM) menu allows for the definition of alternate units of measure other than the base unit of measure EA. This menu is used in conjunction with UOM Conversion Maintenance to establish selling and purchasing of items in units of measure other than the base unit of measure as defined in the item master. To define an alternate UOM, enter 'uomm' in the navigational text-box on the main-menu bar. Click new, and enter a code for the alternate UOM and an appropriate description. There is a 3 character limitation for code definitions. Once you've entered the information, click the add button to commit the record. See Figure 7.5.1 below for example of adding an alternate UOM.

Figure 7.5.1



The image shows a software window titled "Unit Of Measure Maintenance". It contains two input fields: "Code:" with the value "CT" and "Description:" with the value "Carton of 12 pack". To the right of the "Code:" field is a magnifying glass icon and a "New" button. Below the input fields are three buttons: "add", "delete", and "update".

Field	Value
Code:	CT
Description:	Carton of 12 pack

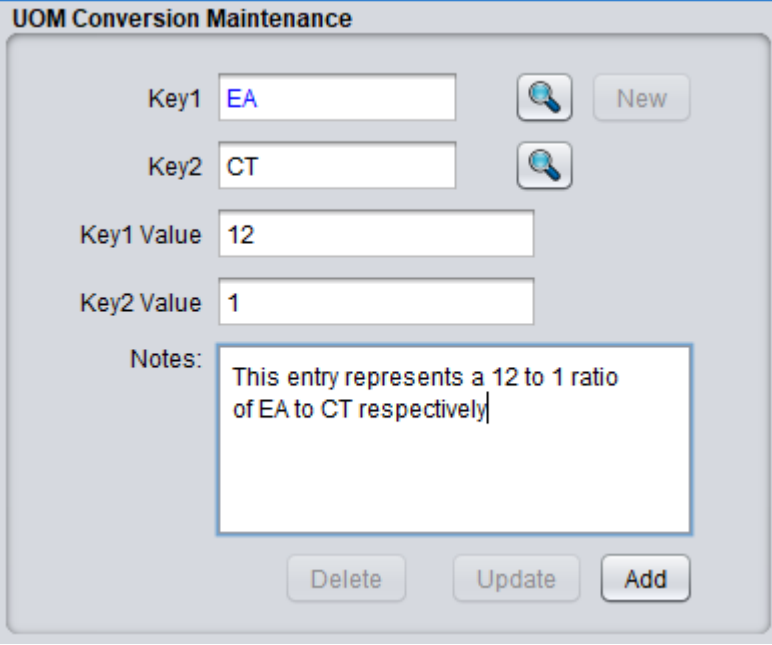
Buttons: New, add, delete, update

7.6 UOM Conversion Maintenance (navcode: uomc)

The Unit of Measure (UOM) Conversion menu is used in conjunction with UOM Maintenance to establish alternate units of measure. To define an alternate UOM conversion, enter 'uomc' in the navigational text-box on the main-menu bar. Click new, and enter the base UOM in key1. The base uom is used in all inventory transactions for inventory movement. Enter the alternate UOM in key2. Both key1 and key2 codes must be previously assigned in UOM Maintenance (uomm). Once the keys have been entered, then enter the ratio of key1 value to key2 value respectively in their individual text-boxes. See Figure 7.6.1 below for an example. The figure shows the entry of EA (each) to CT (carton) conversion record with a ratio of 12 to 1 respectively. Once you've entered the information, click the add button to commit the record.

NOTE: to use the alternate UOM in sales orders and/or purchase orders, you must also have a customer/vendor specific price list for the specific alternate UOM as well. For the specific item you are selling/purchasing, you must have both a conversion record (from alternate uom to base uom as shown below) and a specific price record for alternate uom defined in customer price master or vendor price master...depending on whether you're creating a sales order or a purchase order.

Figure 7.6.1



The screenshot displays the 'UOM Conversion Maintenance' window. It contains the following fields and controls:

- Key1:** A text box containing 'EA' with a magnifying glass icon to its right.
- Key2:** A text box containing 'CT' with a magnifying glass icon to its right.
- Key1 Value:** A text box containing '12'.
- Key2 Value:** A text box containing '1'.
- Notes:** A text area containing the text: 'This entry represents a 12 to 1 ratio of EA to CT respectively'.
- Buttons:** A 'New' button is located to the right of the Key1 field. At the bottom of the window are three buttons: 'Delete', 'Update', and 'Add'.

7.7 Work Cell Maintenance (navcode: wkcm)

The Work Cell maintenance menu provides a place to designate labor and burden costs associated with operations within your business. This menu is key to establishing the cost associated with day to day activities incurred during the operational phases of production. Each operation within the life-cycle of a finished good should be associated with a work cell. The work cell is a means to define the cost of an operation. The work cell can be defined to be as discrete or generic as necessary depending on the level of granularity necessary to capture the cost of the operation. For example, let's assume that a machining company is producing a threaded bolt. The bolt is made from raw bar stock and requires several operations (it is assumed) to produce the finished good bolt. Each of the multiple operations would be defined within one routing code (See Routing Maintenance). Let's assume that the threading operation is performed by a single operator who works in the 'threading' department and has a base salary of \$35 / Hour. The burden associated with this operation is expected to be \$15 / Hour. Note: in this instance, burden is defined as any non-labor and non-material cost associated with running the business divided up by department (work cell). In this instance, we have concluded that the burden cost associated with this operation should be \$15 / Hour and is thus assigned to this work cell. Now that we have labor and estimated burden cost, we can define the work cell for this operation. Figure 7.7.1 shows the screenshot of the creation of this work cell with these variables.

Figure 7.7.1

The screenshot displays the 'Work Cell Maintenance' form. The 'Work Cell' field is set to 'TESTCELL'. The 'Machine' field is set to '1'. The 'Site' dropdown is set to '1000'. The 'Description' field is set to 'Sample Work Cell for Threading'. The 'Dept/CC' dropdown is set to '4500'. The 'Labor Rate' field is set to '35.00'. The 'Setup Rate' field is set to '0'. The 'Burden Rate' field is set to '15.00'. The 'Run Crew Size' field is set to '1'. The 'Setup Crew Size' field is set to '0'. The 'Remarks' section contains the text: 'Burden rate has been extropolated for this work cell from the monthly (electricity, fuel, supplies, tooling, etc) costs.' The form has buttons for 'Delete', 'Update', and 'Add' at the bottom right.

Field	Value
Work Cell	TESTCELL
Machine	1
Site	1000
Description	Sample Work Cell for Threading
Dept/CC	4500
Labor Rate	35.00
Setup Rate	0
Burden Rate	15.00
Run Crew Size	1
Setup Crew Size	0

Remarks: Burden rate has been extropolated for this work cell from the monthly (electricity, fuel, supplies, tooling, etc) costs.

7.8 Routing Maintenance (navcode: roun)

Routing codes define the operations that an item will undergo during its life cycle. The number of distinct operations within the manufacturing of an item depends on how much detail you require in the cost 'description' of the item. For example, the drilling and threading of a screw can be broken down into two distinct operations, drilling as the first operation, and threading as the second operation. Each operation will have its own 'run rate' i.e. how many parts can you 'drill' in one hour and other relevant information associated with that specific operation. In turn, each operation will also have a labor rate and/or burden rate associated with that specific operation. On the other hand, you could combine both operations into one operation with a summed value of both operational costs..i.e. summed labor and burden costs and cumulative run rates. However, it is generally good practice to break up the operations into distinct cost cells with unique run rates. This allows for improved cost analysis, better metrics of operational efficiency, and identification of bottlenecks and throughputs. In general, the more discrete reporting points the better.

Routing codes are a 'one-to-many' concept. Each routing code can have multiple operations (and often do). For example, you could have routing code "MYCODE" that has operations A,B,C or 10,20,30. Each operation within the routing code will detail the labor, burden, and overhead cost associated with that operation. The sum of the operational costs will be the cost of manufacturing the item less the material cost and any outside service cost associated with the item. The cost of each operation depends on the work cell (see [workcellmaint](#)) that this operation resides in. The combined information from both the routing code maintenance and work cell maintenance menus define the labor, burden, and overhead cost of the item.

Note: The work cell records must be set up before creating any routing code records. Likewise, Both work cell codes and routing codes (in that order) must be created before creating any items of type "M" (manufactured). This sequence of events ensures the proper information is assigned before cost roll is applied to any items marked as 'manufactured'.

To add a routing code, first make sure you have already created the necessary work cells in the Work Cell maintenance menu. Each routing code can have multiple operations at various work cells, so it is imperative that work cells are defined prior to creating a routing code. Work cells are validated in the process of adding a new routing code. Once you have established your work cells, go to 'Inventory'|'Routing Menu'|'Routing Code Maintenance'. Enter a routing code of your choice. In the operation drop down box, enter an operation code for your first operation. For example, your routing code can be 'testroute' and your first operation can be '10'. Then choose the work cell and machine (if applicable) that this first operation resides in. Next, enter the setup hours required to setup this cell to perform the first operation (example 1 hour setup time). Enter '0' for no setup. Then, enter the number of pieces per hour this cell/operation can perform. You will notice that the 'run hours' to the right of 'pieces per hour' is automatically calculated based on your entry in pieces per hour. Once this information is entered, you can click 'Add' to add the new routing code with its first operation. To add more operations, simply enter the same routing code and enter a second operation code (example: routing code 'testroute' operation: 20). You will repeat this step of 'adding' operations for as many operations with the routing code 'testroute'. Figure 7.8.1 shows a screenshot of the routing code maintenance menu.

The 'Auto Backflush' check box in the routing code maintenance menu is of particular importance and is used to define whether or not the specific operation within the routing code is reportable or non-reportable. When you manufacture an item at a specific operation, you must either report that operation as complete (Auto Backflush toggle=checked) or allow the system to automatically report it when a subsequent 'reportable' operation is complete. (See production and scrap entry menus). The

last operation should always have it's Auto Backflush box checked. For example, suppose you have five operations, 100, 200, 300, 400, 500 and we set both 200 and 500 as Auto Backflush toggle=checked. In this scenario, you do not have to post production at operations 100, 300, and 400, but you do have to post production at operations 200 and 500. When you post production at 200, the system will automatically post production at operation 100. Similarly, when you post production at 500, the system will 'backflush' operations 300 and 400. The system will always backflush (on your behalf) all previous operations that are not marked backflush...up to the most recent reportable operation which in this case was 200. All operations within a routing code, once posted, will provide visibility of inventory movement and financial cost absorption. Therefore it is imperative that either you post production (or scrap) for each operation or you allow the system to post on your behalf. The final operation should always have Auto Backflush check box checked.

Figure 7.8.1

The image shows a 'Routing Maintenance' form with the following fields and values:

- Routing ID: TESTROUTE
- Site: 1000
- Operation: 10
- Operation Desc: SAMPLE OPERATION 1st
- Set Backflush: ☒ Auto Backflush?
- Work Cell: A1
- Machine: 1
- Setup Hours Per (lotsize): 0
- Run Pieces/Hr: 500
- Run Hours: 0.00200

Buttons at the bottom: Delete, Update, Add.

7.9 Bill Of Material Maintenance (navcode: bomm)

Bill of Material (BOM) is a phrase used to describe the components that comprise a finished good (FG) item or a work in progress (WIP) item. The components that make up the FG or WIP item are maintained in the Bill of Material Maintenance menu. In order to establish a BOM of a FG or WIP item, it is first necessary to make sure that FG or WIP item is defined in Item Master as well as any components that are included. All components must be defined in the item master as well before including them in the BOM of an item. Furthermore, the parent item that is to have the BOM must have a routing defined in the 'routing' field in the item master. This is necessary to establish the operations where the BOM components will be consumed. At a minimum, every FG or WIP item that is to have a BOM must have at least one operation within a predefined routing code (See Routing Maintenance). Once these pre-requisites are established, you can then proceed to create the BOM of an item. The creation of a BOM for an item will change the 'actual' cost of the item, but not the standard cost. The actual and standard cost of the item can be viewed in the 'cost tab' of the item master maintenance menu of the parent item in question. You will notice that establishing a BOM or changing the BOM of a parent item will change the actual cost of the item. The standard cost will only change once you roll the standard with the Cost Maintenance Menu under Inventory → Item Menu → Cost Maintenance.

To add a BOM component to a parent item, go to the BOM Maintenance menu under Inventory → BOM Menu → BOM Maintenance. Enter the parent item in the appropriate field. This field is validated against the item master, so this parent item must be a record in the item master table. Note: The parent item must 1) be of class code 'M' and 2) have a routing created and assigned to the parent in the item master. You can choose the 'default' routing code in the item master for the parent if you do not have a specific routing code. If you enter/choose a legitimate parent item in the item master field (but without a routing) the foreground color will turn red. If you enter/choose a legitimate parent item with a legitimate routing, then the foreground color will turn blue and you can proceed to associate a child component item to this parent item. Choose the component from the list of items in the component drop down selection box. Note: All items in the item master 'except' the parent item will be available for choosing in the selection box. Once you choose the component, then enter the 'qty per' field with the quantity of this component that will be consumed by this BOM. Then, enter the operation where this component will be consumed. As mentioned earlier, the parent item must have a routing defined in the routing field in order for the operation drop down selection box to have operation numbers available. You can then enter an optional reference text note. Once all fields are correctly entered, click the 'Add' button to commit this component to the BOM of the parent item. You will repeat this process as necessary for each component that is needed to complete the parent item. See Figure 7.9.1 for a screen shot of the BOM Maintenance menu.


Once you have the parent item's BOM structure complete, you can set the standard cost of this newly created structure by clicking on the 'Roll Cost' button within the BOM Maintenance menu. This should be done whenever you first establish a parent item or when you make significant change to a parent item's structure.

You can create BOMs with multiple depth levels by adding a WIP item as a component of the parent item. This WIP item will have its own BOM, and therefore the BOM tree will show a multi-level structure to the parent item. WIP items are unique in that you should always ensure that WIP items have their cost rolled (as a parent) before including them in the BOM of a parent. Note: for new parent items, you should always roll standard once the entire BOM is complete.

To Update a BOM, choose the parent item in BOM Maintenance, and then click on the appropriate component item within the tree structure. The event of clicking the component item will retrieve this specific parent/child record association and you can then proceed to update the qtyper, operation, and reference fields as necessary. Click 'Update' when your changes are complete. This will update this record with the new values and the tree structure will automatically adjust in the view. Note: Once you update a BOM record, the actual cost of the parent may change depending on the nature of the update. The standard cost of parent will not change until you roll cost in Cost Maintenance or by clicking the 'Roll Cost' within the Maintenance menu window.

Figure 7.9.1 BOM Maintenance Menu (before 'add' of child to parent)

BOM Maintenance

Parent Item 

Parent Desc

Comp Desc

Component

Qty Per

Operation

Reference

Comp Cost:

Comp Type:

Title 1	Title 2	Title 3	Title 4

Operational WorkCell/Dept

	Production	Simulation
RunRate	<input type="text"/>	<input type="text"/>
SetupRate	<input type="text"/>	<input type="text"/>
BurdenRate	<input type="text"/>	<input type="text"/>
CrewSize	<input type="text"/>	<input type="text"/>
SetupSize	<input type="text"/>	<input type="text"/>
pcs/HR	<input type="text"/>	<input type="text"/>
Setup	<input type="text"/>	<input type="text"/>
LotSize	<input type="text"/>	

Material:
Sim Mat:

Operational:
Sim Oper:

Current Cost:
Sim Cost:

Standard Cost:

Figure 7.9.2 BOM Maintenance Menu (after 'add' of child to parent)

Parent Item

50000001

Parent Desc

parent item

clear

Comp Desc

comp

Component

50000002

▼

Qty Per

1

Operation

10

▼

Reference

Comp Cost:

.00000

Comp Type:

P

Comp	Type	Op	QtyPer	Cost
50000002	P	10	1.0	0.0

Roll Cost

Operational WorkCell/Dept

	Production	Simulation
RunRate		
SetupRate		
BurdenRate		
CrewSize		
SetupSize		
pcs/HR		
Setup		
LotSize	0	

Material:

.00000

Sim Mat:

.00000

Operational:

2.50000

Sim Oper:

.00000

Current Cost:

2.50000

Sim Cost:

.00000

Standard Cost:

.00000

PDF

Delete

Update

Add

50000001

▼

10

▼

50000002

7.10 Cost Maintenance (navcode: roll)

Standard and Actual costing are the only cost methods supported within BlueSeer as of this version. There are several maintenance screens that must be set up to correctly apply stand costing, however, most of these menus are generically applied to many items and once created, are applicable for any new items introduced. The cost of any given item is dependent on whether it's a manufactured part, (finished good or WIP) or a purchased component. This distinction is set in the item maintenance menu with the "Class Code" field for every item. Items of code 'M' usually have processes and routing instructions along with Bill of Material. The cost of an item of code 'M' therefore is a product of the cost of it's BOM and it's processes rolled up in the final item as well as the processes (operations) to manufacture the final item. In the following sections, the process to create the cost of an item (both standard and actual) will be discussed.

Once a Work Cell and a Routing Code have been established, the next step is to add the item master record for the costed item. See [<xref linkend="itemmaint" endterm="itemmainttitle"/>](#) for details on how to add items to the item master. Assuming the item to be costed has bill of material, it will be necessary to add both the Finished product item of class 'M' and one or more raw items of class 'P' to the item master. Once these items have been entered into the item master, the bill of material for the costed item will need to be entered into "BOM Menu" -> "BOM Maintenance". The BOM will dictate how the cost is rolled up from raw components and processes into the final product that is to be costed.

The easiest way to understand the costing module is to walk through an example of the costing procedures. Let's create a hypothetical scenario usually found in the machining job shop environment. The following example assumes that there is a finished product (a rivet for example) called 'myRivet' that is comprised of a single bar of material (raw material) called 'myRAW'. The myRivet final product has but one process to machine the part (turning) in the completion of the final product. This process (or operation) will be labeled 'OP1' and will be comprised of a Work cell where the machining occurs and a routing code that describes the nature of the process of the machining.

First, let's create the Work Cell for the turning operation to be done on MyRivet. Go to 'Routing Menu'|'Work Cell Maintenance' and enter 'WC1' as the Work Cell. Enter a machine code of '1' and choose the default site. You can leave desc blank and choose the default Dept from the drop down list. Now let's assume our labor rate (how much we pay our machinist) to be \$10.00)...so enter '10.00' in the labor rate field (do not put the dollar sign). Also enter 1 for the run crew size and enter 0 for both setup rate and setup crew size (We will assume there is no setup). Let's further assume that we've calculated our burden rate (electricity, rent, etc) to be \$15.00 per item we produce. Enter 15.00 into the burden rate field. Then click 'Add' to create the WC1 work cell.

Second, go to 'Routing Menu'|'Routing Maintenance' and enter 'RC1' in the Routing ID field and enter '1' in the operation field. This will be our routing code (RC1) that describes our one operation (turning) which we have labeled operation '1'. Enter the previously created work cell 'WC1' into the Work Cell field along with machine '1' in the machine field. For simplicity, we will assume no setup by entering setup hours as '0'. Now, the "Run Pieces/Hr" field should be entered as the average number of items we can 'turn' within one hour. Let's assume we can 'turn' 30 items per hour by entering '30' in the run pieces field. You will notice the 'run hours' field is automatically populated with the inverse of the 30 pieces per hour...or (1 / 30) to provide the hours per part. (This field is non-editable and is governed by the "Run Pieces/Hr" field.) Once the above info is provided, click 'Add' to enter the new routing code 'RC1'.

Third, let's now enter our two items (myRivet and myRawBar) to the item master. You can use the default fields in the creation of the item master for both items. However, you will need to distinguish

the 'class' field for both. For 'MyRivet', choose class 'M'. For 'myRawBar' choose class 'P'. Let's enter the final product first. Enter 'MyRivet' in the part number field and choose 'M' for it's class code. In addition, enter the newly created routing code in the routing field as 'RC1'. That is all you need to enter for MyRivet. Click 'Add' to add this part. Now, enter 'MyRawBar' in the part number field for the raw component and choose 'P' for the class code. Also, Enter 20.00 in the 'Material Cost' field. (We will assume our material cost per one bar is \$20.00). Then click 'Add' to add this raw component.

Lastly, let's create the bill of material association between the MyRivet parent and the MyRawBar child. Go to 'BOM Menu'|'BOM Maintenance' and enter 'MyRivet' for the Parent Item and choose 'MyRawBar' as the component. Tab down to 'Qty Per' and enter '.05'. (We are effectively saying that we can get 20 pieces of MyRivet per one bar of 'MyRawBar'...i.e. $1 / 20 = .05$). Now, enter '1' in the operation field...(this is the operation within RC1 that we previously defined). Then click 'Add' to create this BOM record between MyRivet and MyRawBar.

You have now effectively created an 'actual' cost of MyRivet (not a standard cost yet). You can view the actual cost in the item master for MyRivet by going to the Item Maintenance screen and entering 'MyRivet'. You will see the info you entered previously. In the 'Cost' Panel, there are two sets of costs...standard and Current. Click the 'Current' button to see the final cost of the item you just created.

To create a standard cost, go to menu 'Cost Maintenance' under the 'Item Menu' and enter the parent part 'MyRivet'. You can commit a standard cost of the current cost for this item by clicking 'roll' in cost maintenance. You will then be able to review both current and standard cost and a break down of the cost sets (material, labor, burden, overhead, outside) for the item in question including operational cost at each operation.

Figure 7.10.1

The screenshot displays the SAP Item Maintenance Cost panel for part 50000012. The interface includes several sections:

- Parent Tree Structure:** A tree view showing the hierarchy of parts, with 50000012 as the parent and 50000001 and 50000007 as children.
- Component Attributes:** Fields for Component, Description, Qty Per, Operation, and Standard Cost.
- Parent BOM Cost Structure:** A table showing the breakdown of costs for the parent item.
- Parent Routing Cost Structure:** A table showing the routing costs for the parent item.
- Sub Assembly Routing Cost:** A table showing the routing costs for the sub-assembly.

The **Parent BOM Cost Structure** table is as follows:

Type	RollL...	StdLo...	RollU...	StdU...	RollT...	StdTo...
Materi...	13.1	.0000	0.0	.0000	13.1	0.0
Labor	0.0	.0000	0.0	.0000	0.0	0.0
Burden	0.0	.0000	0.0	.0000	0.0	0.0
Overh...	0.0	.0000	0.0	.0000	0.0	0.0
Outsi...	0.0	.0000	0.0	.0000	0.0	0.0
Total					13.1	0.0

The **Parent Routing Cost Structure** table is as follows:

Part	Op	WC	Mch	Desc	Dept	Labor	Burden	Material	Overh...	Service	Setup...	Labor...	Burde...	setup...	runHo...	Lotsize	RollC...	StdCost
50000...	10	test	test		1300	.00000	.00000	453.1...	.00000	.00000	0	0	0	0	0	0	453.1	0.0
total						.00000	.00000	453.1...	.00000	.00000								

The **Sub Assembly Routing Cost** table is as follows:

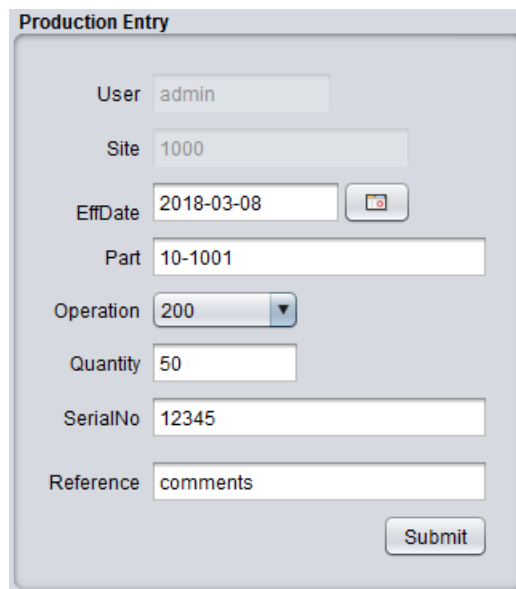
Title 1	Title 2	Title 3	Title 4

7.11 ***Production Entry (Generic) (navcode: prod)***

Production can be entered in one of two ways. It can be recorded via the Production Entry menu or the Production Entry By Plan menu. A description of the generic production entry method is provided here. The production entry menu allows you to record production of your WIP or FG items at each of the operations of that item. This menu does not validate how many times you post production for a given item and given operation (you will want to use Production Entry By Plan if that is an issue). This menu does however validate that the item you enter is a legitimate item and that the item has a legitimate routing with at least one operation. Under most circumstances, reporting production of a finished good or wip at each operation is performed within the Work Cell of that operation. It is therefore possible to lock the allowed operation of reporting to just the operation that is performed at its associated Work Cell. This will prevent unintended posting of a quantity at the wrong operation. Note: reporting of operations other than the last operation is optional. However, you must report production quantities of the last operation. If the previous operations are not marked as milestones, then the act of posting the last operation will auto-backflush the previous (non-milestone) operations at the quantity posted for the last operation. This functionality is provided for situations where it is inconvenient and unnecessary to post at each operation.

To enter production for a WIP or FG item, go to Inventory → Production Menu → Production Entry. The userid, site, and effective date are pre-defined in the text fields. Enter the item to be posted, and tab to the operation drop down selection box. If the item entered is unknown or the item does not have at least one operation, an alert will be generated. Choose the appropriate operation that is being posted. Then enter the quantity to be posted. The serialno and reference fields are optional. Once all required fields have been entered, click 'Submit' to commit the production to the database. An alert will be generated indicating a successful entry, and the cursor will return to the item field for the next entry. Figure 7.11.1 shows a screen shot of the Production Entry Menu.

Figure 7.11.1



The screenshot displays a web-based form titled "Production Entry". The form contains several input fields and a submit button. The fields are arranged vertically: "User" with the value "admin", "Site" with the value "1000", "EffDate" with the value "2018-03-08" and a calendar icon, "Part" with the value "10-1001", "Operation" with a dropdown menu showing "200", "Quantity" with the value "50", "SerialNo" with the value "12345", and "Reference" with the value "comments". A "Submit" button is located at the bottom right of the form.

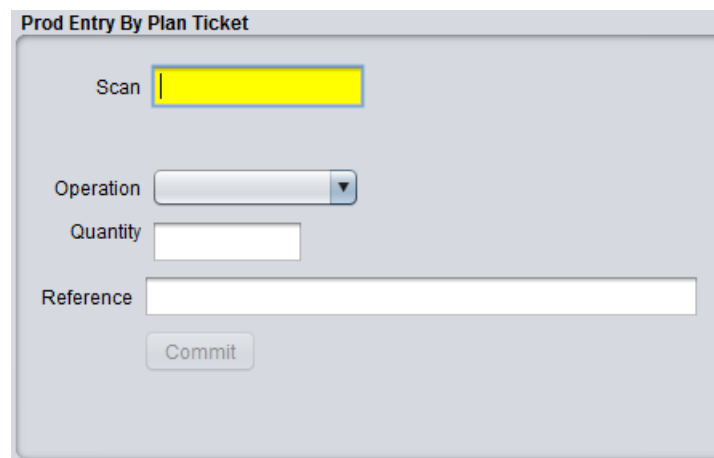
Field	Value
User	admin
Site	1000
EffDate	2018-03-08
Part	10-1001
Operation	200
Quantity	50
SerialNo	12345
Reference	comments

7.12 ***Production Entry By Plan (navcode: prodp)***

Production can be entered in one of two ways. It can be recorded via the Production Entry menu or the Production Entry By Plan menu. A description of the production entry by plan method is provided here. The production entry by plan menu is the preferred method of posting production of your WIP and/or FG items because it allows you to better control the data entry by providing scanable job tickets with specific quantities. These 'planned' job tickets are typically generated by the scheduling menu where quantities and production dates are scheduled through a master schedule. However, you can generate plan tickets from the miscellaneous plan menu.


When a plan ticket is printed (See Scheduling Menu), a bar code is provided on the ticket that contains the value of the plan number. See Figure 7.12.2 for a sample ticket. Each ticket has a unique plan number. Typically, each operation is provided a copy of the plan ticket. This ticket will inform them of the part, quantity, date required, and other info necessary for the production of the specified item on the ticket at that operation. Once production at that operation is complete, the operator will scan the bar code on the ticket, choose their appropriate operation, enter the quantity that they produced, and click commit. Constraints are provided at the scanning event that prevent an operator from reporting more production than is reported on the ticket. You can scan post 'multiple' times, as long as the quantity at each reporting does not exceed the quantity on the ticket. Also, once the posted quantity reaches the ticket quantity for a specified operation, no further posting will be allowed for that operation. If the last operation post quantity reaches the ticket quantity, the ticket will close and the scheduler will see the ticket as closed in the scheduling reports.

Figure 7.12.1



The screenshot shows a software window titled "Prod Entry By Plan Ticket". Inside the window, there are four input fields and one button. The "Scan" field is a yellow rectangular box. The "Operation" field is a dropdown menu with a downward arrow. The "Quantity" field is a white rectangular box. The "Reference" field is a long white rectangular box. Below the "Reference" field is a "Commit" button.

Figure 7.12.2 Plan Ticket for Work Order

MASTER TICKET		Work Order		Print Date: March 08, 2018		Cell: test	
Job#: 100251		Part No: 10-1001		Quantity: 50			
 100251		Cust Part: null Customer: null		Plan Due Date: 2018-03-08 Plan Create Date: 2018-03-08 Plan Sched Date: 2018-03-08			
Routing: ASSY1001							
Operation	Desc	Work Ctr	Mach	Qty Good	Qty Scrapped		
100	FGAssembly	FGAssembly	1				
	p0001 clip	1					
	p0002 clip	3					
200	Packaging	Packaging	1				

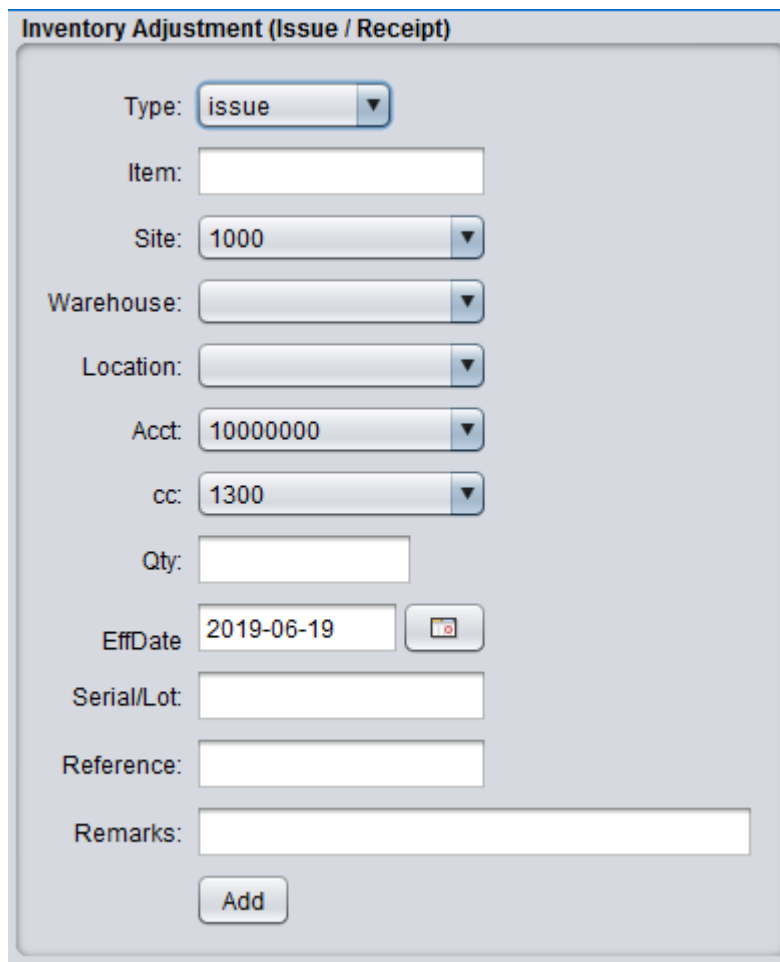
Item Master Data

PartNumber: 50000001	<input type="button" value="New"/>	Status: ACTIVE	Sell Price: 0.00000	NetWt: 0
Description: test item			Purch Price: 0.00000	ShipWt: 0
UnitOfMeas: EA	Prod Code: 9999	Drawing:	LeadTime: 0	
Class Code: M	GroupCode:	CreateDate: 2019-06-19	SafetyStock: 0	
Site: 1000	LotSize: 0	Eng Rev:	MinOrdQty: 0	
Type: FG	Warehouse:	Cust Rev:	QtyOnHand: 495.0	
Location:		Overhead Cost: 0.00000	<input type="checkbox"/> MRP	<input checked="" type="checkbox"/> Plan Orders
Comments:		Outside Cost: 0.00000	<input checked="" type="checkbox"/> Scheduled?	<input type="checkbox"/> Alt BOM
<input type="button" value="Delete"/> <input type="button" value="Edit"/> <input type="button" value="Add"/>		Material Cost: 0.00000		
		Routing:		
		TaxCode:		

7.13 Inventory Adjustments (NavCode: inva)

Manual adjustments to inventory can be accomplished with the Inventory Adjustment menu found under Inventory | Inventory Adjustments Menu | Inventory Adjustment. This menu can also be reached by entering 'inva' in the navigation text-box on the main menu bar. There are two types of adjustments that can be performed in this menu. You can 'issue' items in stock which will relieve inventory for the specified item and quantity or you can execute a 'receipt' adjustment which will put the specified item and quantity into inventory. Both transaction types require a standard 'cost' associated with the item, therefore the item must be in the item master and it must have a standard cost associated with it. You can also choose the specific GL account and cost center to apply the issue or receipt of goods. Serial, reference, and remarks text box fields are optional.

Figure 7.13.1



The screenshot displays the 'Inventory Adjustment (Issue / Receipt)' form. It features several input fields and dropdown menus for specifying transaction details. The 'Type' dropdown is set to 'issue'. The 'Item' field is empty. The 'Site' dropdown is set to '1000'. The 'Warehouse' and 'Location' dropdowns are empty. The 'Acct' dropdown is set to '10000000'. The 'cc' dropdown is set to '1300'. The 'Qty' field is empty. The 'EffDate' field is set to '2019-06-19' with a calendar icon. The 'Serial/Lot' and 'Reference' fields are empty. The 'Remarks' field is a large text area, currently empty. An 'Add' button is located at the bottom of the form.

Field	Value
Type	issue
Item	
Site	1000
Warehouse	
Location	
Acct	10000000
cc	1300
Qty	
EffDate	2019-06-19
Serial/Lot	
Reference	
Remarks	

8 Scheduling

8.1 Scheduler (*NavCode: schm*)

Scheduling of production and/or work-in-process (wip) items is provided for by the Schedule Maintenance menu found under the Inventory menu | Schedule Menu | Scheduler. This menu can also be reached by entering the value 'schm' in the navigation text box on the menu bar. The schedule maintenance menu is a master scheduling report tool that collects all planned orders generated from various sources of demand within their 'due date' window. (See Figures 8.1.1 and 8.1.2 for images of the scheduler). Planned orders can be considered as notifications for production of an item. Planned orders are generated from three possible sources: 1) demand, 2) forecast, and 3) miscellaneous planned orders. Once the planned orders are created, they can be reviewed in the scheduler based on filtering by due date and/or Item number. The scheduler will display both scheduled and unscheduled planned orders with the option of filtering based on this attribute as well.

Typical operation of the scheduler is to display a list of open planned orders by due date (or other sorting options). You would then enter a schedule quantity and choose a work cell. Once these two pieces of information have been added for each line you want to schedule, You will click the 'commit' button. A message box will appear of how many lines you scheduled.

The option to print a schedule ticket (otherwise known as a work order ticket) is provided after confirmation of the planned order has been executed. Once the planned order / work order is completed, there are two options to report and close the plan order. The plan order can be manually closed by going to Production Entry and manually entering the production of the item or going to Production Entry By Plan and scanning the work order ticket to report the production. Both menus will close the planned order job number once the quantity on the ticket reaches the quantity scheduled.

Figure 8.1.1 Image of Scheduler Menu:

Address Purchasing Order Shipping Finance Inventory Engineering Quality Custom HR Admin Help

Scheduler

Cell: ALL

January 2021

From: 2021-01-17 Site: 1000

To: 2021-02-07

☐ Unscheduled Only? ☐ OpenOnly?

Run Commit Hide Detail

Rows 0

Tot Qty Sched 0

Tot Qty Reqd 0

Selected Date Tot Qty 0

Selected Date Tot Avail 0

PlanNbr	Part	DueD...	Type	isSched	Cell	QtySch...	QtyRe...	QtyCo...	Sched...	Order	line	Status	Print	Update	Void
---------	------	---------	------	---------	------	-----------	----------	----------	----------	-------	------	--------	-------	--------	------

Figure 8.1.2 Image of Scheduler Menu with right column detail:

Address Purchasing Order Shipping Finance Inventory Engineering Quality Custom HR Admin Help

Scheduler

Cell: ALL

January 2021

From: 2021-01-17 Site: 1000

To: 2021-02-07

☐ Unscheduled Only? ☐ OpenOnly?

Run Commit Hide Detail

Rows 1

Tot Qty Sched 0.0

Tot Qty Reqd 22.0

Selected Date Tot Qty 0.0

Selected Date Tot Avail 300.0

Pla...	Part	Du...	Type	isS...	Cell	Qty...	Qty...	Qty...	Sc...	Ord...	line	Stat...	Print	Up...	Void
10...	50...	202...	MISC			0	22	0			0	open			

Scheduled On This Date

Pla...	Part	Type	Cell	Qty...	Stat...
--------	------	------	------	--------	---------

Available Cells On This Date

Cell	Capacity	QtySch...	QtyAvail
CELL1	100	0.0	100.0
CELL2	100	0.0	100.0
CELL3	100	0.0	100.0




8.2 Navigating the Scheduler (NavCode: schm)

The scheduler window consists of a main calendar, selection fields for filtering, and several tables one of which is the main report table. See figures 8.1.1 and 8.1.2. There are also three buttons within the filtering panel. Clicking the 'run' button loads the main report table with any planned order records (scheduled and unscheduled) that fall within the selection window of the from / to date and checkbox selections. The from / to date selection criteria is based on the 'due' date of the planned order. You can also choose to show only scheduled or unscheduled planned orders by checking the appropriate check box in the filtering panel.

Once the main report is filled with planned orders, you have the option to schedule those planned orders by choosing a cell, choosing a scheduled quantity, and applying a scheduling date. **Note: The scheduled date is chosen from the selected date from the primary Calendar.** By choosing a cell, entering a schedule quantity, and selecting a calendar date, you can commit the planned orders to 'scheduled' by clicking the commit button. You can then click the run button to show that the planned orders are indeed scheduled.

Clicking on a date within the calendar serves two functions. The first function is that the selected date defines the date used for the schedule date when committing planned orders. The second function drives the display of two tables that provide detail on any planned orders scheduled on the date selected as well as an availability table that shows all cells that have availability on the date selected from the calendar. The availability quantity is based on the capacity of the cell as defined in the appropriate 'cell' record in Generic Code Maintenance less the accumulated quantity scheduled on that date. These two tables can be 'hidden' by clicking the 'hide detail' button in the filtering panel. Clicking on any date in the calendar will re-display these two tables.

The drop-down Cell column is a collection of values that can be maintained in Generic Code Maintenance. There are three 'default' cells that are provided with the installation. You can remove these in Generic Code Maintenance as adjust as necessary. Within the Generic Code Maintenance menu, the 'code' should always be 'CELL' for any new records entered. The key text field will be the name of the cell and will be visible in the drop-down menu in the main report table. The 'value/desc' text-box field should be defined with the capacity of that cell for a single day. An example of the three default records are shown below in Generic Code Browse menu (navcode=genb).

select	Code	Key	Value/Desc
	CELL	CELL1	100
	CELL	CELL2	100
	CELL	CELL3	100

8.3 Example of the Scheduler Usage

An example of a scheduling scenario is provided below. The first step is to insure that the item is in the item master and that the appropriate toggle flags are provided. The toggle boxes highlighted in yellow in the item master image below (figure 8.15.1) need to be checked for the item that is being scheduled.

Fig 8.15.1

The screenshot displays the 'Item Master Data' form. The 'PartNumber' is 50000001, 'Status' is ACTIVE, and 'Description' is 'test item'. The 'UnitOfMeas' is EA, 'Prod Code' is 9999, 'Class Code' is M, 'Site' is 1000, and 'Type' is FG. The 'Comments' field is empty. The 'Delete', 'Edit', and 'Add' buttons are at the bottom. The 'Toggle Flags' section includes 'MRP' (unchecked), 'Plan Orders' (checked), 'Scheduled?' (checked), and 'Alt BOM' (unchecked). The 'Location Quantities' table is empty.

TranType	Date	TranNbr	Qty

Site	Loc	Qty	LastDate

Once the item has been set up correctly in the item master, you can either enter a sales order for the item, enter a forecast for the item, or enter a Miscellaneous Planned Order for the item. This example considers the latter. TO enter a miscellaneous planned order, enter 'plan' in the navigational text box. Choose the item you wish to schedule, choose the appropriate site, and enter a desired quantity. Then, choose a date that this item is 'due' which can be interpreted as a date this item is expected to be completed. Note: The scheduler sorts by this 'due date' so accurate date selections are imperative. Then, click 'Add' and this planned order will be created. See image 18.5.2 for an example of entering the planned order.

Fig 18.5.2

Misc Plan Maintenance

Part Number: 50000001

Site: 1000

Quantity: 500

Due Date: 2019-06-19

Remarks:

Add

Once you've entered the planned order, go to the scheduler menu (navcode="schm") and choose the due date window that is appropriate to the due date you entered in the planned order. Then click 'Run'. You will then see the item as unscheduled in the table. Note that the 'cell' and 'qty Sched' fields will be highlighted in a green background color and the 'isSched' toggle box will be unchecked. See Figure 18.5.3 (a and b) below. Figure a is a close-up of figure b and shows the pertinent information to the planned order.

Fig 18.5.3a

From DueDate: 2019-06-16 To DueDate: 2019-07-07

From Part: To Part:

From Cell: To Cell:

Run Export

☐ Unscheduled Only?

☐ OpenOnly?

JobNbr	Part	DueDate	Type	isSched	Cell	QtySched	QtyRequired
100251	50000001	2019-06-19	MISC	<input type="checkbox"/>	zz	495	500

Fig 18.5.3b

Address Purchasing Order Shipping Finance Inventory Engineering Quality Custom HR Admin Help

From DueDate: 2019-06-16 To DueDate: 2019-07-07

From Part: To Part:

From Cell: To Cell:

Run Export

☐ Unscheduled Only?

☐ OpenOnly?

Commit Rows: 1

Total Sched Qty: 0.0

Total Req'd Qty: 500.0

JobNbr	Part	DueDate	Type	isSched	Cell	QtySched	QtyRequired	QtyComp	SchedDate	Order	line	Status	Print	Update	Void
100251	50000001	2019-06-19	MISC	<input type="checkbox"/>	zz	495	500	0			0	open			

Notice that the Planned Order Number is assigned automatically and is labeled as the 'JobNbr'

column in the Scheduler report table.

The next step is to enter a 'cell' and 'QtySched' for the Job number you are scheduling. The Cell is an arbitrary value and is used to designate where the operation / work is being performed. This field is not validated and can be any value you choose. The QtySched field is typically the same as 'QtyRequired' which was assigned from the original quantity entered in the miscellaneous planned order you created. You have the option of entering more or less than this quantity as desired. Once you have entered a cell and a scheduled quantity, you then click 'confirm' and it will assign the scheduled toggle column with a check mark, confirming the schedule. Once you click confirm, a dialog will appear confirming the number of scheduled items that were confirmed (in the case you scheduled more than one jobnumber). The images below show the succession of events after confirming. You then click 'run' again, and you will notice the jobnbr record you scheduled shows the isSched toggle flag as checked. You can then print a work order ticket, update the scheduled quantity or void the ticket as appropriate. Note: You can only update the cell and scheduled quantity (as long as no production has been reported). If you wish to change the scheduled date, you will have to void the schedule jobnbr and reschedule the item. Once you have scheduled the line item, you can print the work order ticket as shown in Figure 18.5.4.

Confirmation of schedules:

The screenshot shows the Scheduler interface with a confirmation message dialog. The dialog box is titled "Message" and contains an information icon (i) and the text "1 Schedules Committed". There is an "OK" button at the bottom right of the dialog.

The background interface includes a menu bar (Address, Purchasing, Order, Shipping, Finance, Inventory, Engineering, Quality, Custom, HR, Admin, Help) and a toolbar with buttons for "Run" and "Export". Below the toolbar are input fields for "From DueDate" (2019-06-12), "To DueDate" (2019-07-03), "From Part", "To Part", "From Cell", and "To Cell". There are also checkboxes for "Unscheduled Only?" and "OpenOnly?".

JobNbr	Part	DueDate	Type	isSched	Cell	QtySched	QtyRequired	QtyComp	SchedDate
--------	------	---------	------	---------	------	----------	-------------	---------	-----------

Clicking 'Run' again once confirmation Order has been executed.

The screenshot shows the Scheduler interface after clicking 'Run'. The background interface is the same as the previous screenshot, but the "Run" button is now disabled. The "Commit" button is visible on the right side of the interface.

JobNbr	Part	DueDate	Type	isSched	Cell	QtySched	QtyRequired	QtyComp	SchedDate	Order	line	Status	Print	Update	Void
100251	50000001	2019-06-10	MISC	<input checked="" type="checkbox"/>	zz	495	500	0	2019-06-10		0	open			

Summary statistics on the right: Rows: 1, Total Sched Qty: 495.0, Total Req'd Qty: 500.0.

Figure 18.5.4 ...showing Work Order / Job Number Ticket

Address Purchasing Order Shipping Finance Inventory Engineering Quality Custom HR Admin Help

Scheduler

Cell: ALL

PlanNbr	Part	DueD...	Type	isSched	Cell	QtySch...	QtyRe...	QtyCo...	Sched...	Order	line	Status	Print	Update	Void
100251	50000...	2021-...	MISC	✓	C...	22	22	0	2021-...		0	open			

January 2021

01 02 03 04 05 06

From: 2021-01-15 To: 2021-02-05

Run Comr

Rows

Tot Qty Sched

Tot Qty Req

Selected Date Tot Qty

Selected Date Tot Avail

jobticket.jasper

Work Order

Print Date: January 22, 2021 Cell: C

Job/Lot#: 100251 Part No: 50000001 Quantity: 22.0

Description: my test item Plan Due Date: 2021-01-20

Cust Part: N/A Plan Create Date: 2021-01-20

Customer: N/A Plan Sched Date: 2021-01-22

PO: N/A OrderType: MISC

Routing: default

Operation	Desc	Work Ctr	Rate(per/hr)	Qty Good	Qty Scrapped
10	default routing (non-prod)	default	10		

Now that you have a scheduled work order created, you can then provide the ticket to your production crew and have them complete the work order. Once the production is complete, you need to report production to the system. The easiest method to accomplish this is to scan the Work Order ticket upon completion of the job. Enter navigation code "planp" in the navigation text box and you will be directed to the "Production Entry By Plan Ticket" Menu. (See image below). Once at this menu, scan the barcode on the ticket, and it will retrieve the appropriate planned order record. Note: if the item on the work order does not have any operations defined, a message indicating so will flash in

yellow. This is a passive warning and indicates that no raw material or labor will be committed. For most production reporting, you will want to insure that your items have operations associated with the manufacturing of the item, however, the system will allow you to report production without it. Enter the quantity produced and click 'commit'. If the quantity is greater than or equal to the scheduled quantity, the schedule will be marked as 'closed' and you are finished. If the quantity reported is less than the scheduled quantity, then the work order will remain open until the scheduled quantity is reached. You can override this by voiding the ticket if you no longer wish to reach the targeted scheduled quantity and you wish to close the ticket. The final image below shows the scheduler menu of the work that was just closed. Note the text color is 'blue' and the status of the work order is 'closed'. These records will continue to show in the window because of the due date selection, however you can hide the closed work orders by clicking the 'openOnly' toggle box before clicking 'Run' in the scheduler menu.

Scanning the Work Order ticket.

Prod Entry By Plan Ticket

Scan: 100251

50000001 No Operations...make ...

Operation: 0

Quantity: 495

Reference:

Commit

Scheduler Menu after closing the scheduled order by posting production.

Address Purchasing Order Shipping Finance Inventory Engineering Quality Custom HR Admin Help

From DueDate: 2019-06-16 To DueDate: 2019-07-07 From Part: To Part: From Cell: To Cell: Run Export

☐ Unscheduled Only? ☐ OpenOnly?

JobNbr	Part	DueDate	Type	isSched	Cell	QtySched	QtyRequired	QtyComp	SchedDate	Order	line	Status
100251	50000001	2019-06-19	MISC	<input checked="" type="checkbox"/>	zz	495	500	495	2019-06-19		0	closed

Once the work order is closed and production is reported, the item master for the item just reported will denote the quantities just reported and the transactions that occurred to update the quantities in inventory. You will also note that the QtyOnHand field in the item master has been updated with the addition of the quantities produced. See Image below of the Item master after scanning the work order ticket and closing the ticket.

Image of Item Master after closing of work order ticket and production reporting:

Item Master Data

PartNumber

50000001

New

Status

ACTIVE

Sell Price

0.00000

NetWt

0

Description

test item

Purch Price

0.00000

ShipWt

0

UnitOfMeas

EA

Prod Code

9999

Drawing

LeadTime

0

Class Code

M

GroupCode

CreateDate

2019-06-19

SafetyStock

0

Site

1000

LotSize

0

Eng Rev

MinOrdQty

0

Type

FG

Warehouse

Cust Rev

QtyOnHand

495.0

Location

Overhead Cost

0.00000

MRP

☐

Plan Orders

☒

Comments

Outside Cost

0.00000

Scheduled?

☒

Alt BOM

☐

Delete

Edit

Add

Material Cost

0.00000

Routing

TaxCode

Recent Inventory Transactions

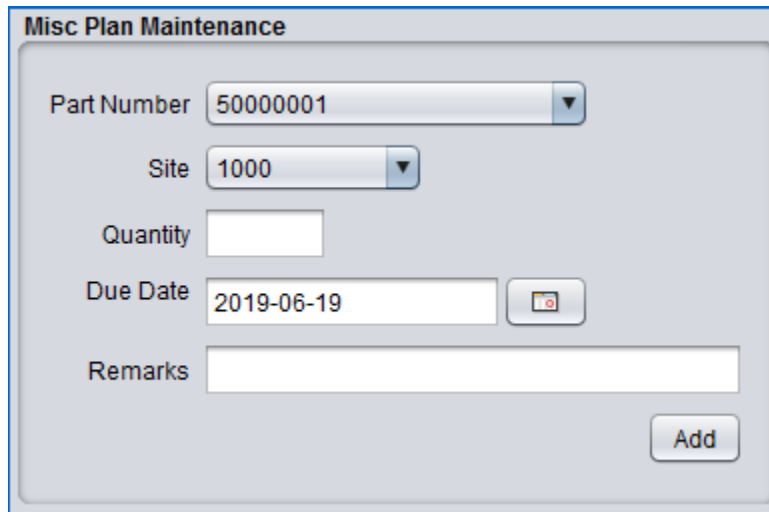
type	date	tranID	qty
RCT-FG	2019-06-19	1	495.0

Location Quantities

Site	Loc	WH	Qty	Date
1000			495	2019-06-19

8.4 Miscellaneous Plan Maintenance (navcode: plan)

Miscellaneous Plan Maintenance is used to create demand for production and scheduling. The menu is under the parent Inventory | Schedule Menu | Misc Plan Maintenance. You can also navigate to this menu by entering 'plan' in the Navigation text box on the main menu bar. Plan Maintenance is designed to allow for quick entry of 'demand' that would have otherwise come from Sales Orders or Forecast entries. In lieu of the latter demand, you can enter demand for any item that is defined in the item master. The below figure shows an example of the Plan Maintenance entry screen. The process is to choose an item and entering a quantity. Then choose a due date that you wish this item to be completed (due) and click 'Add'. This will create a Misc Plan record that will create 'miscellaneous' demand in the system and also be visible at the scheduling menu for scheduling / work order printing options. The remarks field is optional and will be visible on the Work Order Ticket if one is printed.



The screenshot shows a window titled "Misc Plan Maintenance". It contains the following fields and controls:

- Part Number:** A drop-down menu showing "50000001".
- Site:** A drop-down menu showing "1000".
- Quantity:** A text input field.
- Due Date:** A text input field showing "2019-06-19" with a calendar icon to its right.
- Remarks:** A large text input field.
- Add:** A button located at the bottom right of the form.

The choice of item is a drop-down list that is assigned from items in the item master. The assignment of the drop-down list is independent of item 'type', but does depend on certain toggle flags in the item master. In order for an item to appear in the drop-down list on plan maintenance, the 'scheduled?' toggle box and the 'Plan Orders' toggle box must be checked in the item master as shown below.

8.5 Forecast Maintenance(navcode: fore)

The Forecast Maintenance menu provides a method for maintaining expected weekly production values per item per year. Forecast schedules are best used in environments where the order to ship cycle is relatively short and you are able to extrapolate the expected ship volume of your items from historical information. These forecasted volumes can be translated into plan tickets by the forecast to plan menu, thus allowing you to create plan tickets based on these expected volumes.

To enter a forecast record, enter the item, site, and year in the forecast maintenance menu and then enter each of quantity fields representing the 52 weeks of the specified year. Once the quantity fields have been entered, click 'Add' to commit the item forecast record. See Figure 5.11 for a screen shot of the forecast maintenance menu.

Once you have entered your forecast records, and you wish to create plan tickets for these records, go to Inventory → Schedule Menu → Forecast to Plan Sync. In this menu, you can select a range of sites and items to create plan tickets from forecast records. Choose your range, and click commit. You should then go to Inventory → Schedule Menu → Scheduler to see your newly created plan records in the scheduler.

The Forecast To Plan Sync will only process forecast records that have a date that is greater than the day of execution. It will not create plan records for previous weeks earlier than the day of execution. Also, only forecast records 13 weeks out from the day of execution will create plan records. If you run it multiple times within a 13 week period, only forecast records that have a quantity change or newly added quantities will create/adjust plan records. All plan records previously created from forecast records that do not exhibit a forecast quantity change for that specific due date will not be adjusted.

You can review your forecast records per item by going to Inventory → Schedule Menu → Forecast Browse or Forecast View 13 Weeks. The Forecast Browse will simply display all items including a select button to toggle between browse and the Forecast Maintenance Screen. The Forecast View /13 weeks will allow you to see all item forecast records, but also any plan record generated for that item regardless of type. There are three types of plan records. Miscellaneous (MISC), Forecast (FCST), and Order (ORD). This latter menu will allow you to see all plan records generated for this item along with type and status of each plan record as well as the forecasted quantities for this item up to 13 weeks.

Figure 5.11a Forecast Maintenance Menu

Forecast Maintenance

Part

Get

Add

Edit

Delete

Site

1000

Year

2018

01/01/18	0	04/02/18	0	07/02/18	0	10/01/18	0
01/08/18	0	04/09/18	0	07/09/18	0	10/08/18	0
01/15/18	0	04/16/18	0	07/16/18	0	10/15/18	0
01/22/18	0	04/23/18	0	07/23/18	0	10/22/18	0
01/29/18	0	04/30/18	0	07/30/18	0	10/29/18	0
02/05/18	0	05/07/18	0	08/06/18	0	11/05/18	0
02/12/18	0	05/14/18	0	08/13/18	0	11/12/18	0
02/19/18	0	05/21/18	0	08/20/18	0	11/19/18	0
02/26/18	0	05/28/18	0	08/27/18	0	11/26/18	0
03/05/18	0	06/04/18	0	09/03/18	0	12/03/18	0
03/12/18	0	06/11/18	0	09/10/18	0	12/10/18	0
03/19/18	0	06/18/18	0	09/17/18	0	12/17/18	0
03/26/18	0	06/25/18	0	09/24/18	0	12/24/18	0

Figure 5.11b Forecast to Plan Sync

Commit Fcst To Plan

From Site

To Site

From Part

To Part

Commit

8.6 MRP Maintenance (navcode: mrpx)

BlueSeer provides Material Resource Planning (MRP) functionality at both the finished good and component levels based on demand. Demand is defined as any finished good item that is assigned to an *open* sales order. In order for an item to be considered for MRP, the item in the item master record must have the 'mrp' toggle flag checked. See image below of an example finished good item that has the appropriate toggle flag checked.

The screenshot displays the 'Item Master Data' form for a finished good item. The 'PartNumber' is 50000001, 'Status' is ACTIVE, and 'Description' is 'test item'. The 'UnitOfMeas' is EA, 'Prod Code' is 9999, 'Class Code' is M, 'Site' is 1000, 'Type' is FG, and 'LotSize' is 0. The 'Warehouse' and 'Location' are empty. The 'Comments' field is empty. The 'Sell Price' is 0.00000, 'Purch Price' is 0.00000, 'Drawing' is empty, 'CreateDate' is 2019-06-19, 'Eng Rev' is empty, 'Cust Rev' is empty, 'Overhead Cost' is 0.00000, 'Outside Cost' is 0.00000, 'Material Cost' is 1.00000, 'Routing' is empty, and 'TaxCode' is empty. The 'NetWt' is 0, 'ShipWt' is 0, 'LeadTime' is 0, 'SafetyStock' is 0, 'MinOrdQty' is 0, and 'QtyOnHand' is 494.0. The 'MRP' toggle flag is checked, and 'Plan Orders' is also checked. 'Scheduled?' is checked, and 'Alt BOM' is unchecked.

Recent Inventory Transactions

type	date	tranID	qty
RCT-FG	2019-06-19	1	495.0
ISS-MISC	2019-06-19	2	-1.0

Location Quantities

Site	Loc	WH	Qty	Date
1000			494	2019-06-19

The process for applying the MRP processor is fairly simple. Any open sales orders that have finished good items with the MRP flag checked will be seen as demand by the MRP engine and that specific items projected demand versus production will be calculated for a series of weeks and viewable in the MRP report tool. Furthermore, any components of the finished good item on the order will also be considered with subsequent calculations of it's projected usage versus on-hand quantity. In order for components to be considered, these items must also have their 'mrp' toggle flag checked in the item master. One of the initial configurations required for applying MRP processing to components is to ensure that they are well defined in the Bill of Material of it's parent Finished Good. The MRP processor will walk through the bill of materials for any finished good item on an open sales order and calculate projected quantities based on the product of qty-per of the component in the bill of material and parent item quantity on the order.

The first step to using the MRP engine is to perform the level assignment of all components in all bill of materials. Once this step is performed, you do not have to process it again unless you change any bill of material or you add new finished goods with new bill of materials. To process the level assignment, go to the MRP Regenerate menu under Inventory | MRP Menu | MRP Regenerate.

This menu can also be reached by entering 'mrpx' in the navigational text box on the main menu bar. An image of the MRP regenerate menu is provided below.



To calculate the level assignment, simply choose the site in the drop-down selection box and click 'level'. Note: this function will assign all components a maximum 'level' based on their relationship to parents in their respective bill of materials. This is used by the MRP engine to calculate each components usage quantity regardless of what level the component exists in the bill of material. NOTE: The mrp engine can only walk a bill of material that is no more than 7 levels deep. The image below shows execution of a single item with no bill of material...hence the function only reached level 0. Any finished item with 'children' will reach level 1. 'grand-children' will reach level 2...so on and so forth. The processing time of the level function will be commensurate with the number of items in your item master that are 'mrp' checked and the depth of your bill of material.

Once the level assignment has been performed (once if no bom changes), you can run the MRP processor as often as necessary. It is typically ran once a day and should be ran 'consistently' at the same time of day to ensure repeatable results. Simply click 'MRP' in the MRP Regenerate menu (Navcode: mrpx) and the mrp processor will process 'new' mrp records which will reflect a current snapshot of demand versus quantity on hand versus production for finished goods and components. See figure 8.16.2 for a typical run example of the MRP engine.

Figure 8.16.1

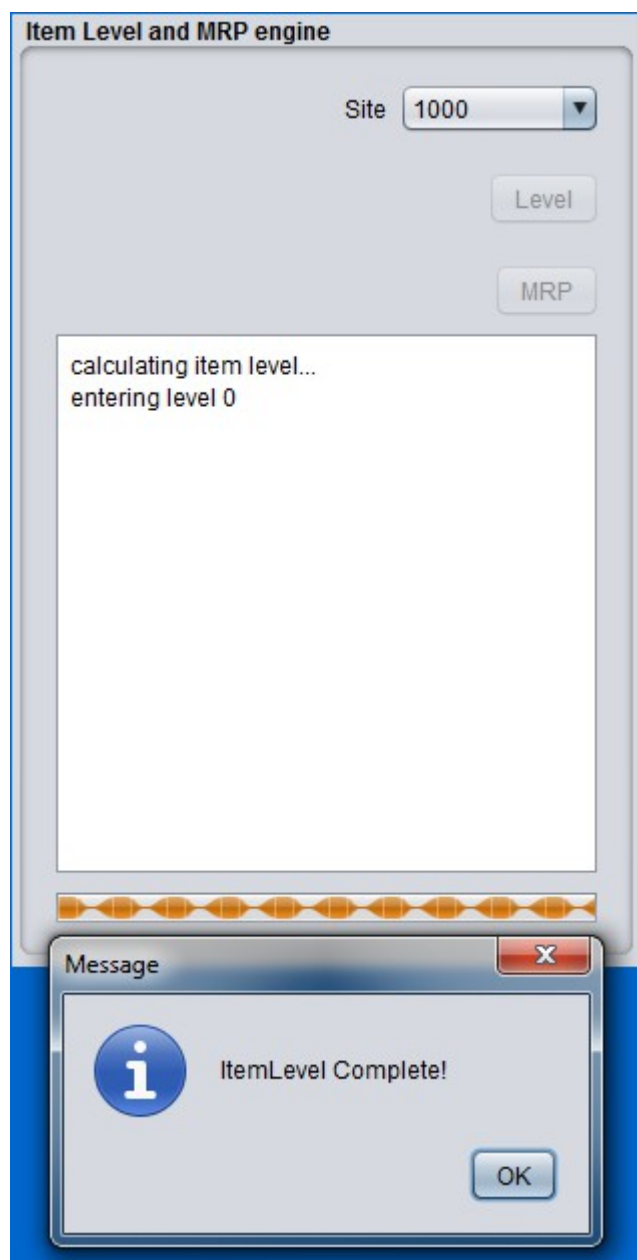
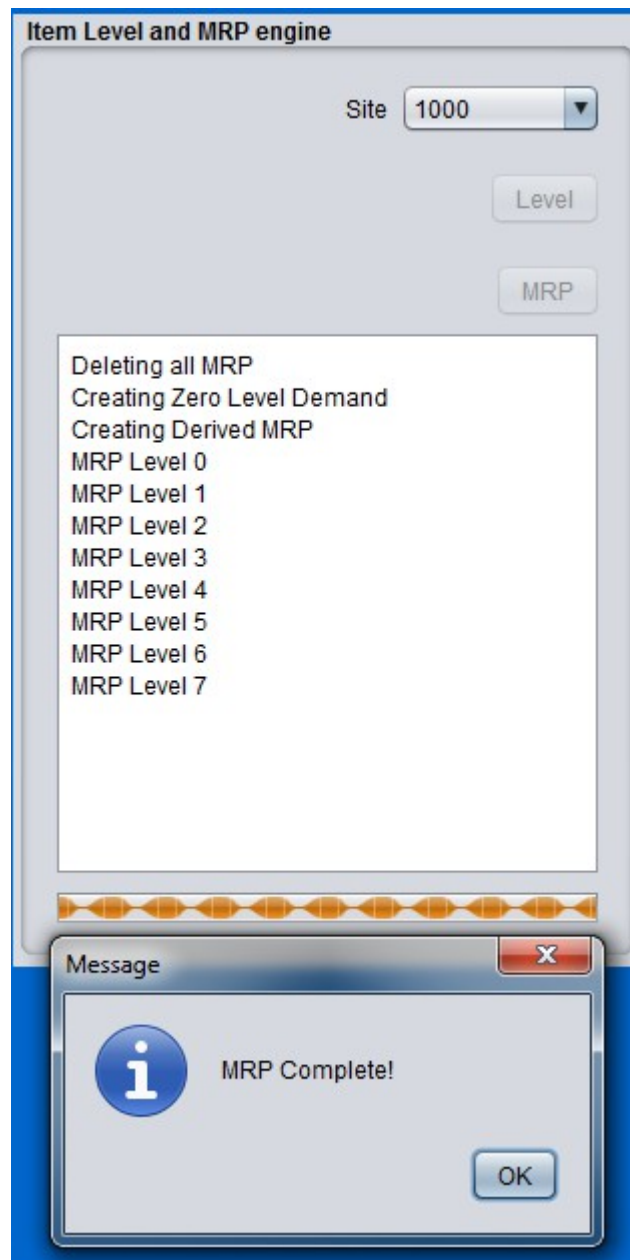


Figure 8.16.2



8.7 MRP Browse (*navcode: mrpb*)

To review the results of running the MRP processor, go to Inventory | MRP Menu | MRP Browse or enter 'mrpb' in the navigation text-box on the main menu. The MRP Browse menu allow you to view the results after MRP processor has run. You can filter the report by item type (class code 'M' or 'P' or 'A') as well as filtering based on item part number. Choosing class code 'M' will provide mrp details on the finished good item while class code 'P' will provide requirement quantities on the raw components (purchased items) in a traditional BOM structure. Class code 'A' will reflect material requirements of item quantities that are both bought and sold in a traditional retail business scenario.

The MRP processor provides visibility of demand versus production for up to thirteen weeks. The browse window allows you to choose the individual week. You must click the search button after every change in week selection to display that specific weeks movement. The MRP Browse window shows three rows of quantities for each week per item. The calculated quantities for each item are the 'demand', 'plan', and 'QOH' (quantity on hand). For each day of the week that is displayed, a rolling reduction of QOH is display as any demand consumes the item and a rolling addition is shown as any planned work orders compensate for the demand consumption. An example of the MRP Browse window is shown below in figure 8.16.3. One of the better features of the MRP browse is the ability to see the planned work orders that are used to calculate the usage as well as the specific sales orders that comprise the demand. Another feature is the display of the recent inventory transactions for the item in view. This extra visibility (see image 8.16.4) provides a one stop report for determining source and sinks of item demand/usage without having to leave the report window.

With regards to monitoring class 'A' items, the mrp browse report can show the demand versus replenishment quantities. Class 'A' items are used on both purchase orders and sales orders in typical retail fashion, and the detailed sales orders and purchase orders that constitute the quantity movement can be viewed in the report by clicking on the appropriate row select icon.

Figure 8.16.3

MRP Browse

☐ Class M Week1
☐ Class P Site 1000
☒ Class A

From:
To:

Type
QOH
Cost

Select	PART	CALC	Mon-02-03	Tue-02-04	Wed-02-05	Thu-02-06	Fri-02-07
	50000001	DEMAND	0	0	0	22	0
	50000001	PURCH	0	0	0	0	0
	50000001	QOH	45.0	45.0	45.0	23.0	23.0
	50000002	DEMAND	0	0	0	0	0
	50000002	PURCH	0	0	0	0	0
	50000002	QOH	0.0	0.0	0.0	0.0	0.0
	50000003	DEMAND	0	0	0	0	0
	50000003	PURCH	0	0	0	0	0
	50000003	QOH	20.0	20.0	20.0	20.0	20.0
	50000004	DEMAND	0	0	0	0	0
	50000004	PURCH	0	0	0	0	0
	50000004	QOH	3.0	3.0	3.0	3.0	3.0

type	date	qty
------	------	-----

Figure 8.16.4

MRP Browse

☐ Class M Week1
☐ Class P Site 1000
☒ Class A

From:
To:

Type ASSET
QOH 45.0
Cost 11.0

Select	PART	CALC	Mon-02-03	Tue-02-04	Wed-02-05	Thu-02-06	Fri-02-07	Sat-02-08	Sun-02-09
	50000001	DEMAND	0	0	0	22	0	0	0
	50000001	PURCH	0	0	0	0	0	0	0
	50000001	QOH	45.0	45.0	45.0	23.0	23.0	23.0	23.0
	50000002	DEMAND	0	0	0	0	0	0	0
	50000002	PURCH	0	0	0	0	0	0	0
	50000002	QOH	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	50000003	DEMAND	0	0	0	0	0	0	0
	50000003	PURCH	0	0	0	0	0	0	0
	50000003	QOH	20.0	20.0	20.0	20.0	20.0	20.0	20.0
	50000004	DEMAND	0	0	0	0	0	0	0
	50000004	PURCH	0	0	0	0	0	0	0
	50000004	QOH	3.0	3.0	3.0	3.0	3.0	3.0	3.0

Part	SalesOrder	Type	Status	DueDate	Qty
50000001	10002	SORD	close	2020-02-04	20
50000001	10003	SORD	open	2020-02-06	22

type	date	qty
RCT-FG	2020-02-04	65.0
ISS-SALES	2020-02-04	20.0

8.8 Retail Replenishment (navcode: reor)

The retail replenishment report specifically addresses inventory movement of items typically found in the retail sector where items are purchased as a complete product and sold at a higher price without modifications to the item. The same item in the item master can be used on both purchase orders (replenishment) and sales orders (demand) in an order fulfillment scenario. Items to be used as 'retail items' must be marked as Class Code 'A' in the item master in order to trigger specific logic within the MRP processor, MRP browse, and retail replenishment reporting.

The retail replenishment report can be used in conjunction with the MRP Browse report to view movement of retail items. Both reports complement each other with the replenishment report providing signal flags for reordering merchandise and the MRP browse report showing the actual movement of quantities as a function of demand and replenishment over a 13 week period.

To view the retail replenishment report, go to Inventory | MRP Menu | Retail Replenishment Report or enter 'reor' in the navigation text-box on the main menu. The report provides information on items marked as class code 'A' only. You can filter the items based on item part number in the *from* and *to* drop down selection boxes. The report gives various information that is helpful for determining sufficient quantity on hand to support the demand for the specific item. To run the report, simply choose your item range and site and click run. If you click the basket button in the table for a specific item, you will see two more panels with sales order detail and purchase order detail for this specific item for this specific date range window (based on leadtime). To hide the detail panels, click 'Hide Detail'. Also, there is a csv button that will export the contents of the summary panel to a .csv file. Note: you have to click 'run' first before you can click the csv button. The PDF button is not yet supported and is for future use only.





The following fields are provided :

- **Select** clicking the basket icon provides the current sales orders (demand) and purchase orders (replenishment) for the specific item. Note: the date range of the sales orders and purchase orders reported here are determined by the *leadtime* of the Item. Any **open** sales orders or purchase orders with **due dates** up to today + *leadtime* will be shown. You can override the *leadtime* look ahead value by checking the override checkbox and keying in a non-zero number of days forward (ex: 90, 180, etc). You must click the run button again for any changes to the filtered input. Note: **due date** is defined as the actual ship date of the item on the sales order or expected receive date item on the purchase order.
- **LeadTime** this column represents the leadtime as defined in the item master menu for this specific item. The leadtime is an integer field representing number of **days**. This value is used only for the application of purchasing. It is the minimum number of days required for your vendor to deliver the product from the date/time the purchase order is placed. Note: this field does not actively adjust or calculate purchase order due dates. Due dates are manually determined by the person entering the purchase order based on information about each item's leadtime value.
- **QOH** (quantity on hand) this is the current quantity on hand from the viewpoint of actual inventory in house regardless of allocated or unallocated. It can be viewed as inventory that has not been shipped or received.
- **UQOH** (unallocated quantity on hand) this is simply the difference between actual Quantity on Hand (QOH) and allocated quantity on hand (AQOH). This is the actual field that is used in the calculation of the 'state' (status) of the item inventory.

- **SafetyStock** this column represents the safety stock field in the item master for this specific item. The value of safety stock is determined manually and is based on movement I/O of the item in question. Typically, the safety stock is set to the total quantity sold within the timespan of the leadtime. For example, if item X has a lead time of 42 days and the average quantity sold with 42 days is 100 units, then the safety stock should be set to 100. However, this is completely subjective to the product and the nature of the retail business and should be reviewed and set with realistic variables.
- **POQty** (purchase order quantity) this column represents a summation of any **open** purchase orders for this specific item's quantities. The purchase orders selected are the ones with due dates for the expected delivery of the item within the leadtime window of the item forward from the current date. For example, any PO with an expected delivery date of the item that is greater than today but less than today + leadtime is considered. The resultant summed quantity will be considered as legitimate *supply* for the calculation of item supply versus demand.
- **DemandUnallocated** (sales order quantity) this column represents a summation of any **open** sales order with this specific item that does not have enough UQOH to meet the order quantity. The sales orders selected are the ones with due dates for the expected shipment of the item within the leadtime window of the item forward from the current date. For example, any Sales Order with an expected ship date of the item that is greater than today but less than today + leadtime is considered demand. Furthermore, any quantity that could not be allocated because of insufficient UQOH will be summed here.
- **FwdQty** (sales order quantity forward) this column is only a representation of all sales order quantities for this item for the date range of current date through leadtime. This is all open quantities independent of allocated or unallocated. This field is used in the **Ratio** calculation along with **FcstQty**. This field is not used in assignment of status.
- **FcstQty** (forecast qty) this column represents the total summed quantities of all forecast records for this item for the date range of current date through leadtime. This field is used in the **Ratio** calculation along with **FwdQty**. This field is not used in assignment of status.
- **Ratio** this column is used to gauge the legitimacy of the forecast of this item. This ratio should reflect a low percentage if both forecasting is accurate **and** the demand is dispersed throughout the duration of the leadtime. For example, if the leadtime of the item is 40 days then **FcstQty** is the sum of forecasted quantities in the next 40 days. Likewise, the **FwdQty** is the sum of the open sales order quantity for this item for the next 40 days. The ratio of **FwdQty** to **FcstQty** should reflect (1 / leadtime) reduction (assuming even disbursement). Given a 40 day leadtime, it is expected that **FwdQty** should be ~ 2% of forecasted quantity. The legitimacy of the ratios are subject to order frequency and size, but can be used to gauge how fast the consumption of forecast is occurring. *Large ratios should be considered a red flag.* This column is not used in the assignment of the status field, and should only be used as a potentially useful indicator.
- **Status** The status field is a calculation that indicates one of four possible color-coded values based on the logic below :
 - **urgent** Any item where the unallocated quantity on hand (UQOH) plus the expected PO delivery quantities is **less** than the total unallocated demand for the given date range (today + leadtime). In this scenario, there is neither sufficient on-hand quantity nor PO replenishment quantity to meet existing and new demand.

- The status column values are based on the variables within the leadtime window which is unique for each item. You can override this by checking the Override checkbox and keying in a number of days to look forward. This new timeline window will be defined as starting today to (today + DaysForward). This new date range window will be applicable for all items regardless of their specific leadtime. You can use this to take a larger look at forward demand and purchasing timeline windows....assuming you have demand and replenishment orders scheduled at more distant dates. A good rule of thumb is to look at days forward > than 2 x your largest leadtime. If safety stock and replenishment orders are satisfactory, then you should see mostly good statuses.

Figure 8.18.2 shows a sample screenshot of items with both the sales order detail and purchase order detail screens visible for each item. Note: the order of panels is 1) summary panel, 2) sales order panel, 3) purchase order panel. To hide the detail panel, click 'Hide Detail'.

<div> <div>Address Purchasing Order Shipping Finance Inventory Engineering Quality Control HR Admin Help</div> <div> <div>From Item 50000001</div> <div>Site: 1000</div> <div>Run PDF CSV Override? Days Forward: 0</div> <div>Hide Detail</div> </div> </div> <div>Line Count: 4</div>													
<div> <div>To Item 50000004</div> </div>													
Select	Item	Desc	LeadTime	QOH	UQOH	SafetyStock	POQty	DemandUnAllocated	PwtdQty	FcstQty	Status	Ratio	
	500000001	unicycle	42	12.0	12.0	10	0.0	0.0	0.0	40	good	0.00%	
	500000002	bicycle	42	6.0	6.0	10	0.0	0.0	0.0	35	warning	0.00%	
	500000003	tricycle	42	25.0	25.0	10	25.0	3.0	28.0	45	danger	62.22%	
	500000004	Four Wheeler	42	25.0	25.0	10	29.0	3.0	28.0	55	safe / warning	50.91%	

[illegible]

9 Finance

9.1 Chart of Accounts Maintenance (navcode: accm)

BlueSeer provides a sample chart of accounts for convenience. However, you will probably want to add your own or edit the given accounts to suit your needs. The account master maintenance menu is reasonably straight forward. There are only a few fields to consider in order to create an account record. The account 'ID' itself is the primary key to the account master table. This field is your account number and can be a max of 10 chars (no spaces). The account number is a unique field. You will need to assign a 'type' value to the account. There are four account types accommodated in BlueSeer. They are Asset (A), Liability (L), Income (I), and Expense (E). Each record must be assigned one of these four types. The Description field is arbitrary and should be as verbose as necessary (up to 50 chars). The only other field necessary to describe the account is the currency assignment. At this time, BlueSeer only accommodates US Currency (USD).

To add or edit an account, go to 'Finance'|'Ledger Setup'|Account Master Maintenance menu. Once inside the account maintenance window, enter your account ID, Description, Type, and Currency. Once the fields are entered, click 'Add' and a message box will appear indicating successful entry of the account number. To Edit any account, click the search button beside the account id field. (Note: you can search by account or by description of account; depending on search button clicked). Clicking on one of the search buttons will bring up the browse panel where you can search by text or simply click 'Find It'. If you click 'Find It' without a search text, the browse panel will return all account records. Simply click on the account number that you want to edit/review, and it will return to the account maintenance screen with the appropriate record. Once you've edited your fields, click 'Edit' and a message box will appear indicating the success or failure of your edit. See Figure 9.1.1 for a screen shot of the Account Maintenance screen.

Figure 9.1.1

Account Maintenance

Account: 10000000 [Search] [New] [Clear]

Desc: CASH-GENERAL BANK ACCT [Search]

Type: A [v] Asset Account

Currency: USD [v]

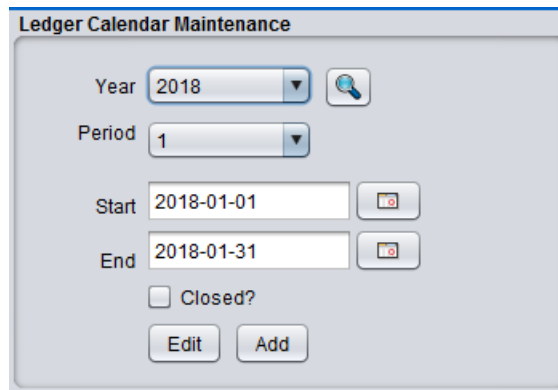
☐ Show this account in Expense DropDowns

[Delete] [Update] [Add]

9.2 Ledger Calendar Maintenance (navcode: calm)

The General Ledger Calendar is maintained under the Finance main menu. Go to the Ledger Setup Menu and then choose the Ledger Calendar Maintenance menu. The ledger calendar allows you to assign beginning and ending dates to financial reporting periods within a given calendar year. You can span over years if your planning calendar requires so, or you can simply use the accepted months within a given year as your accounting periods. This example will illustrate. To assign period 1 in calendar year 2000, choose "2000" in the year drop down box, and then choose period 1 for your first period. Choose a beginning and ending date from the appropriate date icon box and then click the 'Add' button. You also have the option to close the accounting period by clicking the 'closed?' checkbox. It is a generally accepted practice to close all periods except the operating period to prevent transactions from being posted with erroneous dates. Closing the previous period and opening the new period is generally done at the end of the period by an appropriate controller. You can use Ledger Calendar Browse to see a list of all the periods and their assigned beginning and ending dates. To Edit a year / period, you simply choose the year and period and click 'Get'. If the record has been established previously, the beginning and ending dates will be populated. Edit the dates as you require, and then click Edit. Never edit a currently effective year/period record...(operating period). It could have undesirable consequences.

Figure 9.2.1



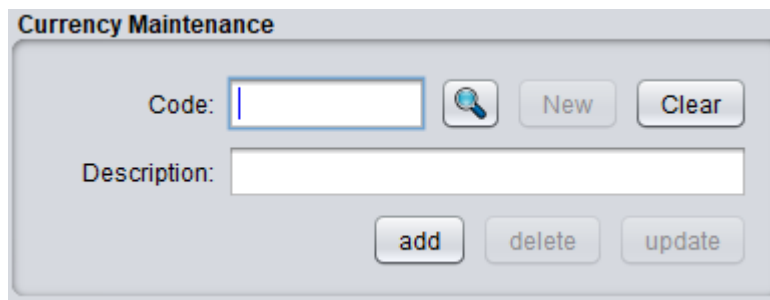
The screenshot shows a window titled "Ledger Calendar Maintenance". It contains the following fields and controls:

- Year:** A dropdown menu set to "2018" with a magnifying glass icon to its right.
- Period:** A dropdown menu set to "1".
- Start:** A text box containing "2018-01-01" with a calendar icon to its right.
- End:** A text box containing "2018-01-31" with a calendar icon to its right.
- Closed?:** An unchecked checkbox.
- Edit:** A button.
- Add:** A button.

9.3 Currency Maintenance (navcode: curm)

The default currency in the BlueSeer application is “USD”. You can create other currency records and set the default to the currency denomination of your choice. Once you've created and set the system currency in the Default Maintenance menu, all transactions will be performed with that currency unless manually chosen otherwise. To create a currency ID, enter 'curm' in the navigational text box. This will bring you to the Currency Maintenance screen. Click the new button, and enter a 3 character currency code. These codes are not validated. The only restriction is that the code must be 3 characters in length. You will need to enter a description as well. Once the code and description have been entered, click the add button to commit the new currency ID. See Figure 9.3.1 for the currency maintenance screen.

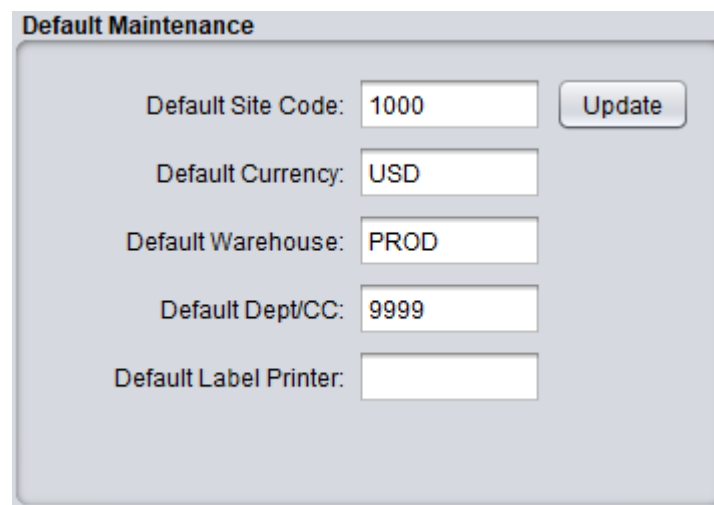
Figure 9.3.1



The screenshot shows the 'Currency Maintenance' window. It has a title bar with the text 'Currency Maintenance'. Inside the window, there is a 'Code:' label followed by a text input field. To the right of the input field is a magnifying glass icon. Further right are two buttons: 'New' and 'Clear'. Below the 'Code:' field is a 'Description:' label followed by a larger text input field. At the bottom of the window, there are three buttons: 'add', 'delete', and 'update'.

Once you have created your new currency code, you will need to ensure that the system recognizes this currency as the default currency. You can get to the Default Maintenance screen by navigating to Admin parent menu—Default Maintenance, or enter 'defm' in the navigational text-box. Once you are at the Default Maintenance menu, enter your new currency ID in the default currency field and click 'update'.

Figure 9.3.2



The screenshot shows the 'Default Maintenance' window. It has a title bar with the text 'Default Maintenance'. Inside the window, there are five rows of labels and text input fields. The first row is 'Default Site Code:' with the value '1000' and an 'Update' button to its right. The second row is 'Default Currency:' with the value 'USD'. The third row is 'Default Warehouse:' with the value 'PROD'. The fourth row is 'Default Dept/CC:' with the value '9999'. The fifth row is 'Default Label Printer:' with an empty text input field.

Now that a new currency has been defined and set as the system default, any new customer or vendor record creation will automatically apply this default currency code as the default for that specific customer or vendor and any subsequent orders or purchase orders. Note: previously created customers and vendors will have to have their currency codes adjusted as necessary in the appropriate customer and/or vendor maintenance screen.

Also, customer prices lists and vendor price lists must be adjusted for the new currency if you already have price lists records created at the time you create the new currency. It's important to assign your default currency early in the implementation so that any subsequent address records and/or price list records will have the correct currency.

9.4 Exchange Rate Maintenance (navcode: excm)

The exchange rate maintenance menu is used to assign currency exchange rates against the default system currency. Typically, you would want to assign your default system currency in default maintenance (navcode: defm) and then apply whatever alternate currencies that are applicable to your system. The rate value assigned in the menu is defined relative to one unit of default currency. For example, if your default currency is USD and you determine that you will be selling product in Canadian currency, then assign a rate of x.xxx CDNs to one unit USD. The drop down selection box in the menu provides alternate currencies that have been defined in currency maintenance (navcode = curm).

All general ledger financial reports are reported relative to the base default currency. For each ledger transaction, a base amount (defined as amount in default currency) is calculated and assigned to specific “base_amt” fields in the gl_tran and gl_hist tables. If the currency applied to the order is the same as the default currency, then the glh_base_amt and glh_amt fields are the same. However, if an order is placed in a currency that is different than the default system currency, then glh_base_amt will be assigned an amount relative to the base currency and the glh_amt field will be assigned a value relative to the order's specific currency that was applied. The calculation of base_amt uses the exchange rate **at the time of the transaction**.

The exchange rate menu can be accessed by using navcode: excm or clicking on the exchange rate maintenance menu under Financials | Ledger Setup. The base code value will be disabled from user input and is assigned by the default maintenance menu. Any exchange rates previously applied will be visible in the table provided. You can click on the specific record in the table to 'update' the rate. If it is a new record, then choose your alternate currency, enter an exchange rate, and click add.

Figure 9.4.1

The screenshot shows the 'Exchange Rate Maintenance' window. It contains a form with the following fields and buttons:

- Base Code:** A text field containing 'USD'.
- Foreign Code:** A dropdown menu currently showing 'INR'.
- Rate:** An empty text field.
- Buttons:** 'add', 'update', and 'delete' buttons are located to the right of the form fields.

Below the form is a table with the following data:

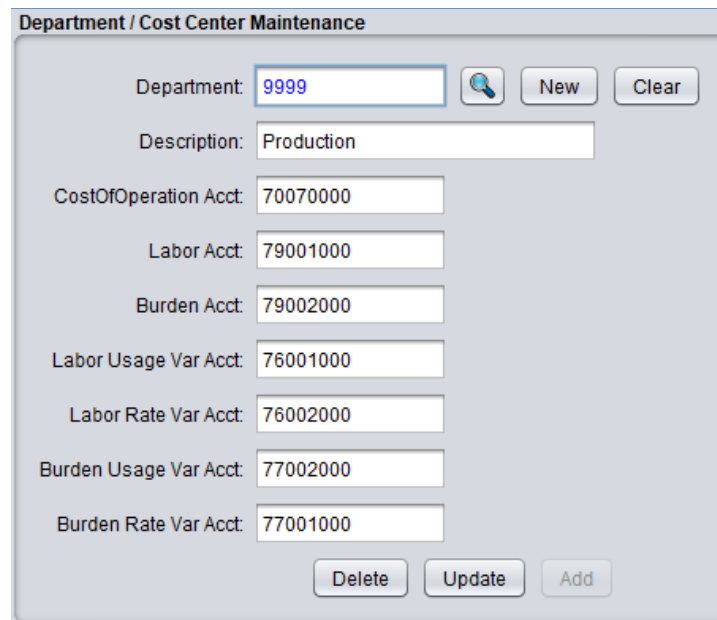
BaseCurrency	ForeignCurrency	Rate
USD	INR	75.432

9.5 Department / Cost Center Maintenance (navcode: depm)

BlueSeer considers the Cost Center and Department to be the same in definition and is used interchangeably within the application. The Cost Center (department) is defined as an operational entity within a business that incurs a cost whether that cost be labor, burden or a combination of both.

One of the first steps in the implementation process of BlueSeer is to define one or more cost centers. The code used as the identity key for the department record can be up to 8 chars long (no spaces). When setting up a new department/cc, you will be asked to assign GL accounts to several fields associated with capturing labor, burden, and cost of operation costs. To add a new dept/cc, enter a code (up to 8 digits) for the dept/cc id and then occupy the account fields with the appropriate GL account. The accounts are validated, so these accounts must exist in the chart of accounts before continuing. Once the fields are completed, click 'Add' to enter a new dept/cc record. You can browse a list of the dept/cc records under the menu "Finance"|"Ledger Setup"|"Dept/CC Browse". The Browse will allow you to select any dept/cc for further info and editing.

Figure 9.5.1



The screenshot shows a web-based form titled "Department / Cost Center Maintenance". The form contains several input fields and buttons. The "Department" field is highlighted with a blue border and contains the value "9999". To its right are a magnifying glass icon, a "New" button, and a "Clear" button. Below this is a "Description" field containing the text "Production". Further down are seven more input fields, each with a label and a value: "CostOfOperation Acct:" with "70070000", "Labor Acct:" with "79001000", "Burden Acct:" with "79002000", "Labor Usage Var Acct:" with "76001000", "Labor Rate Var Acct:" with "76002000", "Burden Usage Var Acct:" with "77002000", and "Burden Rate Var Acct:" with "77001000". At the bottom of the form are three buttons: "Delete", "Update", and "Add".

Field Label	Value
Department	9999
Description	Production
CostOfOperation Acct:	70070000
Labor Acct:	79001000
Burden Acct:	79002000
Labor Usage Var Acct:	76001000
Labor Rate Var Acct:	76002000
Burden Usage Var Acct:	77002000
Burden Rate Var Acct:	77001000

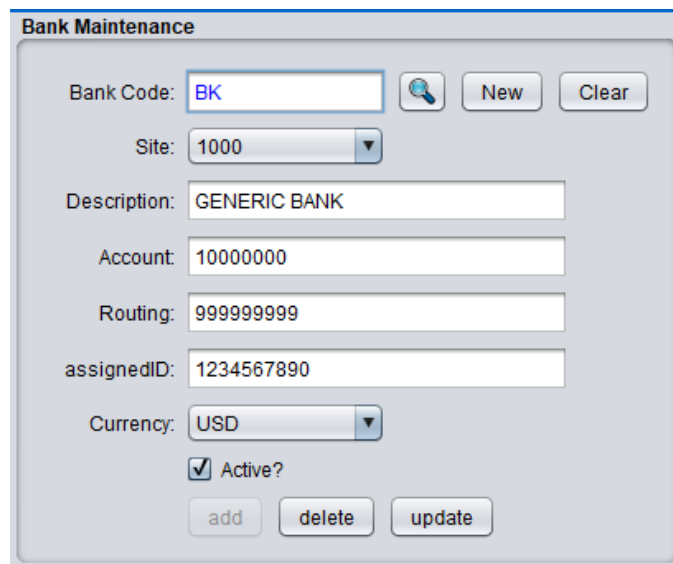
9.6 Bank Maintenance (navcode: bank)

Bank Maintenance allows the addition or updating of information related to banks and associated account information. These bank records are used a selection drop down boxes in several modules including the customer master and vendor master. Bank codes associated with various customers and/or vendors are used during shipping and receiving transactions as they pertain to GL account credits and debits. The bank record itself is simply an association of a GL account with a specific bank code. It can be used if you have more than one bank for specific customer payments or accounts payable check runs for vendors. At least one bank record must exist. A default bank record is provided with BlueSeer. You can delete, update, or add your own as necessary.

To add a bank record, go to 'Finance'|'Ledger Setup'|'Bank Maintenance' menu. Enter a 2 digit code (no spaces) for your bank code and provide a description of this bank (optional). Enter a valid GL account for this bank and choose the currency code. (Currently, only USD is allowed in this version). Check the 'Active' checkbox and click 'Add' to save the record. Note: You can inactivate bank records by unchecking the check box. This will prevent transactions from further using this bank code if unchecked without having to delete the record.

To update a bank record, you can either go through the Bank browse menu to access the target bank code or you can go directly to bank maintenance and enter the bank code then click 'get'. Once the record is retrieved, you can edit the fields within the menu and click 'update' to save the new info associated with this bank id.

Figure 9.6.1



The screenshot shows a 'Bank Maintenance' window with the following fields and controls:

- Bank Code:** A text input field containing 'BK', followed by a magnifying glass icon, a 'New' button, and a 'Clear' button.
- Site:** A dropdown menu showing '1000'.
- Description:** A text input field containing 'GENERIC BANK'.
- Account:** A text input field containing '10000000'.
- Routing:** A text input field containing '999999999'.
- assignedID:** A text input field containing '1234567890'.
- Currency:** A dropdown menu showing 'USD'.
- Active?:** A checkbox that is checked.
- Buttons:** 'add', 'delete', and 'update' buttons at the bottom.

9.7 Tax Maintenance (navcode='taxm')

The tax maintenance menu is used to maintain a collection of tax elements that can be applied at the customer level or at the item level. To create or update a new tax code, enter 'taxm' in the navigational text-box. This tax code can be referenced in the customer master to associate this applicable tax code to all sales orders associated with the customer. The tax code can also be applied at the item level by associating this code with an item in item maintenance. This is known as a Material Tax at the sales order detail level and on invoice documents. Any subsequent sales orders with an item that has a tax code associated with it will have the tax applied automatically.

To create a new tax code, click the new button and enter an arbitrary tax code that is less than or equal to 8 characters. Then enter one or more tax elements that will be associated with this tax code. After you've entered the tax element and percent value, click the 'AddElement' button above the element table. You can delete an element as well and re-add to update the percentage value. Once all elements have been added, then click the 'Add' button at the bottom of the menu.

A tax element is a fixed percent applied to the total tax. Tax elements are then *summed* up for all elements in a single tax code to arrive at a total fixed tax percentage. For instance, if you have a tax code comprised of two elements at 5 percent and 2.3 percent, then you will have a total tax code value of 7.3 percent applied at either the sales order header level or at the item level depending on where it is associated. Figure 9.7.1 shows the tax maintenance menu. A further example is provided below in Figure 9.7.2.

Figure 9.7.1

The screenshot displays the 'Tax Maintenance' window. It is divided into two main sections: 'Master Tax Code' and 'Tax Elements Add/Delete'.

Master Tax Code Section:

- Tax Code:** A text box containing 'GST' with a search icon to its right. Buttons for 'New' and 'Clear' are located to the right of the text box.
- Desc:** A text box containing 'GST'.

Tax Elements Add/Delete Section:

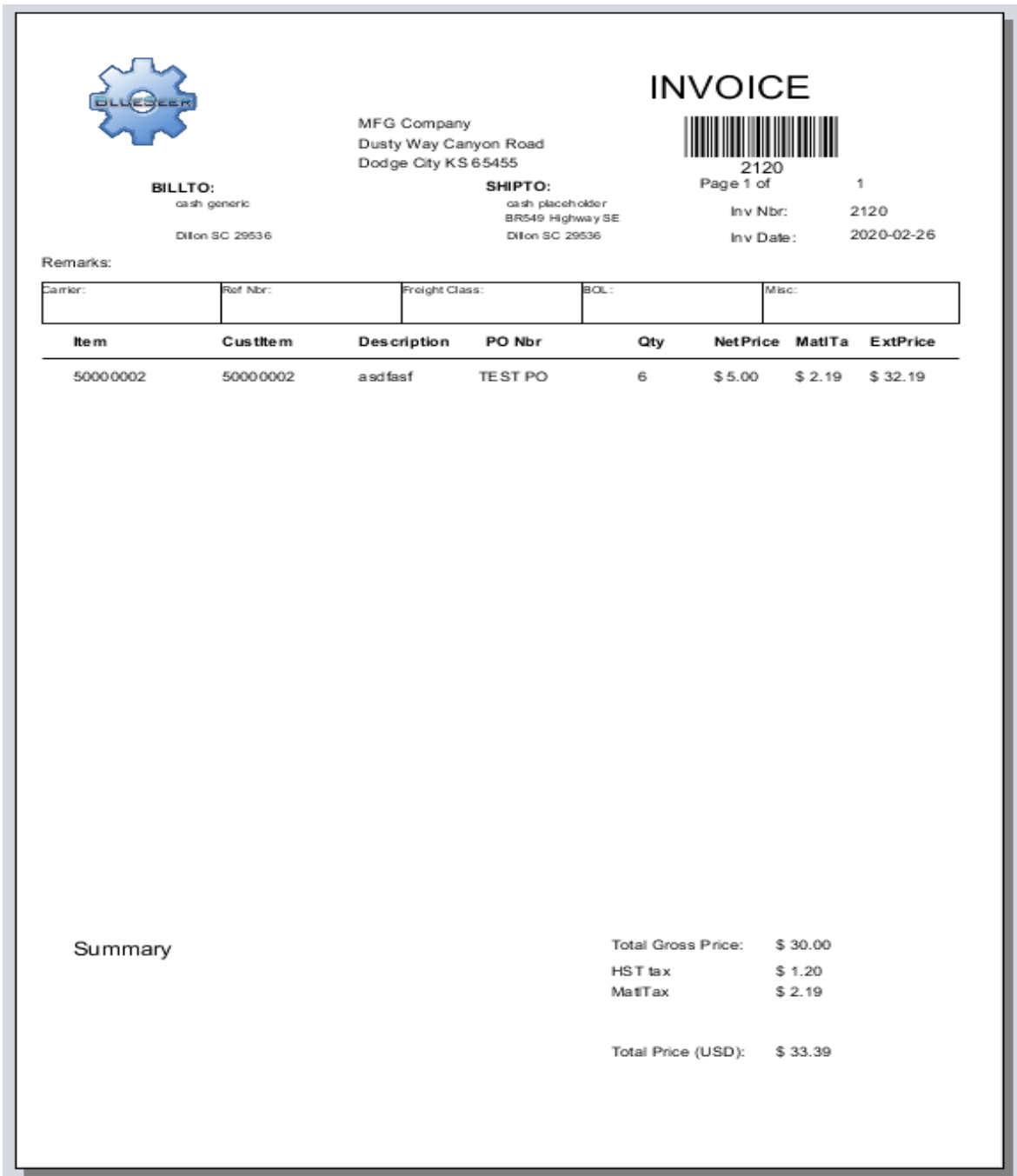
- Tax Element:** A text box containing 'elementB'.
- Percent:** A text box containing '2.3'.
- Enabled?:** An unchecked checkbox.
- Type:** A dropdown menu currently showing 'OTHER'.
- Buttons:** 'AddElement' and 'DeleteElement' buttons are positioned to the right of the 'Type' dropdown.

Table:

Element	Percent	Type	Enabled
elementA	5	OTHER	0
elementB	2.3	OTHER	0

Bottom Buttons: 'Delete', 'Update', and 'Add' buttons are located at the bottom right of the window.

Figure 9.7.2



9.8 Trial Balance Report (navcode=trba)

BlueSeer offers a trial balance report. To review the report, enter 'trba' in the navigation text-box on the main menu bar. The trial balance report is generic in nature and adheres to the standard definition of the report. The report shows debits and credits for all accounts for a particular year and period. You can choose to hide accounts with zero amounts by clicking on the appropriate checkbox. You can also view department/cost center detail by again clicking on the appropriate checkbox. For each filter change whether it be a change in year, period, or check-box, you must click the run button again to show the refreshed information in the table.

You can also view the detail transactions of each account by clicking on the 'basket' icon in the first column. This will open a second panel in the main panel with the detail transactions for the given year, period range. To hide the detail panel, click the hide detail button at the top of the main panel.

As indicated above, the trial balance report is generic in nature and applies the following rules to whether an entry is accumulated in the debit versus credit column :

Account Type	Credit or Debit
Assets (type='A')	Debit
Liabilities (type='L')	Credit
Income/Revenue (type='I')	Credit
Expenses (type='E')	Debit
Owners Equity (type='O')	Credit

The purpose of the trial balance is to ensure that the sum of all debits equals the sum of all credits within the range of all accounts. The sign on the Credit column has been adjusted (* -1) to ensure that the summed values (Total Debit and Total Credit) at the top of the report have the same sign. This is for convention only.

The total credits and total debits should match. If not, then review the transactions for a potential duplicate that has been entered via standard transaction maintenance.

An example of the trial balance report is provided in figure 9.8.1 below.































Figure 9.8.1

Trial Balance Report

Year2020Site1000RunHide Detail

Period2☐ CostCenter☐ Supress Zeros

2020-02-01 To 2020-02-28

Detail	Acct	Type	Curr	Desc	Site	Debits	Credits	Acct	CC
	10000000	A	USD	CASH-GENERAL B...	1000	\$321.00	\$0.00	90000000	9999
	13000000	A	USD	FOREIGN CURRE...	1000	\$0.00	\$0.00		
	19010000	A	USD	INVENTORY	1000	\$0.00	\$0.00		
	19050000	A	USD	MATERIAL VARIAN...	1000	\$0.00	\$0.00		
	20000000	A	USD	A/R	1000	\$0.00	\$0.00		
	20001000	A	USD	UNAPPLIED CASH	1000	\$0.00	\$0.00		
	30000000	L	USD	AP TRADE	1000	\$0.00	(\$0.00)		
	32000000	L	USD	UNVOUCH RECEIP...	1000	\$0.00	(\$0.00)		
	34000000	L	USD	AP SALES TAX Other	1000	\$0.00	(\$0.00)		
	34001000	L	USD	AP SALES TAX Fed...	1000	\$0.00	(\$0.00)		
	34002000	L	USD	AP SALES TAX State	1000	\$0.00	(\$0.00)		
	34003000	L	USD	AP SALES TAX Local	1000	\$0.00	(\$0.00)		
	35000000	L	USD	WITHHOLDING PA...	1000	\$0.00	(\$0.00)		
	40000000	O	USD	RETAINED EARNIN...	1000	\$0.00	(\$0.00)		
	50000000	I	USD	GENERIC SALES I...	1000	\$0.00	\$444.00		
	50001000	I	USD	INTEREST INCOME	1000	\$0.00	(\$0.00)		
	50002000	I	USD	OTHER INCOME	1000	\$0.00	(\$0.00)		
	50003000	I	USD	RETURNS AND AL...	1000	\$0.00	(\$0.00)		
	50004000	I	USD	SALES DISCOUNTS	1000	\$0.00	(\$0.00)		
	55000000	I	USD	ASSET SALES INC...	1000	\$0.00	(\$0.00)		
	62000000	E	USD	COGS MATERIAL	1000	\$0.00	\$0.00		
	62001000	E	USD	COGS BURDEN	1000	\$0.00	\$0.00		
	62002000	E	USD	COGS LABOR	1000	\$0.00	\$0.00		
	62003000	E	USD	COGS OVERHEAD	1000	\$0.00	\$0.00		
	62005000	E	USD	COGS SERVICE	1000	\$0.00	\$0.00		
	65000000	E	USD	INVENTORY ADJU...	1000	\$0.00	\$0.00		
	70001000	E	USD	SALARIED EXPENSE	1000	\$0.00	\$0.00		
	70002000	E	USD	DIRECT LABOR EX...	1000	\$0.00	\$0.00		
	70003000	E	USD	PAYROLL TAX EXP...	1000	\$0.00	\$0.00		
	90000000	E	USD	EXPENSE GENERIC	1000	\$123.00	\$0.00		

9.9 Income Statement Report (navcode=inst)

BlueSeer provides an income statement report that allows you to monitor the profitability of your business. To view the report, enter 'inst' in the navigational text-box on the main menu bar. The report is filterable by site, year, and financial period. The report is generated and viewable within a table when you click 'run', however, you can also review the report by clicking 'print' which will open a jasper view window. This window will allow you to save the report in PDF or print the report to a printer of your choosing.

The default contents of the income statement are customized toward a manufacturing environment. The categories listed on the report can be adjusted for content. The categories such as Sales, Cost of Goods, General and Admin, etc are fixed, but you can adjust which accounts are reported in these categories by using the Income Statement Definition menu. To view this menu, enter 'insd' in the navigational text-box. The definition menu allows you to choose a range of accounts for your category and/or specific accounts that are either included or excluded. For example, the default 'cogs' category (cost of goods sold) is shown in figure 9.9.1.

Figure 9.9.1

Income Statement Category Definitions

Category: cogs

From: 62000000

To: 62005000

CASH-GENERAL BANK ACCT

Accounts: [dropdown]

Delete Add

Assigned: [text area]

Delete Add

Excluded: [text area]

Update

Once you've adjusted the accounts in the categories as you desire, you can run the report via navcode='inst'. Note: All transactions must be posted before you attempt to run the income statement report. You can post all entries by entering 'post' in the navigational text-box and click 'get count' and 'post' respectively.

Figures 9.9.2 and 9.9.3 below show the income statement report menu as well as a sample print of the jasperviewer generated PDF report.

Figure 9.9.2

Address Purchasing Order Shipping Finance Inventory Engineering Quality Custom HR Admin Help		
Year	2017	Site 1000
Period	7	2017-07-01 To 2017-07-31
Run Print		
Description	Amount	Definition
Sales	\$50.00	
Cost Of Goods	\$24.63	
Standard Margin	\$25.37	Sales less COGS
Matl Variance	\$0.00	
Labor Variance	\$0.00	
Burden Variance	\$0.00	
MFG Gross Margin	\$25.37	Standard Margin Less Variance
Product Engineering	\$0.00	
Gross Margin	\$25.37	MFG Gross Margin less Prod Eng Expense
Sales and Marketing	\$0.00	
General and Admin	\$0.00	
Profit Before Allocations	\$25.37	Gross Margin less SMG&A Expenses
Interest	\$0.00	
Corporate Allocations	\$0.00	
Management Fees	\$0.00	
Bank Fees	\$0.00	
Other Income/Expense	\$0.00	
Operating Profit Before Taxes	\$25.37	Op Profit less Int&Alloc&Fees&Other
Depreciation	\$0.00	
EBITDA	\$25.37	

Figure 9.9.3

Income Statement		
Page 1 of 1		
Category	Description	Amount
Sales		\$ 444.00
Cost Of Goods		\$ 0.00
Standard Margin	Sales less COGS	\$ 444.00
Matl Variance		\$ 0.00
Labor Variance		\$ 0.00
Burden Variance		\$ 0.00
MFG Gross Margin	Standard Margin Less Variance	\$ 444.00
Product Engineering		\$ 0.00
Gross Margin	MFG Gross Margin less Prod Eng Expense	\$ 444.00
Sales and Marketing		\$ 0.00
General and Admin		\$ 123.00
Profit Before Allocations	Gross Margin less SMG&A Expenses	\$ 321.00
Interest		\$ 0.00
Corporate Allocations		\$ 0.00
Management Fees		\$ 0.00
Bank Fees		\$ 0.00

9.10 Account Reconciliation (navcode=recon)

The account reconciliation report supports the comparisons of the current Ledger entries versus an arbitrary bank statement for a specific asset account. To use the reconciliation report, enter 'recon' in the navigation text-box on the main menu bar. Note: It is imperative that all financial transactions have been posted before running this tool. Typically, this reconciliation process is performed at the end of a financial period or month, and the previous period/month transaction records are reconciled with a statement provided by your bank institution.


Figure 9.10.1 shows the main screen of the reconciliation report. The first step is to enter the ending balanced from your bank statement for the account in question. After entering in the statement balance, the other fields will become activated. In most situations, the GL Previous Ending Date will automatically be assigned to the end date of the previous financial period/month. The GL Previous Ending Date is essentially the date you ran the reconciliation report and cleared the transactions on your previous run. This date is inclusive in that any transactions on that date have been cleared as well (your previous run) and indicates your GL balance for this account as of that date. The GL To Date will effectively be today, however, you may have to adjust this date depending on how well your GL effective date of transaction matches your Bank effective date (post date).

Once you've entered the GL To Date, choose your site and bank account (typically your primary asset cash account) and click the run button. The summary of totals can be seen in the top right portion of the application. The Statement Balance field is simply a replication of what was entered in the Statement Ending Balance text-box. The GL Previous Ending Balance is the total balance of your previous financial reporting period/month for the specified account. The Selected Total value represents all the transactions that were retrieved from the run command that have a 'check' mark in the check-box column in the table. Any transaction that has not been cleared will be labeled as 'open' in the status column. Note: After you click the run button, you can choose all the transactions by clicking the 'toggle all?' checkbox. Removing the toggle check flag will remove all selections in the check-box column as well. You will notice the 'Selected Total' change after each selection of an individual record or the toggling on/off of the master toggle check box.

The 'Difference' label in the top right hand portion of the application is the primary indicator of a successful reconciliation. If the difference is not 'zero', the total amount in discrepancy will be displayed in red text. See Figure 9.10.2. If the difference is zero, the value will be displayed in blue text. The Difference value is calculated as the difference between the Statement Balance and the sum of the Previous Ending Balance and Selected Totals. See Figure 9.10.3. Once you are satisfied with reconciliation and the difference is zero, you can commit the records as reconciled by clicking the 'commit' button. This will register these transactions as reconciled with your bank statement and will be labeled as 'cleared' in the status column in the table.

You should typically run this application once a month or as required. Consistency in execution and frequency is key to ensuring your ledger account in the application matches your bank statement. If you see discrepancies, review the transactions that are in question. It may be that you have not entered a transaction in BlueSeer to accommodate a deposit or expense recorded by the bank. It also may be possible that the bank has a questionable transaction that should be reviewed for legitimacy. There may also be situations where you have doubled a transaction by mistake. In any case, review and correct the offending transaction before committing the set of transactions as cleared.

Figure 9.10.1



 USER=admin

IP=localhost

DB=data\bsdb.db


VER=4.3.60


DBTYPE=sqlite


Address Purchasing Order Shipping Finance Inventory Engineering Quality Custom HR Admin Help  


Account Reconciliation

Statement Ending Balance:

Site: 1000 

GL Previous Ending Date: 2020-02-28 

Acct: 10000000  CASH-GENERAL BANK ACCT

GLTo Date: 2020-03-05 

☒ Toggle All?

ID	Acct	CC	Site	Ref
----	------	----	------	-----

Figure 9.10.2

Statement Balance: 82.90

GL Previous Ending Balance: 0.00

Selected Total: 0.00

Difference: 82.90

CheckBox	Status
<input type="checkbox"/>	open
<input type="checkbox"/>	open
<input type="checkbox"/>	open
<input type="checkbox"/>	open

Figure 9.10.3

Statement Balance: 82.90

GL Previous Ending Balance: 0.00

Selected Total: 82.90

Difference: 0.00

CheckBox	Status
<input checked="" type="checkbox"/>	open
<input checked="" type="checkbox"/>	open
<input checked="" type="checkbox"/>	open
<input checked="" type="checkbox"/>	open

9.11 Financial Transactions Overview

In this section, you will receive a brief overview of the financial transactions that occur behind the scenes when various functional module events occur (shipping, invoicing, etc). The majority of the financial transactions hitting the ledger occur automatically upon the event of shipping, production, receiving, inventory adjustments etc. These transactions are written to the `gl_tran` table all throughout the production day, and the number of these transactions can be rather large depending on depth of bill of material, number of routing steps, and other variables. The GL Posting menu is used to post the GL transactions temporarily stored in the `gl_tran` table to the `gl_hist` table where they are committed indefinitely. This Posting procedure is typically ran once at night or (close of business). Posting also updates ledger account balances up to the point of posting.

There are a variety of transaction types. Most are used for manufacturing cost and inventory tracking and are committed automatically by the 'events' of inventory adjustments or production reporting. The only available costing method in BlueSeer is standard costing. All of the various transactions incorporated within the production menus are designed within the scope of the standard costing paradigm. The available transactions that are provided by BlueSeer are typical transactions generally found in a manufacturing environment where the financial worth of goods are issued and/or received into accounts based on operations in a workflow. The list of these types of transactions are provided below:

NOTE: These transaction types are also used in the `tran_mstr` table for inventory and miscellaneous transaction monitoring as well as Ledger transaction descriptions.

- RCT-PURCH (Receive Raw Material from Purchase)
- ISS-WIP (Issue Raw Material or SUB to Assembly)
- RCT-SUB (Production of SUB-Assembly)
- ISS-SUB (Issue of SUB to FG)
- RCT-WIPFG (Production of WIP (of FG))
- RCT-FG (Production of FG final OP)
- ISS-SALES (Issue FG to Sales)
- ISS-MISC (Issue of Miscellaneous Material (RAW,SUB,FG))
- RCT-MISC (Receipt of Miscellaneous Material (RAW,SUB,FG))
- LOC-TRNF (Location Transfer of Material (RAW,SUB,FG)) *

* NOTE: Location Transfer does not generate financial transactions. Only inventory movement.

An example of the mechanics of the above transactions would be helpful in understanding the nature of the above transaction codes. The example scenario provided below walks through most of the transactions mentioned above. The scenario includes a single item and an empty (zero-valued) ledger accounts. The items and accounts used in the scenario are already setup and present in the Demo Version of BlueSeer. The item, item cost, Bill of Material, and Routing/Work Center are all pre-

defined, so you can walk through the scenario provided below with your own installation of the demo.

9.12 Accounts Payable Transactions (Procure to Pay)

The top-level business process of “procure to pay” has several double entry transactions that apply against the general ledger, accounts payable tables, and transaction history tables. Most of these entries are governed by assigned fields in the vendor master as well as various control master records.

9.13 Financial Transactions Example Scenario

We are going to be using the data provided in the Demo Installation. All the necessary components to perform the below processes are provided in the demo instance. Below are the processes along with screen shots of the Unposted Ledger Report immediately after the process event occurred. You can access the Unposted Ledger Report under Finance → Ledger Reports → Unposted Transactions.

NOTE: By definition, all Credits are of (-) sign and all Debits are of (+) sign. Negatives are surrounded by parentheses.


1. Receipt of Raw Material from a Purchase. Transaction type: RCT-PURCH

- For our first step, we are going to receive raw material for our inventory. This raw material is used as material in the BOM of the finished good product we will be posting and selling in subsequent transactions.
- The below receipt transaction was accomplished by creating a Purchase Order for item “p0001” at standard cost \$0.10 / each for 100 pieces, and then receiving that item into inventory. (The event of receiving inventory into the system immediately triggers Ledger transactions. The creation of Purchase Orders do not).
- Notice the credit of the AP Trade account and the debit of the Raw Inventory account.



Address Purchasing Order Shipping Finance Inventory Engineering Quality Custom HR Admin Help								
ID	Acct	AcctDesc	CC	Type	Ref	Desc	EffDate	Amt
2	19020000	RAW INVENTORY	2001	RCT-PURCH	100058	Receipts	2017-07-28	\$10.00
1	30000000	AP TRADE	2001	RCT-PURCH	100058	Receipts	2017-07-28	(\$10.00)

2. Production posting of Finished Good Item. Transaction type:

- Now we are going to post production of a finished good item that consumes the raw material in the BOM and consumes labor and burden from each operation that is defined to manufacture the item.
- We will be posting production of item “10-1001” from the demo installation at standard cost \$0.25 . A screen shot of the standard cost breakdown along with the operations to manufacture item 10-1001 is provided below.

Part 10-1001 

Roll Std Cost 0.24625 Roll Cost 0.24625

Parent Tree Structure
 10-1001
 P0001

Component Attributes
Component
Description
Qty Per
Operation
Standard Cost

Parent BOM Cost Structure

Type	RollL...	StdLo...	RollU...	StdU...	RollT...	StdTo...
Materi...	0.1	.1000	0.0	.0000	0.1	0.1
Labor	0.0	.0000	0.048...	.0488	0.048...	0.048...
Burden	0.0	.0000	0.0975	.0975	0.0975	0.0975
Overh...	0.0	.0000	0.0	.0000	0.0	0.0
Outsi...	0.0	.0000	0.0	.0000	0.0	0.0
Total					0.246...	0.246...

Parent Routing Cost Structure

Part	Op	WC	Mch	Desc	Dept	Labor	Burden	Material	Overh...	Service	Setup...	Labor...	Burde...	setup...	runHo...	Lotsize	RollC...	StdCost
10-10...	100	FGAs...	1	Asse...	9999	.0300	.0600	.1000	.0000	.0000	15	15	30	0	0.002	5000	0.19	0.19
10-10...	200	Packa...	1	Packa...	3100	.0187	.0375	.0000	.0000	.0000	15	15	30	0	0.00125	5000	0.056...	-0.1338
total						.0488	.0975	.1000	.0000	.0000								

Sub Assembly Routing Cost

Title 1	Title 2	Title 3	Title 4

- Once we post production under Inventory → Production Menu → Production Entry, you will notice that there are multiple transactions occurring during the posting of a finished good. The raw material is issued to WIP, labor and burden costs are captured at each operation of the manufacturing steps of the finished good, and transfer of finished good from WIP to FG at the last operation signifying a complete state. All of these transactions occur at standard cost.
- There are two operations (Assembly (op 100) and Pack op (200)). Each one of these operations have labor costs and burden costs which stem from the department fixed labor and burden rates where the operation occurred and the expected run rate (parts per hour) and setup costs. You can view these variables in both the Routing Maintenance and Work Center Maintenance screens respectively. The Routing ID for item 10-1001 can be viewed in Item Maintenance menu. With the Routing ID, you can also view the work center called in each operation of the routing.

- The below screen shot shows the labor, burden and material transfer of reporting production of item 10-1001 at 100 pieces. You will notice that the labor absorbed account was hit at each operation for $(\$0.03 * 100)$ and $(\$0.0188 * 100)$ respectively (op 100 and op 200). Similarly, the burden absorbed account was hit at each operation for $(\$0.06 * 100)$ and $(\$0.0375 * 100)$ respectively. In both occurrences, the labor/burden account was credited, and the WIP account was debited.

Address Purchasing Order Shipping Finance Inventory Engineering Quality Custom HR Admin Help								
ID	Acct	AcctDesc	CC	Type	Ref	Desc	Amt	EffDate
12	19010000	FG INVENTORY	1001	RCT-FG	1		\$24.63	2017-07-31
11	19030000	WIP INVENTORY	1001	RCT-FG	1		(\$24.63)	2017-07-31
10	19030000	WIP INVENTORY	1001	ISS-WIP	1	10-1001 - bdn op 100	\$6.00	2017-07-31
9	79002000	DIRECT BURDEN ABSORBED	9999	ISS-WIP	1	10-1001 - bdn op 100	(\$6.00)	2017-07-31
8	19030000	WIP INVENTORY	1001	ISS-WIP	1	10-1001 - lbr op 100	\$3.00	2017-07-31
7	79001000	DIRECT LABOR ABSORBED	9999	ISS-WIP	1	10-1001 - lbr op 100	(\$3.00)	2017-07-31
6	19030000	WIP INVENTORY	1001	ISS-WIP	1	10-1001 - bdn op 200	\$3.75	2017-07-31
5	79002000	DIRECT BURDEN ABSORBED	3100	ISS-WIP	1	10-1001 - bdn op 200	(\$3.75)	2017-07-31
4	19030000	WIP INVENTORY	1001	ISS-WIP	1	10-1001 - lbr op 200	\$1.88	2017-07-31
3	79001000	DIRECT LABOR ABSORBED	3100	ISS-WIP	1	10-1001 - lbr op 200	(\$1.88)	2017-07-31
2	19030000	WIP INVENTORY	1001	ISS-WIP	1	1	\$10.00	2017-07-31
1	19020000	RAW INVENTORY	2001	ISS-WIP	1	1	(\$10.00)	2017-07-31

- Since production was posted at the last operation (200), this signals the system that the last operation of a product is completed, and a finished product has been produced. In the event of a last operation, a second transaction (RCT-FG) will occur which will credit WIP inventory and debit FG inventory, effectively moving the product to Finished Goods. The RCT-FG transaction will occur for both credit and debit at standard cost. The 'actual' cost is also captured, and any deviation from the standard cost will be reflected in the appropriate 'usage variance' account.
- Now that we have production of 100 pieces of item 10-1001, we will now show the transactions for shipping this item. The below screen shot shows all the transactions that occur by shipping 100 pieces of item 10-1001 to a customer at \$.50 selling price / each. Notice that the income statement account 'generic sales income' has a credit of \$50.00 and the balance sheet account 'A/R accounts receivable' has been debited at \$50.00. Also, the Cost of Goods Sold (COGS) accounts (labor, burden, material) have been debited for their respective values, while the FG Inventory account has been credited for a similar amount.

ID	Acct	AcctDesc	CC	Type	Ref	Desc	EffDate	Amt
8	20000000	A/R	9999	ISS-SALES	2118	Sales Order Shipment	2017-07-28	\$50.00
7	50000000	GENERIC SALES INCOME	1001	ISS-SALES	2118	Sales Order Shipment	2017-07-28	(\$50.00)
6	62001000	COGS BURDEN	1001	ISS-SALES	2118	Sales Order Shipment	2017-07-28	\$9.75
5	19010000	FG INVENTORY	1001	ISS-SALES	2118	Sales Order Shipment	2017-07-28	(\$9.75)
4	62002000	COGS LABOR	1001	ISS-SALES	2118	Sales Order Shipment	2017-07-28	\$4.88
3	19010000	FG INVENTORY	1001	ISS-SALES	2118	Sales Order Shipment	2017-07-28	(\$4.88)
2	62004000	COGS MATERIAL	1001	ISS-SALES	2118	Sales Order Shipment	2017-07-28	\$10.00
1	19010000	FG INVENTORY	1001	ISS-SALES	2118	Sales Order Shipment	2017-07-28	(\$10.00)

- Now that we have received raw material, posted production of finished goods, and shipped

those goods, we can proceed to post the GL to the ledger via the GL Posting Menu. Once all the transactions have been posted, you can view the Ledger Balance Report to see all the summarized values of the accounts. You can also click the 'detail' button beside the account to see the itemized detail transactions that produced each account summary. The screen shot below shows the Account Balance Report for all non-zero valued accounts.

Account Balance Report						
Year 2017 From Acct 10000000 Site 1000 Run Hide Detail Period 7 To Acct 99999999 <input type="checkbox"/> CostCenter <input checked="" type="checkbox"/> Supress Zeros 2017-07-01 To 2017-07-31						
Detail	Acct	Desc	BegBal	Activity	EndBal	Site
Detail	20000000	A/R	\$0.00	\$50.00	\$50.00	
Detail	30000000	AP TRADE	\$0.00	(\$10.00)	(\$10.00)	
Detail	50000000	GENERIC SALES INCOME	\$0.00	(\$50.00)	(\$50.00)	
Detail	62001000	COGS BURDEN	\$0.00	\$9.75	\$9.75	
Detail	62002000	COGS LABOR	\$0.00	\$4.88	\$4.88	
Detail	62004000	COGS MATERIAL	\$0.00	\$10.00	\$10.00	
Detail	79001000	DIRECT LABOR ABSORBED	\$0.00	(\$4.88)	(\$4.88)	
Detail	79002000	DIRECT BURDEN ABSORBED	\$0.00	(\$9.75)	(\$9.75)	

- Finally, you can view a generic Income Statement by clicking on the Finance → Ledger Reports → Income Statement menu. Clicking run will show the statement elements that add or subtract from the Standard Margin (Sales less Cost Of Goods). Since the above transactions were limited, the income statement is rather simple in this case, and is essentially the sales minus the cost of goods sold. Elements that reduce the standard margin...other than variance...are not directly involved in the production and therefore are elements captured outside the receipt, production, sales functions present in the previous automatic transactions. Elements such as engineering cost, marketing costs, G&A are all captured explicitly by the accounting team each period.

10 Quick Cash Management (Personal Finance)

For small business or personal finance scenarios where in-depth financial mechanics are not necessary, BlueSeer provides a trimmed down option of cash management transactions. Buying and selling simple assets, managing recurring and miscellaneous expenses are all possible within the Quick Cash Menu (navcode: cash). This menu provides a stream-lined entry mechanism for expense recording and cash buy/sell transactions that do not require a lot of associative fields to support higher level cross functional business visibility. The Quick Cash menu is primarily for data entry. There is a browse/report menu for these transactions that can be viewed in Quick Cash Browse Menu (navcode: cashb). The Browse menu consolidates all four types of entries in one browse screen and includes charting of the transactions based on the date and type of transaction.

10.1 Quick Cash Navigation (navcode: cash)

There are four functional sub-menus within the Quick Cash entry menu. The functional menus include 1) buying an asset, 2) selling an asset, 3) recording a miscellaneous expense, and 4) recording a recurring expense. You can enter 'cash' in the navigation text-box on the menu bar to bring up the Quick Cash entry screen. All four sub-menus are accessible within the main Quick Cash menu as shown below :

Figure 10.1.1

The screenshot displays the 'Quick Cash' application interface. At the top, a blue navigation bar contains five tabs: 'misc expense', 'misc income', 'buy asset', 'sell asset', and 'recurring expense'. The 'misc expense' tab is currently active. Below this bar, the main window is titled 'Quick Cash' and contains a sub-section titled 'Misc Expense Maintenance'. This section features a form with the following elements:

- TransNbr:** A text input field with a 'New' button next to it.
- cash generic:** A label indicating the transaction type.
- Entity:** A dropdown menu currently set to 'cash', with an 'add new vendor' button to its right.
- Date:** A date selection field with a calendar icon.
- Expense Account:** A dropdown menu set to '90000000', with an 'Add Account' button to its right.
- Description:** A large text input field.
- Price:** A text input field.
- Qty:** A text input field set to '1'.
- Rmks (optional):** A text input field for remarks.
- PO# (optional):** A text input field for purchase order number.
- Lot# (optional):** A text input field for lot number, with 'Add Item' and 'Del Item' buttons to its right.

At the bottom of the form is a table with the following columns: Line, Item, Qty, Price, Ref, and Acct. Below the table, there is a 'Total:' label followed by a text input field and a 'Commit' button.

10.2 Quick Cash (Buying Asset)

To record the purchase of an asset/item, click the 'buy asset' tab in the Quick Cash Menu. To add a new purchase record, click the 'new' button. The 'buy' fields should become enabled. The Entity drop down list contains the Vendor Master codes for your vendors. If there are no records in the drop down list, click the 'add new vendor' button, and it will transfer you to the vendor master menu where you can enter a vendor record. Note, you do not have to maintain a separate vendor for each asset you buy. You can choose to create a generic vendor and apply all of your purchases to this 'generic' vendor code. However, you do have to have at least one record in the vendor master. Having legitimate vendors instead of a 'generic' vendor allows you to know more information about the vendor who you purchased the item from, but it is not absolutely required. A generic vendor will do the job.

Now that you have chosen a vendor from the drop down list, you can enter remarks and a PO# if you like (these are not mandatory). You can also change the date of the purchase by clicking on the date dialogue box. This allows you to track when you purchased the item. There are three 'mandatory' fields you must enter. You must enter an item description detailing the item you've purchased. This will be used as the description applied to the auto-creation of the item in the item master that occurs in the background. For example, entering 'black ball-point pen' will be captured in the item master for this item even though the item number generated will be the next incremental number. Note: once you've completed these steps and applied the purchase, an item in the item master (navcode: item) will be generated for you and marked as type = 'asset'.

The other two mandatory fields are the qty and price. The price field must be entered, and it must be a legitimate decimal number "no commas". Once you've entered the price, you can tab to the qty field. Typically, the default '1' in the quantity field should suffice in most situations, so you can just tab to the 'tag/lot' field which is optional. Then click the 'add item' button. This will create a temporary record in the table below the fields. The cursor will go back to the item description field for situations where you have purchased more than one item, and you want to record all items on this one 'buy event'. If you have no further items, you can click the 'commit' button at the bottom, and your purchase will be complete.

Several transactions will occur behind the scenes upon committing. An item master record will have been recorded in the item master along with establishing an inventory record of this item. The appropriate financial ledger transactions will also occur, debiting you cash account and crediting the inventory account for this item. Note, if auto-posting is turned on (the default is on), you will not have to manually post these transactions to the ledger. The transactions will post automatically.

Once you have committed the transaction, the menu bar will indicate 'buy complete'. You can then view the transaction in the Quick Cash Browse (navcode: cashb) menu. The images below show the progression of entering the information for the buy menu and adding the item to the temporary table. Note that in this example, we have created a 'generic vendor' entity to apply the purchase to.

Figure 10.2.1 (Buy transaction entering item, price, and qty)

Buy Asset Maintenance

TransNbr50098New

cash generic

Buy

Vendorcashadd new vendor

Date2019-03-07

Item Descriptiontest item

Price4.55

Qty1

Rmks (optional)

Lot# (optional)

PO# (optional)

Add ItemDel Item

Line	Item	Qty	Price	Desc	Ref
------	------	-----	-------	------	-----

Total Amt

Commit

Figure 10.2.2 (Buy transaction clicking 'add item' to add the item to the table (before commit))

Buy Asset Maintenance

TransNbr 50098 New

cash generic

Buy

Vendor cash add new vendor

Date 2019-03-07

Item Description

Price

Qty 1

Rmks (optional)

Lot# (optional)

PO# (optional)

Add Item Del Item

Line	Item	Qty	Price	Desc	Ref
1	50000006	1	4.55	test item	

Total Amt 4.55 Commit

10.3 Quick Cash (Selling Asset)

To record the selling of an asset/item, click the 'sell asset' tab in the Quick Cash Menu. To add a new selling record, click the 'new' button. The 'sell' fields should become enabled. The Entity drop down list contains the Customer Master codes for the list of customers you have previously established. Unlike the 'buy asset' option where you do not explicitly have to have specific vendor codes for each purchase, it is advisable to establish specific customer master codes for each sell transaction. The 'sell' transaction will provide you with the option to print a receipt for the asset sold, and therefore the customer's information will be provided on the receipt of the specific addressing information is created for this customer in the customer master. If you have not previously set up the customer master records, click 'add new customer' and you will be forwarded to the customer master menu to enter the specifics of the customer you are selling the asset/item to.

The asset/item that is being sold must already exist in the item master, and the item must be an asset type (code = 'A'). The 'item nbr' drop down list in the Selling Asset tab will contain all items from the item master labeled as type 'A'. Choose from one of the items in this list and then tab to the next field. The price field and the qty field are mandatory. Enter a legitimate decimal price (no commas). Tab to the qty field and either choose the default value of '1' or enter a quantity. You are allowed to enter more than is in inventory under the assumption that the inventory values may be inaccurate. Press the tab to the tag/lot field (optional) and then click 'Add Item'. This will create a record in the table at the bottom. You then have the option of entering another item to sell, or if you are only selling the one item, you may click the 'commit' button to complete the transaction. Upon clicking the commit button, the description on the menu bar should indicate that the selling transaction is complete.

Several transactions will occur in the background upon committing. The inventory for this item will be reduced by the quantity entered in the qty field. Balanced financial transactions will occur at the ledger with crediting the cash account and debiting the inventory account. A receipt of the transaction may be provided to the customer purchasing the item. You can view the transaction and print the receipt, if desired, in the Quick Cash Browse menu (navcode: cashb). The printer icon in the last column of the browse table will provide a PDF print of the receipt. Note, only the 'sell' option will allow the print icon to be shown in this column. The other three transaction types will show a lock icon. The following images show the progression of creating a 'selling asset' transaction.

Figure 10.3.1 (Sell transaction entering item, price, and qty)

Sell Asset Maintenance

TransNbr 50101

cash generic

Entity cash

Date 2019-03-07

Item Nbr 50000007 test item

Price 6.23

Qty 1

Rmks (optional)

Lot# (optional)

PO# (optional)

Line	Item	Qty	Price	Desc	Ref
------	------	-----	-------	------	-----

Total Amt

Figure 10.3.2. (Sell transaction clicking 'add item' to add the item to the table (before commit))

Sell Asset Maintenance

TransNbr 50101

cash generic

Entity cash

Date 2019-03-07

Item Nbr test item

Price

Qty 1

Rmks (optional)

Lot# (optional)

PO# (optional)

Line	Item	Qty	Price	Desc	Ref
1	50000007	1	6.23	test item	

Total Amt 6.23

Figure 10.3.3 (Sell transaction clicking 'commit'. Menu Bar indicating 'sell complete').

Inventory Engineering Quality Custom HR Admin Help

sell complete

recurring expense

Sell Asset Maintenance

TransNbr

New

asdf,lkjasfd

Entity

200002

add new customer

Rmks

PO#

Date

2019-03-03

Item Nbr

black ball-point pen

Price

Qty

1

Tag/Lot#

Add Item

Del Item

Line	Item	Qty	Price	Desc	Ref
------	------	-----	-------	------	-----

Total Amt

Commit

Figure 10.3.4 Quick Cash Browse (navcode: cashb) showing the transactions. The 'sell' type transactions will have a 'printer' icon in the last column that will allow a receipt to be printed or PDF file created.

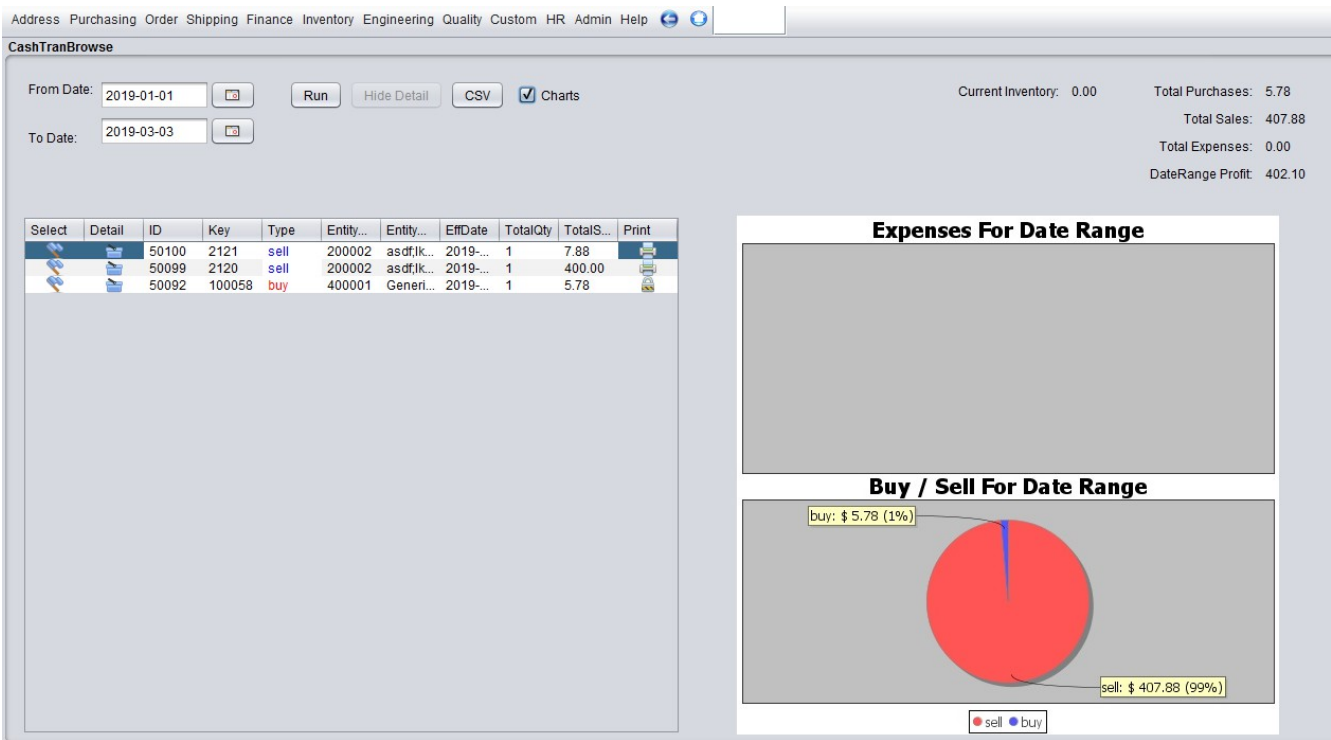







Figure 10.3.5: Receipt image of Sell Transaction. You can print and/or save as a PDF file.





54.6%




BILL TO:
and/jkpld
and/dedf
AAA-4945

MFG Company
Dusty Way Canyon Road
Dodge City KS 65455

SHIP TO:
and/jkpld
and/dedf
AAA-4945

RECEIPT



2121
Page 1 of 1
Inv Nbr: 2121
Inv Date: 2019-03-03

Remarks:

Carrier:	Ref Nbr:	Freight Class:	SOL:	Misc:
----------	----------	----------------	------	-------

Item	Description	Reference	Qty	NetPrice	ExtPrice
50000006	black ball-point pen		1	\$ 7.88	\$ 7.88

Paid in full

Total Gross Price: \$ 7.88

Net Total (USD): \$ 7.88

Net Due (USD): 0.00

10.4 Quick Cash (Expense Miscellaneous)

Recording expenses is one of the more repetitive financial transactions that most people want to track. The Expense Miscellaneous tab allows you to capture those on the spot expenses that are not considered 'recurring'. The Expense Recurring tab is used for expenses that are recurring on a monthly or yearly basis.

To record a miscellaneous expense, click the 'misc expense' tab in the Quick Cash Menu. To add a new expense record, click the 'new' button. The 'misc expense' fields should become enabled. Much like the 'buy asset' tab, the expense miscellaneous menu allows you to track your expenses by vendor. You can alternatively choose to create a single 'generic' vendor, but you must have at least one vendor in the entity drop down list. The primary tracking method for expenses is determined by the expense account you place the transaction in. You can create as many expense accounts as necessary to distinguish and classify your expenses for reporting purposes. When you create a new expense account, it is automatically created in the Account Maintenance under the Finance menu as an incremental account number of type 'E' for expense with the description that you enter in the dialogue. To create a new expense account, click the 'add account' button, then enter a description (classification) for this account. As an example, you could enter 'office supplies' as the account description, and record any expense associated with office supplies (pens, paper, ink, etc) against this expense account. The more effort placed in creating appropriate account classifications, the more you will gain from tracking and reporting your expenses for audit or tax purposes. It is advised that you consider your accounting structure before recording your first entries. You can also go into account maintenance (navcode: accm) and pre-enter your expected expense accounts. Expense electric, Expense water, Expense phone, Expense maintenance are all good examples of separating your account structure and classifying your expenses.

The Expense Description is a mandatory field. You must describe the nature of the expense in this field. You can then tab to the expense account drop down list and use your up/down arrow key to traverse the possible accounts. The description of the accounts are provided to the right as you key up or down. Once you select an account, press tab and enter the price of the miscellaneous expense. This must be a legitimate decimal value (no commas). Then, tab to the qty field and choose the default '1'. In most instances, the default quantity of 1 is sufficient. Then tab to the tag/lot field and enter a value (this field is optional). Click 'Add Item' to enter the transaction into the table at the bottom. You may choose to enter another expense to the transaction by entering another description and repeating the process. Once you have finished entering the expenses, click the commit button to record the set of expense transactions.

You can view the expense transactions that you entered in the Quick Cash Browse report (navcode: cashb). This browse/report tool is a date specific report and defaults to the beginning of the year to the current date. You can change as necessary. All four types of transactions will be visible. You can also click the 'basket' icon to see details of transactions or click the 'chart' button to see pie charts of the total expenses for the date range (top chart) and total buy/sell transactions for the same date range (bottom chart). The below figures shows the steps of entering a miscellaneous expense through to reviewing in the Quick Cash Browse menu.

Figure 10.4.1: Entering a miscellaneous expense

Misc Expense Maintenance

TransNbr50102New

cash generic

Expense

Entitycashadd new vendor

Date2019-03-07

Expense Description:pens 5 pack

Expense Account:90000000EXPENSE GENERICAdd Account

Price3.45

Qty1

Rmks (optional)

PO# (optional)

Lot# (optional)

Add ItemDel Item

Line	Item	Qty	Price	Ref	Acct
------	------	-----	-------	-----	------

Total Amt

Commit

Figure 10.4.2: Adding a new Expense Account Description

Misc Expense Maintenance

TransNbr50102New

cash generic

Entitycashadd new vendor

Date2019-03-07

Expense Description:pens 5 pack

Expense Account

Input

Please input the account description:
Office Supplies

OKCancel

Add Account

Rmks (optional)

PO# (optional)

Lot# (optional)

Add ItemDel Item

Expense

Line	Item	Qty	Price	Ref	Acct
------	------	-----	-------	-----	------

Total Amt

Commit

Figure 10.4.3: Adding expense items to the expense table before committing

Misc Expense Maintenance

TransNbr 50102 New

cash generic

Expense

Entity cash add new vendor

Date 2019-03-07

Expense Description:

Expense Account: 90000000 EXPENSE GENERIC Add Account

Price

Qty 1

Rmks (optional)

PO# (optional)

Lot# (optional)



Add Item Del Item

Line	Item	Qty	Price	Ref	Acct
1	pens 5 pack	1	3.45		99000002
2	paper	1	5.66		99000002

Total Amt 9.11 Commit

Figure 10.4.4: Committing the expense

4.1.5 DBTYPE=sqlite

ineering Quality Custom HR Admin Help   [expense complete](#)

Quick Cash

Misc Expense Maintenance

TransNbr

cash generic

Entity

Date

Expense Description:

Expense Account:

Price

Qty

Rmks (optional)

PO# (optional)

Lot# (optional)

10.5 Quick Cash (*Expense Recurring*)

The Recurring Expense menu is very useful functionality for capturing and viewing monthly expenses are common among all business verticals. This menu allows you to designate monthly recurring expenses and to track whether or not you've paid those expenses on any given month. The Calendar month is used for paid/unpaid designation. For example, if you have established any recurring monthly expenses, at the beginning of each month, these expense records will be display as unpaid (visible x). Any time during the month, you can mark these expenses as paid, and they will remain paid (visible checkmark) until the first day of the next month. Along with the visibility cue, a history of each recurring expense is provided in a table at the bottom of the menu for convenience labeled 'History of Payment'.

To register a recurring expense, click the 'recurring expense' tab in the Quick Cash Menu. The entity drop down list should be set up with a list of the vendors for each of the recurring expense. You should create these before you register your recurring expense so that you can associate the appropriate expense with the appropriate vendor. You can go to the vendor master maintenance menu (navcode: venm) to set up your vendor codes. Choose the appropriate vendor code and enter a value in the unique ID field. You can enter 'electric' as an example. Then enter a description of this expense in the description field. This is a mandatory field. You then choose the appropriate expense account to register this expense to. If you have not already created your expense accounts, you can click 'add account' and enter a description of the account. It will automatically be added to the list. Then enter a legitimate 'monthly' value in the price field of the expected expense. Click 'Add Item' and the item will be registered in the table at the right of the menu. The figure below is an example of registering the expense record.

Figure 10.5.1: registering recurring expense record.

Quick Cash

Recurring Expense Maintenance

Generic Vendor

Entity

UniqueID Date

Site


Desc

EXPENSE GENERIC

Expense Acct

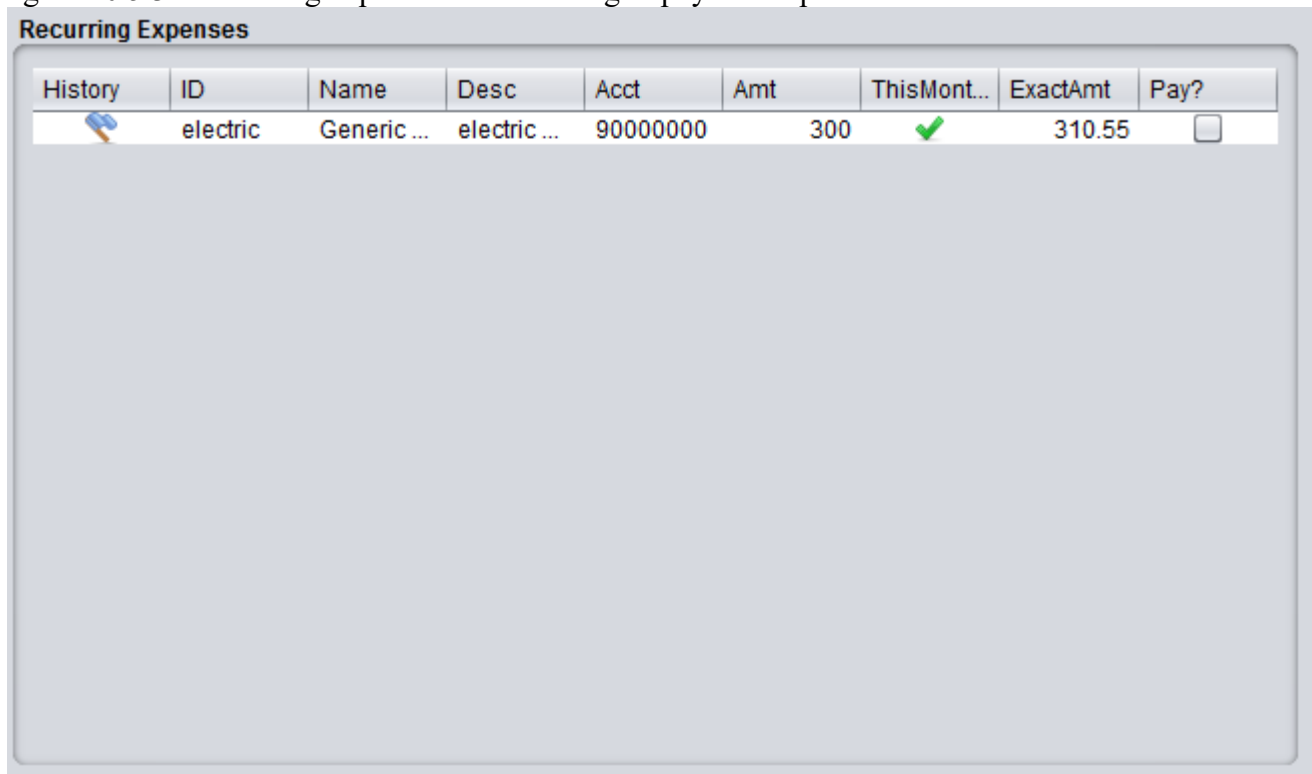
Price

Figure 10.5.2: Table showing registered recurring expense after clicking 'add item'


Recurring Expenses								
History	ID	Name	Desc	Acct	Amt	ThisMont...	ExactAmt	Pay?
	electric	Generic ...	electric ...	90000000	300	✖	0	<input type="checkbox"/>

Notice from the above figure that the 'ThisMonth' column is marked with a red x. To pay this expense, simply place the dollar amount of the expense in the second to last column labeled 'ExamtAmt' and click on the checkbox in the last column. You can do multiple records in this same pattern at one time. Once you've clicked the expenses that you wish to pay and have entered the exact values of the expense, click the 'pay selected items' button at the bottom of the menu to commit these payments. The following figure shows the screen after paying the expense. Note: once the expense is paid for the month, you will not have the opportunity to pay this again until the first day of the following month as the last column will become disabled until then. You can also click on the first column (flag) to show the payment history of this expense in the table at the bottom of the menu.

Figure 10.5.3: Recurring expense after selecting to pay this expense for the month.



The screenshot shows a window titled "Recurring Expenses" containing a table. The table has the following columns: History, ID, Name, Desc, Acct, Amt, ThisMont..., ExamtAmt, and Pay?. The first row of data contains the following values: a blue flag icon in the History column, "electric" in ID, "Generic ..." in Name, "electric ..." in Desc, "90000000" in Acct, "300" in Amt, a green checkmark in ThisMont..., "310.55" in ExamtAmt, and an unchecked checkbox in Pay?. The rest of the table is empty.

History	ID	Name	Desc	Acct	Amt	ThisMont...	ExamtAmt	Pay?
	electric	Generic ...	electric ...	90000000	300	✓	310.55	<input type="checkbox"/>

Once you have registered all of your recurring expenses, you can revisit this menu once a month to pay/track your monthly payments. A summed total of all recurring cost for the month is provided at the bottom of the menu as well as a placeholder for your monthly income. Simply add your expected monthly income in the income field, and click 'update income'. You can change this at any time. A difference field is provided for convenience between the monthly income and monthly expenses. The below figure shows the payment history for this example as well as the total recurring amount, monthly income, and difference.

Figure 10.5.4

The screenshot displays a web application interface for managing payments. At the top right, there is a button labeled "Pay Selected Items". Below this, the section is titled "History Of Payment". It contains a table with the following data:

ID	TranNbr	Vendor	Name	EffDate	Acct	Amount
electric	1000011	400001	Generic Vendor	2019-03-03	90000000	310.55

Below the table, there are summary fields and an action button:

- "Enter Monthly Net Income:" followed by a text input field containing "400.00".
- A blue button labeled "Update Income".
- "Total Recurring Amount:" followed by a text input field containing "300.0".
- "Difference:" followed by a text input field containing "100.00".

10.6 Quick Cash Browse (navcode: cashb)

The primary reporting tool for the Quick Cash Transactions is the Quick Cash Browse Menu. All four type of transactions can be viewed in this menu for any given date range. The default date range is the beginning of the year to the current date. Simply click 'run' and the report will generate all transactions that have occurred between the from and to date range. The initial report will show each a summary of these transactions. You can click on the 'basket' in the left column to see the details of each summary transaction (in situations where you committed more than one item per transaction. To close the detail menu, click the 'hide details' button. You can also view pie charts of the expenses and buy/sell transactions. Click the toggle box labeled 'charts', and the chart menu will appear. The upper pie chart is the combination of recurring and miscellaneous expenses for the given date range. The bottom chart is the total buy/sell transactions that have occurred for the given date range.

Figure 10.6.1: Quick Cash Browse (Expense and Buy/Sell Pie Charts).

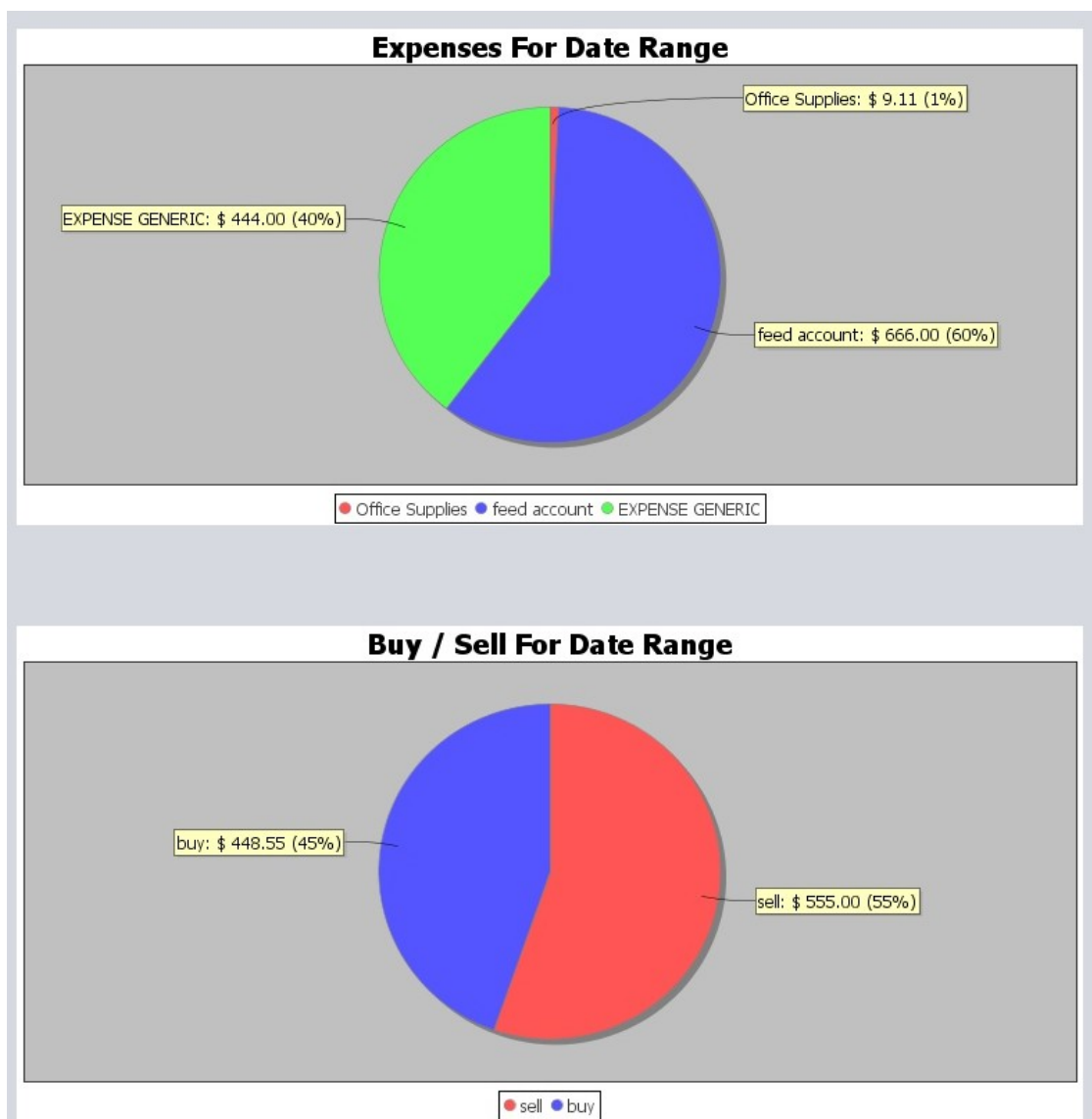






















Figure 10.6.2: Quick Cash Browse (Summary Table).

CashTranBrowse

From Date: 2019-01-01  Run Hide Detail CSV ☐ Charts

To Date: 2019-03-07 

Detail	ID	Key	Type	EntityNbr	EntityName	EffDate	TotalQty	TotalSales	Print
	50102	1000015	expense	cash	cash generic	2019-03-07	2	9.11	
	50100	100059	buy	cash	cash generic	2019-03-07	1	4.55	
	50097	1000013	expense	cash	cash generic	2019-03-06	2	666.00	
	50096	1000012	expense	cash	cash generic	2019-03-06	0	0.00	
	50095	1000011	expense	cash	cash generic	2019-03-06	1	444.00	
	50094	1000010	expense	cash	cash generic	2019-03-06	0	0.00	
	50093	1000009	expense	cash	cash generic	2019-03-06	0	0.00	
	50092	2118	sell	cash	cash generic	2019-03-06	1	555.00	
	50091	100058	buy	cash	cash generic	2019-03-06	1	444.00	

11 Engineering

11.1 Engineering Change Maintenance (navcode: ecnm)

To Be Added

12 Quality

12.1 *Quality Problem Report (navcode: qprm)*

To Be Added

13 Human Resources

13.1 *Employee Maintenance (navcode: empm)*

BlueSeer provides a human resources module for managing employee information. The employee maintenance record for each employee drives much of the functionality within the HR master menu (including Time and Attendance and work shift associations), and as such should be set up correctly to ensure proper execution. There are two pre-requisite maintenance screens that need to be setup before adding an employee record. You need to add at least one record to each of Department Maintenance and Shift Maintenance . To add or edit an employee record, go to 'HR'|'Employee Maintenance' menu. Click the 'New' button, and enter a unique employee number. The employee number can be up to 10 characters. The employee number should be unique to each employee. If bar-coded badges are provided to the employees, it is recommended that this number on the bar-coded badge be the same as the employee number for convenience when using the timeclock functionality (scanning in/out). When all fields are completed, click the 'Add' button to commit the employee record.

NOTE: the employee maintenance and user maintenance are two separate menus and are independent of each other. Establishing one does not establish the other.







You will need to choose a type for the employee. BlueSeer currently supports three types (Hourly, Salary, and Temp). The type field is used in time clock functionality, reports, and other application logic relative to HR functionality. There is also an 'active' versus 'inactive' drop down list to indicate whether the employee is an actual current employee or has been terminated for whatever reason. Some reports use this active/inactive flag to filter records from being displayed.

The Department field is also mandatory. An employee can be assigned to one and only one department/cost center. Choose the appropriate department for each employee.

The last mandatory field in the employee setup is the Shift. You will need to assign the employee to a predefined shift. Shift records are defined in 'HR'-'>'Shift Maintenance' and can be viewed in the Shift Browse Menu. Each employee can be assigned to one and only one shift. You can create as many shift records as necessary to support the various operational hours of the business.

All other fields are optional and will appear on various reports and may be applicable in further HR functional logic. You will need to fill these fields with appropriate values as necessary. Figure 13.13.1 shows a screen shot of the Employee Maintenance screen and the fields associated with this menu.

Figure 13.1.1
Employee Maintenance

Employee Number <input type="text"/>  <input type="button" value="New"/>		
LastName <input type="text"/> 	Dept <input type="text" value="1200"/>	Addrline1 <input type="text"/>
FirstName <input type="text"/> 	Shift <input type="text" value="1"/>	Addrline2 <input type="text"/>
Middle Initial <input type="text"/>	Status <input type="text" value="Active"/>	City <input type="text"/>
Job Title <input type="text"/>	Gender <input type="text" value="M"/>	State <input type="text" value="AB"/>
HireDate <input type="text"/> 	SSN <input type="text"/>	ZipCode <input type="text"/>
TermDate <input type="text"/> 	Type <input type="text" value="Hourly"/>	Country <input type="text" value="Afghanistan"/>
Date Of Birth <input type="text"/> 	Rate <input type="text" value="0"/>	Phone <input type="text"/>
Vacation Days <input type="text" value="0"/>	FMLA Days <input type="text" value="0"/>	Emergency Contact <input type="text"/>
Vac Days Taken <input type="text" value="0"/>		Emergency Number <input type="text"/>
Supervisor <input type="text"/>		
Clocked In? <input type="text"/>		
<input type="checkbox"/> AutoClock		
Comments <div><div></div></div>		
<div><div>Delete</div><div>Edit</div><div>Add</div></div>		

13.2 Shift Maintenance (navcode: site)

The shift maintenance menu maintains the various shift records that are necessary to support the operational business hours of the business. Each employee is assigned one and only one of the shift records defined here. The time clock functionality within BlueSeer depends heavily on the defined shifts and the association of the shifts which each employee that utilizes the time clock menu. Entering a new Shift record is fairly straight forward. Go to the Shift Maintenance menu under the HR master menu. Click the 'New' button, and enter a shift ID. The shift id can be any value up to 8 characters. Enter a description to go along with the shift id and then proceed to enter the appropriate time values for each of the 7 workdays. If Saturday and Sunday are not work days, then leave as the default "00:00" for both beginning and ending. Once you have entered these values, click 'Add' to commit the record.

Figure 13.2.1 shows a screen shot of the shift maintenance menu.

Figure 13.2.1

The screenshot shows a web-based interface titled "Shift Maintenance". It features a "Shift ID" input field with a search icon and a "New" button. Below this is a "Description" input field. The main section contains a grid for setting time values for each day of the week: Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, and Sunday. Each day has two rows of time selection controls, each displaying "00:00" with a dropdown arrow. At the bottom right, there are "Update" and "Add" buttons.

13.3 Time Clock Management and Maintenance (navcode: time)

BlueSeer provides a time clock menu to track employee clock in and clock out events. The time clock menu can be found under the "HR" menu in the menu bar. The time clock package provides a working "clock entry" screen, a means to adjust timeclock entries, and various reports to support payroll entries and analysis. Each employee's time clock 'ID' is their corresponding employee ID which must be setup first in Employee Maintenance before the clock entry screen can be used.

As mentioned previously, each employee has to be setup in the Employee Master. The ID associated with the employee is provided to the employee for their use in interacting with the time clock entry screen. The employee can either enter the ID via a keyboard...or it can be imprinted on an employee ID badge with bar-code...and subsequently scanned with a bar-code reader. Figure 13.3.1 shows the time clock menu that will be visible by the employees.

Figure 13.3.1.

The screenshot shows a software window titled "Employee Clock". At the top center is a dropdown menu currently set to "Clock IN". Directly below this is a text box labeled "ClockNumber". To the left of the "ClockNumber" box, there are four empty rectangular input fields stacked vertically. To the right of these four boxes is a larger, empty rectangular area. At the bottom of the window is a wide text input field with a vertical scrollbar on its right side.

The 'ClockNumber' has focus at all times for either keyboard entry of the employee's clocknumber or bar-code scanning of the clocknumber.

The typical deployment scenario is to deploy BlueSeer on a stand alone PC where it can be appropriately accessed by the employees. The PC should have a keyboard and/or barcode scanner depending on whether or not the employee ID is barcoded on their employee ID card. You can launch BlueSeer on the target PC, click on the TimeClock Entry menu, and leave this menu in the foreground at all times for use by the employees.

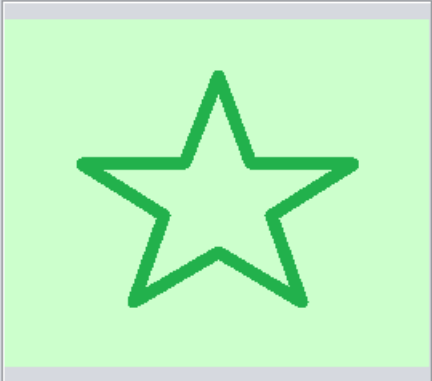
The "ID" field always has focus, so all the employee has to do is select in the dropdown list whatever the appropriate event is (Clock In or Clock Out) and enter their ID via the keyboard or scan their card. If it is a 'clock-in' event (and they haven't already clocked in) then a successfull 'image' will appear (see figure 13.3.2 below).

Figure 13.3.2

Employee Clock

Clock IN

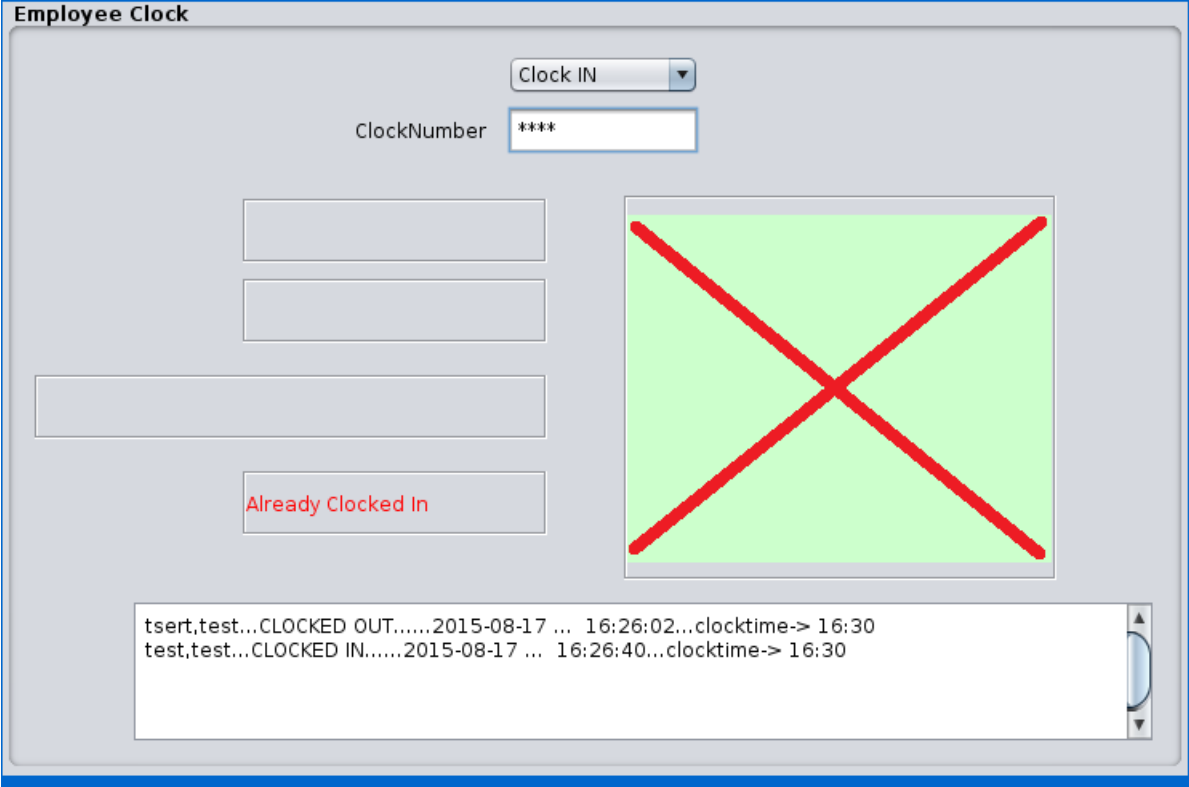
ClockNumber



test, test...CLOCKED IN.....2015-08-17 ... 16:26:40...clocktime-> 16:30"/>

If for any reason the entry was not successful, a message will appear indicating so (example: bad ID, already clocked in, etc) (see figure 13.3.3 below).

Figure 13.3.3



The screenshot shows a software window titled "Employee Clock". At the top, there is a dropdown menu set to "Clock IN". Below it is a text field labeled "ClockNumber" containing four asterisks "****". To the left of the main interface are four empty rectangular input fields. To the right is a large green square with a red 'X' over it, indicating a failed operation. Below the input fields is a button labeled "Already Clocked In" in red text. At the bottom of the window is a log window with a scrollbar, containing the following text:

```
tser,tet...CLOCKED OUT.....2015-08-17 ... 16:26:02...clocktime-> 16:30  
test,test...CLOCKED IN.....2015-08-17 ... 16:26:40...clocktime-> 16:30
```

The image notification will pause for 2 seconds before resetting for another entry event. (You generally do not have to reset the dropdown type event since your employees are generally all clocking in or all clocking out depending on shift). A text field below will contain a record of last entries that includes timestamps, ID, and name of employee.

13.3.1 TimeClock Accounting

Each timeclock entry event records the real time (T_r) and accounting time (T_a) of the entry. T_a is recorded on quarter hour intervals. For example, if an employee clocks in at 8:03AM then the (T_r) time will be 8:03AM and the (T_a) time will be recorded as 8:00AM. However, if the employee clocks in at 8:09AM, then (T_a) will be 8:15AM. There is a 7.5 min window within every quarter hour that dictates whether (T_a) is assigned forward or backward. (T_a) accounting time is provided to make it easier for payroll entries and reporting. However, the real clock time T_r can be reviewed any of the TimeClock reporting menus for administrative and management purposes of employees real time labor activity (example: on time versus tardy reporting and disciplinary actions).

13.3.2 AutoClock Maintenance and Procedure

The AutoClock maintenance utility is a procedure that can be executed once a week that will generate exceptions for missing clock records in the absence of an employee specific clock event. This

utility is generally ran on a monday following the work week under review. The menu can be found under 'HR'|'TimeClock Menu'|'Administration'|'AutoClock Maintenance'. The procedure is simple. Just enter the number of days 'back' you want to check for missing TimeClock events and click the submit button. If any exceptions are found, time clock records will be generated for any employee that is both active and has the 'autoclock' checkbox checked in their employee master record. The clock records will be compared to the employee's shift schedule and if any periods are found without a corresponding timeclock record, a new record with code '66' will be generated. Supervisors and/or HR can then review these '66' records with employees and ascertain the reason for the absent timeclock record. They will then adjust the '66' records to whatever payable or non-payable code by using the Supervisor Approval Menu (see 'HR'|'TimeClock Menu'|'Administration'|'Supervisor Approval'). As stated before, this procedure is typically done on a Monday following the week in review and adjusted in time for the upcoming payroll event. Note: The autoclock procedure should be ran by an administrator or key supervisor. This procedure can also be set as a background service to be automatically executed on a scheduled frequency. (Cron How-To to come)

13.3.3 TimeClock Code Maintenance (navcode: tima)

TimeClock Code Maintenance (under 'HR'|'TimeClock Menu'|'Administration'|'TimeClock Code Maintenance') allows you to create codes that describe various employee clock events. There are 5 codes that are system codes (these cannot be deleted or edited). The remaining codes are miscellaneous codes that your management team can apply to various scenarios of work scheduling and/or absent explanations. There are reports where you can review the frequency of timeclock events by code which can be used to review employee's consistency in their work schedule or lack there of. You can add codes as necessary. To see a complete list of codes go to 'HR'|'TimeClock Menu'|'Administration'|'TimeClock Code Browse' menu. You can then click on a specific code to edit or review it's description and use. Note: You can set these codes as 'Payable' or 'Non-Payable' depending on the code's usage.

13.3.4 TimeClock Accounting Codes

Code	Descr	System Code
00	Successful in/out event	yes
01	Timeclock in event only	yes
02	Bereavement - Unpaid	
04	Jury Duty - Unpaid	
06	Vacation - UnPaid	
07	Lack of Work - UnPaid	
13	Early	yes
14	Tardy	yes
16	Alternate Schedule	yes
20	Medical Leave	
21	Other UnPaid	

23	Holiday - UnPaid	
24	Holiday - Paid	
25	FMLA - UnPaid	
27	Disciplinary Layoff - UnPaid	
66	Exception Pending Review	yes
96	Termination	

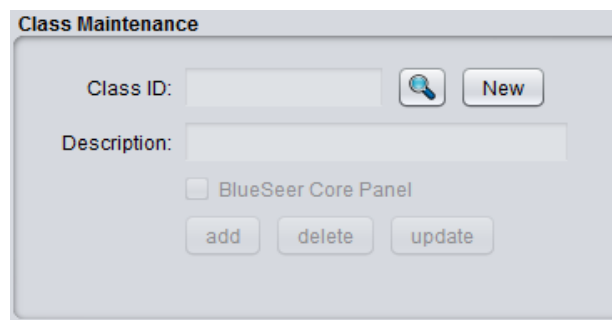
14 Administration

14.1 Class (Panel) Maintenance (*navcode: panel*)

The central design theme behind BlueSeer is 'JPanel' centric. Each maintenance panel (and most reports) have a unique JPanel that the display and logic reside in. Each JPanel is a separate java class, and it is necessary to register each panel 'class' within the BlueSeer database. This is by design to make it as simple as possible to add new functionality or new customization to BlueSeer. Adding a new 'maintenance menu' is as simple as adding a new JPanel class with appropriate fields and logic, compiling and dropping it in the BlueSeer source directory, and registering the new class with in the Class Maintenance Menu. For example, if you wanted to add a menu called 'Job Data Entry Maintenance' for end users to enter data for a particular job, you would create the JPanel with the appropriate fields and logic and include in the BlueSeer directory. From NetBeans, you would most likely right click one of the other 'maintenance panel' .java files, copy, right-click the parent 'BlueSeer' directory, click 'Paste' → 'Refactor Copy', Rename to 'JobEntry.java' and NetBeans will include your new class in the BlueSeer Source directory. You then simply have to register 'JobEntry' in the Class Maintenance registration menu.

To add a new class (JPanel), go to 'Class Register' under the Admin master menu, click on 'New' and enter the 'class id' field with the new JPanel class name (leave off the .class or .java extention). You can add an optional description as well. If this is indeed a GUI JPanel to be used as an interactive maintenance menu, you will need to check the 'BlueSeer Core Panel' box. If it is an arbitrary utility class, then leave that field unchecked. A screenshot of the Class Maintenance menu is provided below in Figure 14.1.1.

Figure 14.1.1



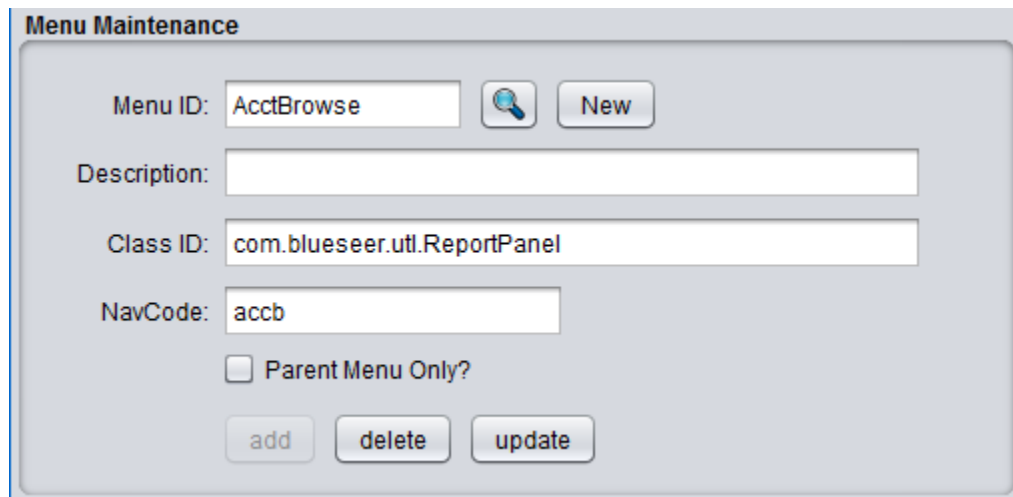
The screenshot shows a dialog box titled "Class Maintenance". It contains the following elements:

- A "Class ID:" label followed by a text input field and a magnifying glass icon.
- A "Description:" label followed by a text input field.
- A checkbox labeled "BlueSeer Core Panel".
- Three buttons at the bottom: "add", "delete", and "update".
- A "New" button located to the right of the "Class ID:" input field.

14.2 Menu Maintenance (navcode: menu)

All of the maintenance, browse, and report menus within BlueSeer are stored in the database by menu name. Each menu parent and menu item in the master menu bar are stored in the database by name. This setup facilitates the creation of new menus and/or the customization or regrouping of menus under different hierarchies. The one exception to this is the master menu bar. All the parent menus on the master menu bar are permanent by design and cannot be changed. All inherited sub menus of the master menus can be added, updated, deleted, and/or re-positioned. The registration of a menu into the database is a simple step. To add (or update) a menu, click the Menu Maintenance menu under the Admin master menu. You can either add a new menu or update an existing menu by clicking on the search button and browsing for the menu to be updated. To add a new menu, click 'New' and enter a menuID value. This can be any value (you will assign to the tree in Menu Tree Maintenance) up to 30 characters. You can then optionally add a description if necessary to describe the menu. You **must** enter a ClassID, which is the JPanel class that is used by the menu for interaction. JPanel Class were registered previously in Class (Panel) Maintenance. You do not have to enter a ClassID if this menu is a 'parent' menu and is for navigational use only. If a 'parent' menu only, check the 'Parent Menu Only?' toggle box. In this case, you can leave ClassID blank. You will also need to enter a 'NavCode' that will allow navigation to the menu via the navigation textbox on the menu bar. This field is validated and will ensure a unique navcode per menu. Once this is complete, click 'Add' to commit the new menu to the database. Figure 14.2.1 shows the screenshot of the Menu Maintenance screen.

Figure 14.2.1



The screenshot shows a web form titled "Menu Maintenance". It contains the following fields and controls:

- Menu ID:** A text input field containing "AcctBrowse". To its right is a search icon (magnifying glass) and a "New" button.
- Description:** An empty text input field.
- Class ID:** A text input field containing "com.blueseer.util.ReportPanel".
- NavCode:** A text input field containing "accb".
- Parent Menu Only?:** A checkbox that is currently unchecked.
- Action Buttons:** At the bottom, there are three buttons: "add", "delete", and "update".

14.3 Menu Tree Maintenance (navcode: tree)

The menu tree maintenance routine maintains the menu registration and positioning within the master menu bar in BlueSeer. To place a new menu within the tree (assign to a parent within the master menu bar), you must first confirm that you have registered the menu in Menu Maintenance, and therefore registered the Class that the menu is associated with in Class (Panel) Maintenance. Once these two items are complete, you can then proceed to insert the menu within the Tree. Click on the Menu Tree Maintenance menu within the 'Admin' menu. This will bring up the Menu Tree Maintenance screen. The screen shot below (Figure 14.3.1) shows the menu when it is first initiated.

Figure 14.3.1

The screenshot shows the 'Menu Tree Maintenance' window. On the left, there are input fields for 'Parent Item', 'Component', 'Index', 'Name', 'Type' (a dropdown menu currently showing 'JMenu'), 'Icon', 'InitVar', and 'Function'. Below these fields are two checkboxes labeled 'Visible?' and 'Enabled?'. At the bottom left are three buttons: 'Delete', 'Update', and 'Add'. On the right side, there is a tree view titled 'Tree' showing a hierarchy of menu items. The root node is 'root', which has several children: 'Address', 'Purchasing', 'Order', 'Shipping', 'Finance', 'Inventory', 'Engineering', 'Quality', 'Custom', 'HR', 'Admin', and 'Help'. Each child node is represented by a folder icon.

The 'root' node of the tree is fixed as are the immediate children of the root node (I.e...Address, Purchasing, etc). These menus cannot be changed or adjusted. You can, however, add, update, delete, or re-position submenus to these parent menus. You can click on any menu in the right panel and the fields on the left will be occupied with the tree position information for that menu. For example, clicking on the Address menu in the right panel will produce Figure 14.3.2.

Figure 14.3.2

The screenshot shows the 'Menu Tree Maintenance' window. On the left, there are form fields for configuring a menu item. The 'Parent Item' is set to 'root'. The 'Component' is set to 'Address'. The 'Index' is '1'. The 'Name' is 'Address'. The 'Type' is 'JMenu'. There are also checkboxes for 'Visible?' and 'Enabled?', both of which are checked. At the bottom left are buttons for 'Delete', 'Update', and 'Add'. On the right, there is a tree view showing the menu structure. The tree starts with 'root', which has a child 'Address'. 'Address' has several children: Purchasing, Order, Shipping, Finance, Inventory, Engineering, Quality, Custom, HR, Admin, and Help. The 'Address' node is selected in the tree view.

You will notice that the Parent Item of the 'Address' is valued as 'root'. The component is the active menu in question 'Address'. The 'Name' field is the name of the Address menu that you see when you open BlueSeer and view the Master Menu Bar. You can change the value in the 'Name' Text Box to be whatever you want. The 'Component' drop down text box is the exact MenuID that was registered in Menu Maintenance. There are two types to choose from with regards to the menu type (Jmenu and Jmenuitem). If it is a navigational parent (as Address is indeed so) then the type should be “Jmenu”. Otherwise the type should be “Jmenuitem”.

So, as an example of adding a menu, let's add a 'test' menu item (jmenuitem type) to the 'Address' parent menu. Right-click on the Address Tree to open it's children. Then click on the last child item under the Address menu (“LabelMenu”). This will place 'Address' in the 'Parent Item' text box. See Figure 14.3.3 below.

Figure 14.3.3

The screenshot shows the 'Menu Tree Maintenance' window. The left panel contains form fields: 'Parent Item' is 'Address', 'Component' is 'LabelMenu', 'Index' is '1', 'Name' is 'Label Menu', 'Type' is 'JMenu', 'Icon', 'InitVar', and 'Function' are empty. There are checkboxes for 'Visible?' and 'Enabled?' and buttons for 'Delete', 'Update', and 'Add'. The right panel shows a tree view with 'root' expanded, showing 'Address' (expanded) with sub-items 'CustomerMenu', 'VendorMenu', 'EDIMenu', and 'LabelMenu' (selected). Other top-level items are 'Purchasing', 'Order', 'Shipping', 'Finance', 'Inventory', 'Engineering', 'Quality', 'Custom', 'HR', 'Admin', and 'Help'.

With the screen active as witness in figure 10.3.3, click inside the Component drop-down list and add the MenuID of the menu you wish to add (assume you registered the menu 'TEST' in Menu Maintenance). After entering 'TEST' in the Component drop-down list, press the Tab key. You will notice that the Index field converts to '-1' and is disabled as it should be. You can then enter the 'Name' of the menu that you wish to be visible on the Menu Bar. You can enter 'TEST' or 'TEST SCREEN' or whatever you wish. Then, choose JmenuItem from the 'Type' drop-down list. You can leave Icon, Initvar, and Function blank (these are discussed below). Check the 'visible?' and 'enable?' boxes with a check mark for both. You can then click 'Add' to insert the new menu item into the tree. Figure 14.3.4 below shows a screen shot of the menu just after clicking 'Add'.

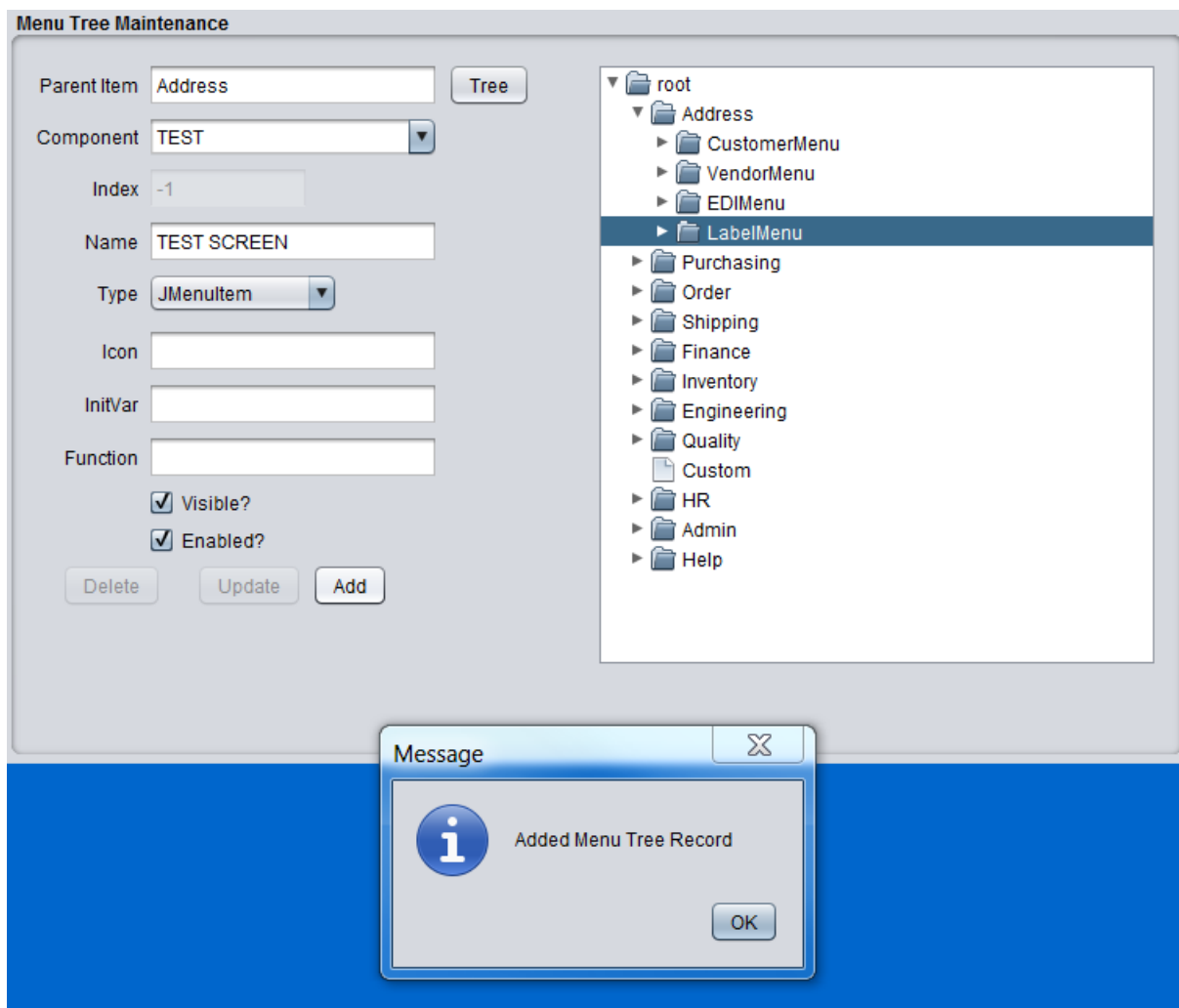
Once you've inserted the new menu, the Menu Tree Maintenance window will refresh with the new information. However, the actual menu 'TEST SCREEN' will not appear under the 'Address' menu until after you have closed BlueSeer and restarted. The menus (and security access thereof) is assigned once at startup of the BlueSeer application. Any changes to the menus (or security) must be accompanied by a restart of the application.

14.3.1 Field Definitions:

- **Icon:** The icon text box is reserved for providing an icon image file instead of 'verbiage' for the menu name. The 'Home' (little blue house icon) is an example.
- **InitVar:** This text box is used for initializing a function within each menu class "initvars(string var). This function should be assigned in every menu class created. Assigning a value of '1' in InitVar will execute the initvars function within the class. If the value is blank, it will not be executed.

- **Function:** A few of the menu items are functions only...i.e. They do not have interactive Panels for which data is entered or retrieved. These type of menus simply perform a simple function or similar background activity. Assigning a '1' in the Function text box will flag this menu item as a 'function' with no visible panel for interaction.
- **Visible:** Checking this box will ensure that this menu item is visible at startup (assuming you have permissions).
- **Enabled:** Checking this box will ensure that this menu item is enabled. The menu item can be visible yet disabled as an option.

Figure 14.3.4



14.4 Site Maintenance (navcode: site)

A default site is created during the installation of BlueSeer. The site code is '1000'. You can view this site under the Admin Menu by clicking on Site Browse and then clicking the appropriate select option from the table. You will be redirected to the Site Maintenance Screen. You can also enter your own Site code by going to the 'Admin' menu and then choosing Site Maintenance. Click 'New', and enter a site code of your choice. The site code can be a maximum of 10 characters. Enter the appropriate information for the site address and then click 'Add'. Figure 14.4.1 shows a screen shot of adding a new site code. Once this code is entered, if you choose to use this code as your default site code, then you must enter this code in Default Maintenance under the 'Admin' menu. Go to the Default Maintenance menu, enter the code, and click 'Update'. This will commit your new site code as the default site code for all functionality within BlueSeer. Figure 14.4.2 shows the updating action within the default maintenance menu.

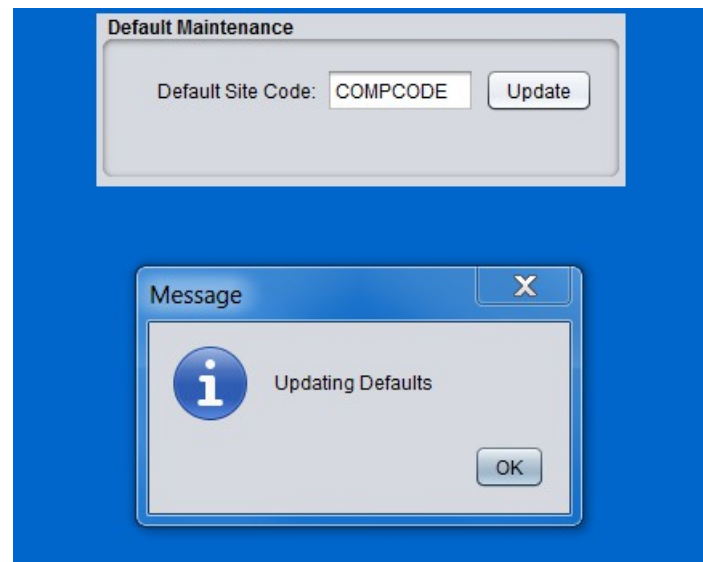
Figure 14.4.1

The screenshot shows the 'Site Maintenance' window with the following fields and values:

Field	Value
Site Code	1000
Site Desc	MFG Company
AddrLine1	Dusty Way Canyon Road
AddrLine2	
AddrLine3	
City	Dodge City
State	KS
Zip	65455
Logo File	bs.png
Generic Invoice	inv_generic.jasper
Generic Shipper	ps_generic.jasper
Generic PO	po_generic.jasper
POS Rcpt	pos_receipt.jasper
Generic OR	ord_generic.jasper

Buttons: New, Clear, Delete, Update, Add

Figure 14.4.2

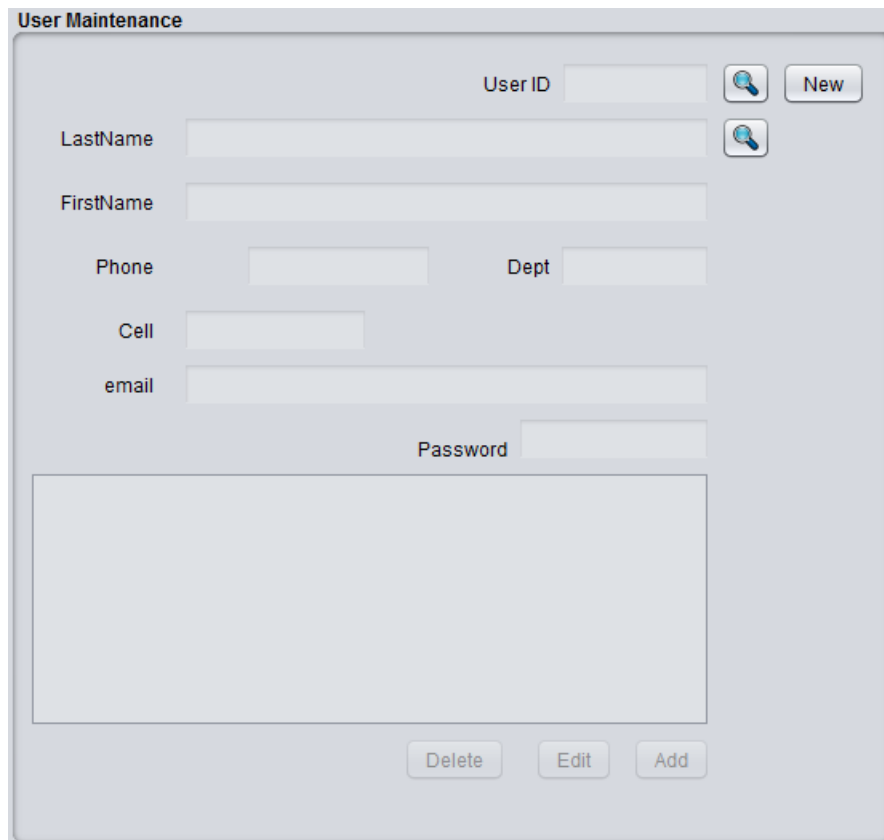


14.5 User Maintenance (navcode: usrm)

Adding and updating user accounts is provided for in the User Maintenance menu under the Admin menu. **Note:** User Ids and Employee Ids are not the same and are independent fields with their own unique purpose. The user maintenance menu allows you to maintain the users ID and associated information with usage of the BlueSeer application. The userid is prevalent through the application in usage and visibility. The majority of the functional modules use the userid field to stamp an id onto each record that is created and/or updated for tracking and change purposes. Each user of BlueSeer should have one and only one userid so that change management can be controlled and audited as necessary.

To create a new user, go to the user maintenance menu under the Admin master menu. Click the 'New' button. This will enable the fields for input. Enter in a unique value for 'userid'. This can be any string up to 8 characters. You can then proceed to enter the associated information including lastname, firstname, email account, etc. The password field is used by the admin to establish and change passwords as necessary. Once the required information has been entered, click the 'Add' button to add the userid to the database. You can then provide the user with the application, userid, and password. However, you still need to add 'permissions' to this userid (which is discussed in the next section). A screen shot of the user maintenance menu is provided in figure 14.5.1.

Figure 14.5.1



The screenshot shows a web-based form titled "User Maintenance". The form contains several input fields and buttons. At the top right, there is a "User ID" field with a search icon and a "New" button. Below this, there is a "LastName" field with a search icon. Further down, there is a "FirstName" field. Below that, there are "Phone" and "Dept" fields. Below "Phone" is a "Cell" field. Below "Cell" is an "email" field. Below "email" is a "Password" field. At the bottom of the form, there are three buttons: "Delete", "Edit", and "Add".

14.6 User Permissions Maintenance (navcode: uspm)

Once you have created a unique user id, you can then assign permissions that will allow the user id in question to access certain menus within the application. To assign and/or update menu permissions, click on the User Perms Maintenance menu under the Admin master menu. This will bring up the user perms maintenance screen. There are four panels in this menu screen. The majority of the time, you will assign individual menus to specific user ids. This is achieved by the panel marked 'Menu To User Assign/Unassign'. Simply choose the menu in question from the drop-down list and choose the user id from the user drop down list, and then either click the assign or unassign button to associate or unassociate the menu to the user id. You can also copy one user id permissions to another in the panel marked 'Copy All User Permissions'. This is the most feasible for new implementations. The standard practice is to create 'general' user ids for groups of functionality...(by Finance, Customer Service, etc) and assign relevant menus to these generic user ids. You can then use these ids to copy permissions from and assign to 'real' user ids as they are granted access to the system.

Note: the 'admin' user id can not be 'assigned' to in the 'copy all' panel for security purposes. Once a new menu is created/registered in menu maintenance, it is by default assigned to the 'admin' user id automatically.

To view what menus are assigned to what users, you can see this list in 'Menus Assigned to this User' panel. Choose a user id in the drop-down list and click the relevant 'get' button.

To view all users assigned to a certain menu, the far right panel 'Users Assigned to this Menu' will provide that detail. Simply choose a menu in the drop down list and click the 'get' button. A screen shot of the User Perms Maintenance menu is provided in Figure 14.6.1.

Figure 14.6.1

The screenshot displays the User Permissions Maintenance interface with the following components:

- Copy All User Permissions:** Includes a 'User From' dropdown set to 'admin', an empty 'User To' dropdown, and a 'Copy' button.
- Menu To User Assign/Unassign:** Includes a 'Menu' dropdown set to 'AcctBalSumYTD', a 'User' dropdown set to 'admin', and 'UnAssign' and 'Assign' buttons.
- Menus Assigned to this User:** Features a dropdown set to 'admin' and a 'Get' button above a large empty list box.
- Users Assigned to this Menu:** Features a dropdown set to 'AcctBalSumYTD' and a 'Get' button above a large empty list box.

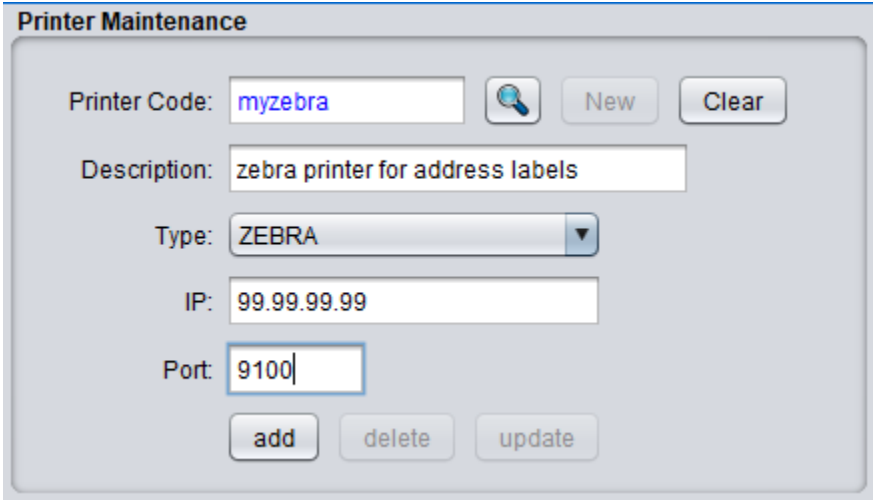
14.7 **Printer Maintenance (navcode: prnt)**

Printer Maintenance is primarily used for maintaining configuration of label printers. Most non-label printing functionality (reports, tables, etc) is handled by the default printer dialog box of the jasper viewing window. Typically, reports and custom prints are processed by the default printer dialog box of the operating system. The label printing functionality, however, is specific to the printers set up in this menu.

The configuration of the printer maintenance is fairly simple. A printer 'code' is defined for each label printer along with it's specific IP address and Port. A type field is provided with only two options at this time 'LASER' and 'ZEBRA'. Most label printing configurations will be 'ZEBRA'. To add a new printer, click the new button and enter a code for the printer. The code can be no more than 8 chars long. Enter a description, IP address and Port number and click the add button to commit the record. See figure below for screenshot of the printer maintenance panel.

Note: any label printer that supports ZPLII printer commands will work. In these cases, you can assign 'ZEBRA' to the type, even if it's a different manufacturer.

Figure 14.7.1



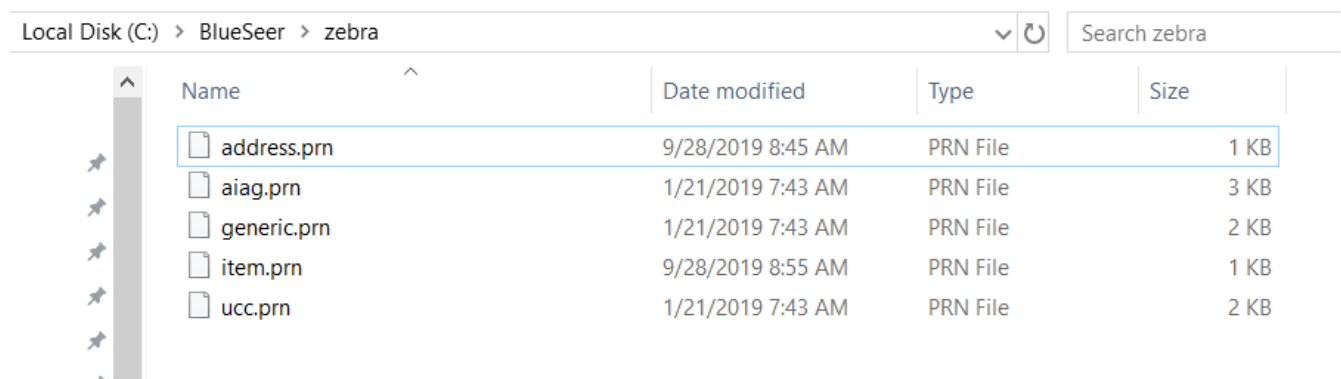
The screenshot shows a 'Printer Maintenance' window with the following fields and controls:

- Printer Code:** A text input field containing 'myzebra' with a magnifying glass icon to its right.
- Description:** A text input field containing 'zebra printer for address labels'.
- Type:** A dropdown menu currently set to 'ZEBRA'.
- IP:** A text input field containing '99.99.99.99'.
- Port:** A text input field containing '9100'.
- Buttons:** 'New' and 'Clear' buttons are located next to the Printer Code field. 'add', 'delete', and 'update' buttons are located at the bottom of the form.

14.8 Label Maintenance

BlueSeer can generate container, address, and item labels from thermal label printers of the appropriate type. The label template design is left to other 3rd party tools, but once the label template is created and stored in the template directory, it can be used to print various labels. Note: at this time, only ZPL coded templates are supported, so it is imperative that you design your templates based on ZPL supported printers. There are several label designer software vendors that offer free downloads that can be used to generate the label template. ZebraDesigner® and Bartender Label Software® are two such packages. Once you've created the template, place the template file in the blueseer/zebra directory. There are already several generic templates in this directory as shown in figure 14.8.1.

Figure 14.8.1



Local Disk (C:) > BlueSeer > zebra				Search zebra
Name	Date modified	Type	Size	
address.prn	9/28/2019 8:45 AM	PRN File	1 KB	
aiag.prn	1/21/2019 7:43 AM	PRN File	3 KB	
generic.prn	1/21/2019 7:43 AM	PRN File	2 KB	
item.prn	9/28/2019 8:55 AM	PRN File	1 KB	
ucc.prn	1/21/2019 7:43 AM	PRN File	2 KB	

An example of the content of the generic address label template file is shown below. Note that the content is essentially comprised of ZPL specific codes for printing the desired template and are generic to ZPL based printing in general. However, in order to overlay 'data' onto the desired location, you will need to use variables which can be defined with a \$ prefix. For example, the Address label below passes a value to the '\$ADDRNAME' variable highlighted in yellow (see below). When you design the label, place your 'variables' in the appropriate text boxes with a prefix \$ character. Note also that the java program calling the label is designed *specifically* for the variables created in the ZPL template file so any custom labels with custom variables **must** have a corresponding custom java program to drive the label generation. See the source code for the java class com.blueseer.lbl.LabelAddrPanel to understand more about the correlation between the java program and the label template file.

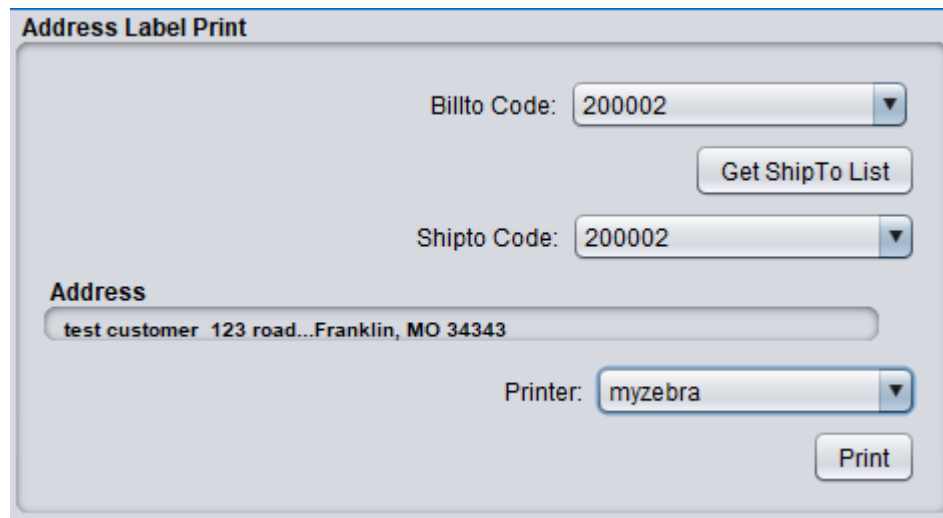
Figure 14.8.2 (Contents of address.prn label template file)

```
#CT~~CD,~CC^~CT~  
^XA~TA000~JSN^LT0^MCY^MNW^MTT^PON^PMN^LH0,0^JMA^PR4,4~SD15^JUS^LRN^CI0^  
XZ  
^XA  
^MMT  
^PW812  
^LL1218  
^LS0  
^FT372,1197^A0B,62,62^FH\^FDTO:^FS  
^FT612,363^A0B,54,52^FH\^FD$ADDRZIP^FS  
^FT611,692^A0B,54,55^FH\^FD$ADDRSTATE^FS  
^FT532,1066^A0B,51,52^FH\^FD$ADDRLINE2^FS  
^FT613,1070^A0B,56,57^FH\^FD$ADDRCITY^FS  
^FT454,1065^A0B,54,52^FH\^FD$ADDRLINE1^FS  
^FT374,1063^A0B,51,52^FH\^FD$ADDRNAME^FS  
^FT78,1189^A0B,62,62^FH\^FDFROM: $SITENAME^FS  
^FT41,187^A0B,28,28^FH\^FD$TODAYDATE^FS  
^FT786,120^A0B,28,28^FH\^FDBlueSeer^FS  
^FT237,990^A0B,28,28^FH\^FDph: $SITEPHONE^FS  
^FT186,984^A0B,28,28^FH\^FD$SITECSZ^FS  
^FT134,987^A0B,28,28^FH\^FD$SITEADDR^FS  
^PQ1,0,1,Y^XZ
```

14.8.1 Address Labels (4x6) (navcode: lbla)

Address labels can be generated from BlueSeer. To generate an address label for a specific customer ship-to address, enter 'lbla' in the navigational text-box on the main-menu bar. Note: This menu only prints labels for Customer 'shipto' codes. You need to confirm that you have a ZPL compatible printer set up in printer maintenance (navcode: prtn) before proceeding.

To print the label, choose the bill-to code parent of the ship-to code that you want to print a label for. Then click the button below to get a list of possible ship-to codes that are applicable. Select the target ship-to code and the target printer. The address will be displayed in the Address text box. If the address presented is the one to print, then simply click print and a single label will be printed to the printer assigned.



The screenshot shows a software window titled "Address Label Print". It contains several input fields and buttons. At the top, there is a "Billto Code:" dropdown menu with "200002" selected. Below it is a "Get ShipTo List" button. Underneath that is a "Shipto Code:" dropdown menu, also with "200002" selected. Below the ship-to code is an "Address" label above a text box containing "test customer 123 road...Franklin, MO 34343". At the bottom, there is a "Printer:" dropdown menu with "myzebra" selected, and a "Print" button to its right.

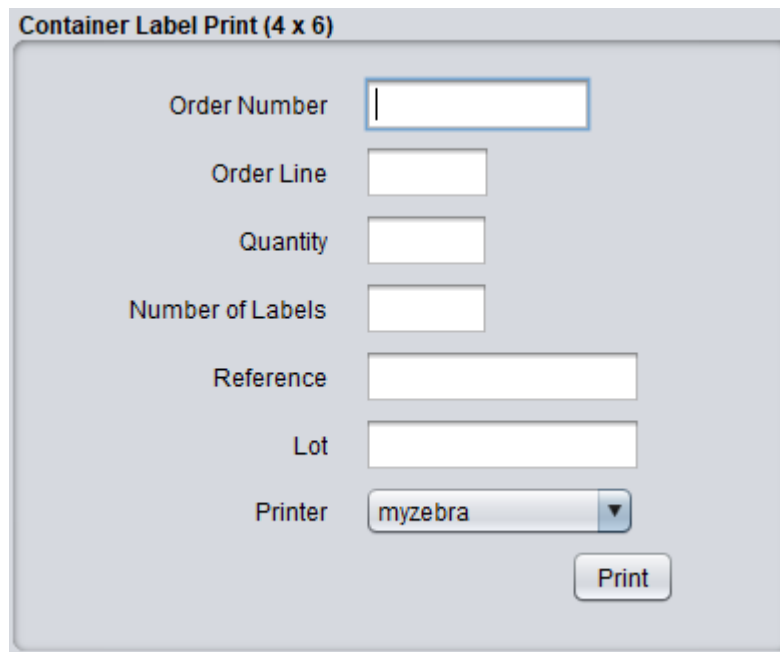
14.8.2 Container Labels (4x6) (navcode: lbld)

Container labels can be generated from BlueSeer. Container labels are specific to a customer order and customer line of that order (a single item). The container label print program can be accessed by entering 'lbld' in the navigational text-box on the main-menu bar. You will first need to confirm that you have a ZPL compatible printer set up in printer maintenance (navcode: prtn) before proceeding.

To print the label, enter the sales order number, line number on the order, quantity (per container label), number of labels and reference and lot numbers (both optional). If the information entered is correct, a 4 x 6 generic container label will be generated for that specific order / line number.

Note: It is possible to design and print a custom label. Once the custom label has been defined in Label File Maintenance, the code used for the label can be assigned to specific customers. The 'Label' drop down selection box in Customer Maintenance can assign a specific custom label to all container labels for this customer's orders. The association is only at the customer bill-to level and not the ship-to level.

Figure 14.8.3



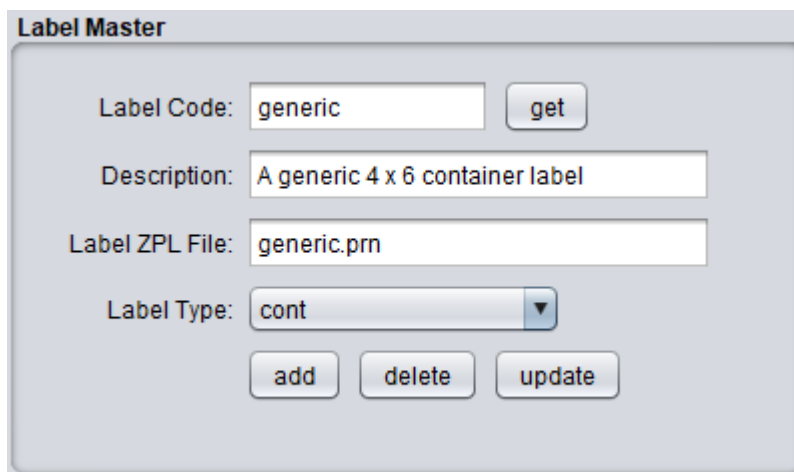
A screenshot of a web form titled "Container Label Print (4 x 6)". The form contains several input fields and a dropdown menu. The fields are labeled "Order Number", "Order Line", "Quantity", "Number of Labels", "Reference", and "Lot". The "Printer" field is a dropdown menu currently showing "myzebra". A "Print" button is located at the bottom right of the form.

Field	Value
Order Number	
Order Line	
Quantity	
Number of Labels	
Reference	
Lot	
Printer	myzebra

14.9 Label File Maintenance (navcode: lblm)

Label File Maintenance is used to manage the label template files found in the blueseer/zebra directory. You can design and create custom ZPL formatted labels for containers, addresses, or items. Once the template has been designed and placed in the blueseer/zebra folder, you will need to associate a code with the custom label. Enter a label code (8 chars max) and the name of the file placed in the blueseer/zebra directory. Then choose a type of label and click Add to commit the record. You can then use this code to assign specific customers with this new custom label in customer maintenance drop-down field 'Label'.

Figure 14.9.1



A screenshot of a web form titled "Label Master". The form contains several input fields and buttons. The fields are labeled "Label Code:", "Description:", "Label ZPL File:", and "Label Type:". The "Label Code:" field contains the text "generic" and has a "get" button next to it. The "Description:" field contains the text "A generic 4 x 6 container label". The "Label ZPL File:" field contains the text "generic.prn". The "Label Type:" field is a dropdown menu currently showing "cont". At the bottom of the form are three buttons: "add", "delete", and "update".

Field	Value
Label Code:	generic
Description:	A generic 4 x 6 container label
Label ZPL File:	generic.prn
Label Type:	cont

15 API (BlueSeer)

BlueSeer has several APIs as of version 5. These APIs allow for the exchange of data between BlueSeer and other peripheral application systems that may require some level of integration with the parent package. It uses a simple java servlet architecture to provide the services for the APIs. BlueSeer utilizes the open source embedded web server Jetty, developed by the Eclipse Foundation, to serve java servlets that process HTTP requests and responses through the API interfaces. These APIs can be used in machine to machine communication to retrieve and post various data in JSON format from various modules with the BlueSeer application.

There are many manufacturing scenarios where APIs are useful. Many shop floor functions are performed at production work stations. These work stations may have applications developed specific to their function in other programming languages that could integrate BlueSeer APIs for the purpose of programmatically sharing/exchanging information between the work station and the BlueSeer ERP. Retrieving item master info, sales order info, or posting production directly from the work station into BlueSeer are but a few examples where these APIs are useful.

15.1 Host Application Service (Jetty)

As mentioned previously, BlueSeer uses the Jetty embedded web server to host the java servlets for the API services. The server is initiated from the apiServer class within the BlueSeer utilities package. The apiServer class is a simple class with a main method that instantiates the server. The server uses a context path of /bsapi/ and port '8088' to serve content and respond to HTTP GET and POST requests. The server is easily started from the command line as the following example shows:

Note: you should be in the BlueSeer parent directory when running the below java command.

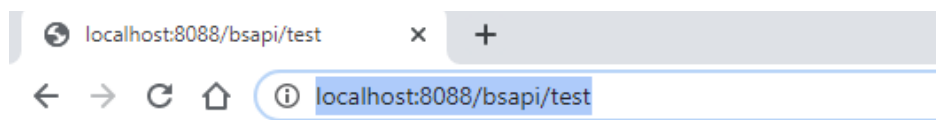
```
Prompt> java -cp ".;dist\*" utilities.apiServer
```

If the execution is successful, you will get output ending with something similar to :

```
[main] INFO org.eclipse.jetty.server.AbstractConnector - Started ServerConnector@7a92922{HTTP/1.1, (http/1.1)}{0.0.0.0:8088}
[main] INFO org.eclipse.jetty.server.Server - Started @1388ms
```

This execution must be left running for as long as the API services are required. On linux, you can run in the background if you wish. On Windows, it is advisable to set this execution as a Windows Service.

To test the api server, you can enter the below in a browser from the box executing the above service and you should see the following results :



BlueSeer API server says hello!

Note: You will need to change 'localhost' to the name of the server actually running apiServer if you are using a browser on a different box or work station.

15.2 API Service Categories

BlueSeer's APIs are limited to data exchange with the following Modules :

- 1) Sales Orders (Post and Get)
- 2) Work Orders (Post and Get)
- 3) Shipping (Post and Get)
- 4) Item Master (Get Only)
- 5) Customer Master (Get Only)

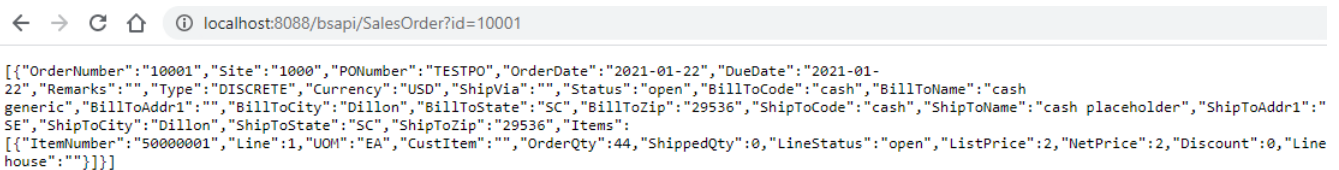
15.2.1 Sales Order API

The Sales Order API provides the ability to create sales orders from a third party application using the api as well as retrieve information about a specific sales order. The API also provides the ability to retrieve a list of orders with a few selection filters in the Parameters String of the 'GET' HTTP method. The 'POST' HTTP method allows for the creation of a Sales Order if given an appropriate JSON object within the post.

To retrieve a specific Sales Order, the API call would have to provide the id of the sales order. For example, the following URL call would retrieve a JSON object for sales order '10001' :

<http://servername:8088/bsapi/SalesOrder?id=10001>

The response received would be a JSON object similar to the image below.



The screenshot shows a web browser window with the address bar displaying `localhost:8088/bsapi/SalesOrder?id=10001`. The main content area displays a JSON object representing a sales order. The JSON structure includes fields for OrderNumber, Site, PONumber, OrderDate, DueDate, Remarks, Type, Currency, ShipVia, Status, BillToCode, BillToName, generic, BillToAddr1, BillToCity, BillToState, BillToZip, ShipToCode, ShipToName, ShipToAddr1, SE, ShipToCity, ShipToState, ShipToZip, Items, and a nested array of Item objects. The first item in the array has ItemNumber 50000001, Line 1, UOM EA, CustItem, OrderQty 44, ShippedQty 0, LineStatus open, ListPrice 2, NetPrice 2, and Discount 0.

```
[{"OrderNumber": "10001", "Site": "1000", "PONumber": "TESTPO", "OrderDate": "2021-01-22", "DueDate": "2021-01-22", "Remarks": "", "Type": "DISCRETE", "Currency": "USD", "ShipVia": "", "Status": "open", "BillToCode": "cash", "BillToName": "cash generic", "BillToAddr1": "", "BillToCity": "Dillon", "BillToState": "SC", "BillToZip": "29536", "ShipToCode": "cash", "ShipToName": "cash placeholder", "ShipToAddr1": "SE", "ShipToCity": "Dillon", "ShipToState": "SC", "ShipToZip": "29536", "Items": [{"ItemNumber": "50000001", "Line": 1, "UOM": "EA", "CustItem": "", "OrderQty": 44, "ShippedQty": 0, "LineStatus": "open", "ListPrice": 2, "NetPrice": 2, "Discount": 0, "Line house": ""}]}]
```

This (array) JSON object contains many fields associated with the Order as well as the detail lines in an embedded array of JSON objects labeled 'Items'. Looping through the 'Items' tag will provide you with a JSON object per item.

To retrieve a list of Sales Orders you can use the *SalesOrderList* path along with specific parameters. You can enter something similar to the following URL :

<http://servername:8088/bsapi/SalesOrderList?fromdate=2020-12-01&todate=2021-01-22>

This will return an Array of JSON objects for each sales order within the range of the fromdate, todate date range provided in the variables. The date provided will be the order date of the sales orders in question. There are several other filtering variables that can be used. The list is below :

<i>Variable</i>	<i>Format</i>	<i>Example</i>
fromdate	yyyy-mm-dd	2020-12-01
todate	yyyy-mm-dd	2020-12-30
fromnbr	integer	10001 (sales order number)
tonbr	integer	19999 (sales order number)
fromcust	varchar	20000 (customer number)
tocust	varchar	29999 (customer number)
status	Varchar	open,closed,onhold

To create a Sales Order from a system outside of BlueSeer, you can use the API call to perform an HTTP POST command to the /SalesOrder path. This must be a POST method HTTP call. A simple example is shown below using 'Curl' to post an HTTP call to the URL. A JSON object with Status, Message, and Key will be returned that indicates whether the transaction was successful. If successful, the 'key' value will be the order number created in BlueSeer.

```
c:\documentation>curl -H "Content-type: text/json" -d@so_create.json -X POST http://localhost:8088/bsapi/SalesOrder
{"Status":"success","Message":"Loaded Sales Order Successfully","Key":"10002"}

c:\documentation>
```

In order to create the sales order through the api call, a valid JSON object must be provided. In the above example, a valid JSON object was created in file 'so_create.json' and passed to the HTTP POST method. A valid JSON file example is shown below.

```
{
  "OrderNumber": "",
  "Site": "1000",
  "PONumber": "TestOrderX",
  "OrderDate": "2021-01-06",
  "DueDate": "2021-01-06",
  "Remarks": "test of remarks",
  "Type": "DISCRETE",
  "Currency": "USD",
  "ShipVia": "",
  "Status": "open",
  "BillToCode": "",
  "BillToName": "blah generic",
  "BillToAddr1": "route 1",
  "BillToCity": "Dillon",
  "BillToState": "SC",
  "BillToZip": "29536",
  "ShipToCode": "",
  "ShipToName": "some shipto name",
  "ShipToAddr1": "BR549 Highway SE",
  "ShipToCity": "Dillon",
  "ShipToState": "SC",
  "ShipToZip": "29536",
  "Items": [
    {
      "ItemNumber": "50000001",
      "Line": 1,
      "UOM": "EA",
      "CustItem": "",
      "OrderQty": 44,
      "ShippedQty": 0,
      "LineStatus": "open",
      "ListPrice": 5,
      "NetPrice": 5,
      "Discount": 0,
      "LineLocation": "",
      "LineWarehouse": ""
    },
    {
      "ItemNumber": "50000002",
      "Line": 2,
      "UOM": "EA",
      "CustItem": "miscitem",
      "OrderQty": 444,
      "ShippedQty": 0,
      "LineStatus": "open",
      "ListPrice": 2,
      "NetPrice": 2,
      "Discount": 0,
      "LineLocation": "",
      "LineWarehouse": ""
    }
  ]
}
```

Note that the OrderNumber must be blank. Also, if a valid BillToCode and ShipToCode are passed in the JSON object (for example...a returning customer) then no new address will be created. However, if

both BillToCode and ShiptoCode are blank, new address records in the Customer Master and ShipTo Master will be created on the fly. Note further that if the ItemNumber that is passed in the JSON is not an item already listed in the item master, then the item will still load on the order with a designation of 'miscellaneous' item.

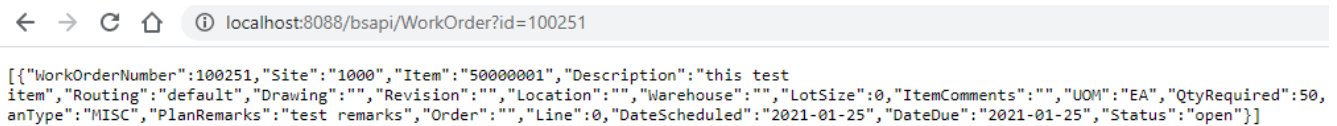
15.2.2 Work Order API

The Work Order API is an interface specifically designed for posting production against a work order from a client work station. The API does not create Work Orders, but instead, provides the opportunity to report production of an item against a Work Order retrieved from the BlueSeer database. The API allows for integration of a work station's specific programming with retrieval and reporting operations performed by events at the work station. The API also provides the ability to retrieve a list of work orders with a few selection filters in the Parameters String of the 'GET' HTTP method. The 'POST' HTTP method allows for the posting of production into inventory against a given Work Order when given an appropriate JSON object within the post.

To retrieve a specific Work Order, the API call would have to provide the id of the work order. For example, the following URL call would retrieve a JSON object for work order '100251' :

<http://servername:8088/bsapi/WorkOrder?id=100251>

The response received would be a JSON object similar to the image below.



The screenshot shows a web browser address bar with the URL `localhost:8088/bsapi/WorkOrder?id=100251`. Below the address bar, the JSON response is displayed as a single line of text: `[{"WorkOrderNumber":100251,"Site":"1000","Item":"50000001","Description":"this test item","Routing":"default","Drawing":"","Revision":"","Location":"","Warehouse":"","LotSize":0,"ItemComments":"","UOM":"EA","QtyRequired":50,"anType":"MISC","PlanRemarks":"test remarks","Order":"","Line":0,"DateScheduled":"2021-01-25","DateDue":"2021-01-25","Status":"open"}]`

The JSON object returned provides the work station with various fields associated with the work order to support the function of creating the product, posting production, and controlling lot traceability of the produced item.

To retrieve a list of Work Orders you can use the *WorkOrderList* path along with specific parameters. You can enter something similar to the following URL :

<http://servername:8088/bsapi/WorkOrderList?fromdate=2020-12-01&todate=2021-01-22>

This will return an Array of JSON objects for each work order within the range of the fromdate, todate date range provided in the variables. The date provided will be the *scheduled* date of the work orders in question. There are several other filtering variables that can be used. The list is below :

Variable	Format	Example
fromdate	yyyy-mm-dd	2020-12-01 (Scheduled Date)
todate	yyyy-mm-dd	2020-12-30 (Scheduled Date)

fromitem	varchar	50000001 (item number)
toitem	varchar	59999999 (item number)
fromcell	varchar	CELL1 (cell label)
tocell	varchar	CELL9 (cell label)
status	Varchar	open,closed,void

To post production to inventory against a work order from a system outside of BlueSeer, you can use the API call to perform an HTTP POST command to the /WorkOrder path. This must be a POST method HTTP call. A simple example is shown below using 'Curl' to post an HTTP call to the URL. A JSON object with Status, Message, and Key will be returned that indicates whether the transaction was successful. If successful, the 'key' value will be the transaction ID of the posted production in BlueSeer.

```
c:\documentation>curl -H "Content-type: text/json" -d@wo_create.json -X POST http://localhost:8088/bsapi/WorkOrder
{"Status":"success","Message":"work order loaded successfully","Key":"126"}
```

In order to create the work order through the api call, a valid JSON object must be provided. In the above example, a valid JSON object was created in file 'wo_create.json' and passed to the HTTP POST method. A valid JSON file example is shown below.

```
{"Action":"update","WorkOrderNumber":"100251","Item":"50000001","Site":"1000","Operation":"10",
"QtyComplete":"50","DateComplete":"2020-01-02","LotNumber":"12345","Operator":"Boo","PostComments":"well done"}
```

Note that the WorkOrderNumber must be the work order number being operated on at the work station. Also, the “Action” code must have the value of “update”. You must also pass the specific operation of the routing of the item that this specific work station is performing. In the above example, 50 pieces of item 50000001 are produced at operation '10'. The lot number of '12345' is provided as traceability of the production and can be used on subsequent prints and/or labels down stream.

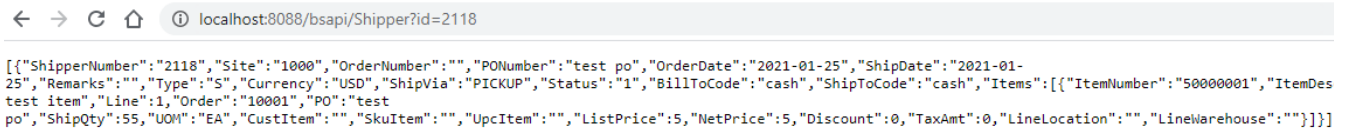
15.2.3 Shipper API

The set of Shipper APIs within BlueSeer provides 3rd party applications the ability to communicate shipping info between the application (a web application for example) and the BlueSeer ERP. A call to the shipper list API can return a list of shippers given a set of parameters as filters. This list is returned with various fields that describe aspects of each shipper. A call to a specific shipper, given a specific id in a parameter field, will return a JSON object that has complete information about the specific shipper. These 'retrieval' APIs are provided as HTTP 'GET' methods within the API and have associated parameter names that provide filtering. The shipper API also allows for the programmatic creation of a shipper document within BlueSeer. This specific API will consume a JSON object of shipper related info via an HTTP 'POST' method call and create the shipper programmatically. The shipper ID is then returned to the calling program.

To retrieve a specific Shipper, the API call would have to provide the id of the shipper as it exists in the BlueSeer database. For example, the following URL call would retrieve a JSON object for shipper id '2118' :

<http://servername:8088/bsapi/Shipper?id=2118>

The response received would be a JSON object similar to the image below.



The screenshot shows a web browser address bar with the URL `localhost:8088/bsapi/Shipper?id=2118`. Below the address bar, the JSON response is displayed, containing fields such as ShipperNumber, Site, OrderNumber, PONumber, OrderDate, ShipDate, Remarks, Type, Currency, ShipVia, Status, BillToCode, ShipToCode, Items, Line, Order, PO, ShipQty, UOM, CustItem, SkuItem, UpcItem, ListPrice, NetPrice, Discount, TaxAmt, LineLocation, and LineWarehouse.

The JSON object returned provides the calling program with various fields associated with the shipper to be consumed as necessary (reports, email alerts, etc).

To retrieve a list of shippers you can use the *ShipperList* path along with specific parameters. You can enter something similar to the following URL :

<http://servername:8088/bsapi/ShipperList?fromdate=2020-12-01&todate=2021-01-22>

This will return an Array of JSON objects for each shipper within the range of the fromdate, todate date range provided in the variables. The date provided will be the *effective ship date* of the shippers in question. There are several other filtering variables that can be used. The list is below :

Variable	Format	Example
fromdate	yyyy-mm-dd	2020-12-01 (Scheduled Date)
todate	yyyy-mm-dd	2020-12-30 (Scheduled Date)
fromnbr	varchar	2000 (shipper id)
tonbr	varchar	2999 (shipper id)
fromcust	varchar	200001 (cust id label)
tocust	varchar	299999 (cust id label)
status	Varchar	open,closed,void

To create a shipper programmatically and post it to BlueSeer, you can use the API call to perform an HTTP POST command to the /Shipper path. This must be a POST method HTTP call. A simple example is shown below using 'Curl' to post an HTTP call to the URL. A JSON object with Status, Message, and Key will be returned that indicates whether the transaction was successful. If successful, the 'key' value will be the Shipper ID of the created shipper in BlueSeer.

```
c:\documentation>curl -H "Content-type: text/json" -d@sh_create.json -X POST http://localhost:8088/bsapi/Shipper
{"Status":"success","Message":"Loaded Shipper Successfully","Key":"2120"}
```

In order to create the shipper through the API call, a valid JSON object must be provided. In the above example, a valid JSON object was created in file 'sh_create.json' and passed to the HTTP POST method. A valid JSON file example is shown below.

```
{"ShipperNumber":"","Site":"1000","OrderNumber":"","PONumber":"test po","OrderDate":"2021-01-25","ShipDate":"2021-01-25","Remarks":"","Type":"S","Currency":"USD","ShipVia":"PICKUP","Status":"1","BillToCode":"cash","ShipToCode":"cash","Items":[{"ItemNumber":"50000001","ItemDescription":"this test item","Line":1,"Order":"10001","PO":"test po","ShipQty":55,"UOM":"EA","CustItem":"","SkuItem":"","UpclItem":"","ListPrice":5,"NetPrice":5,"Discount":0,"TaxAmt":0,"LineLocation":"","LineWarehouse":""}]}
```

Note that the ShipperNumber field must be blank. In the above example, 55 pieces of item 50000001 was shipped to bill-to code 'cash' and ship-to code 'cash'. Note: 'Cash' is a default code pre-installed in BlueSeer during implementation. The bill-to code and ship-to code must already exist within BlueSeer from a previously assign address for both bill-to and ship-to. Typically, this is the case when you're shipping against an order that has been previously placed, and therefore the addresses have already been assigned a code. Retrieval of these codes are accessed by accessing the OrderList API and the specific Order id API that you are shipping against.

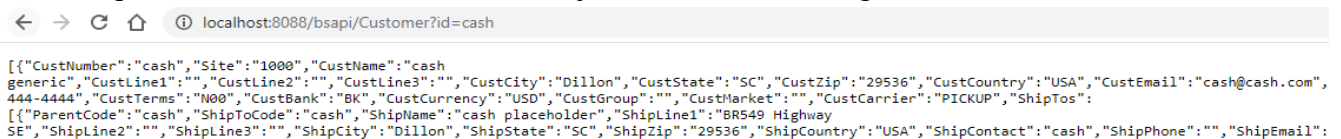
15.2.4 Customer API

The customer API allows for the retrieval of a specific Customer (bill-to) id or a range/list of customers based on a set of provided parameters to the calling function. A call to the customer list API can return a list of customers given a set of parameters as filters. This list is returned with various fields that describe aspects of each customer. A call to a specific customer, given a specific id in a parameter field, will return a JSON object that has complete information about the specific customer. Note: the range/list API will return header information about the Customer master record for the range of customers returned. However, the API that calls a specific customer ID will return not only information about the customer (bill-to) but also a list of all ship-to codes associated with that customer id. These 'retrieval' APIs are provided as HTTP 'GET' methods within the API and have associated parameter names that provide filtering. There is no API that creates customer master records at this time except for what is provided in the Sales Order creation API. You can create addresses on the fly with the Sales Order creation API.

To retrieve a specific customer, the API call would have to provide the id of the customer as it exists in the BlueSeer database. For example, the following URL call would retrieve a JSON object for customer id 'cash' (NOTE: 'cash' is a pre-installed address for demonstration purposes):

<http://servername:8088/bsapi/Customer?id=cash>

The response received would be a JSON object similar to the image below.



```
[{"CustNumber": "cash", "Site": "1000", "CustName": "cash generic", "CustLine1": "", "CustLine2": "", "CustLine3": "", "CustCity": "Dillon", "CustState": "SC", "CustZip": "29536", "CustCountry": "USA", "CustEmail": "cash@cash.com", "444-4444", "CustTerms": "N00", "CustBank": "BK", "CustCurrency": "USD", "CustGroup": "", "CustMarket": "", "CustCarrier": "PICKUP", "ShipTos": [{"ParentCode": "cash", "ShipToCode": "cash", "ShipName": "cash placeholder", "ShipLine1": "BR549 Highway SE", "ShipLine2": "", "ShipLine3": "", "ShipCity": "Dillon", "ShipState": "SC", "ShipZip": "29536", "ShipCountry": "USA", "ShipContact": "cash", "ShipPhone": "", "ShipEmail": ""}]}
```

The JSON object returned provides the calling program with various fields associated with the customer as well as all ship-tos associated with that customer in an embedded JSON array with tag "ShipTos".

To retrieve a list of shippers you can use the *CustomerList* path along with specific parameters. You can enter something similar to the following URL :

<http://servername:8088/bsapi/CustomerList?fromnbr=00000000&tonbr=ZZZZZZZZ>

This will return an Array of JSON objects for each shipper within the range of the fromnbr, tonbr customer id range provided in the variables. The fromnbr and tonbr related to bill-to codes only (not ship-to). There are several other filtering variables that can be used. The list is below :

Variable	Format	Example
fromnbr	varchar	200001 (customer id)
tonbr	varchar	299999 (customer id)
fromname	varchar	John Doe (customer name field)
toname	varchar	Zach Doe (customer name field)
fromzip	Varchar	Bill-to zip code
Tozip	Varchar	Bill-to zip code

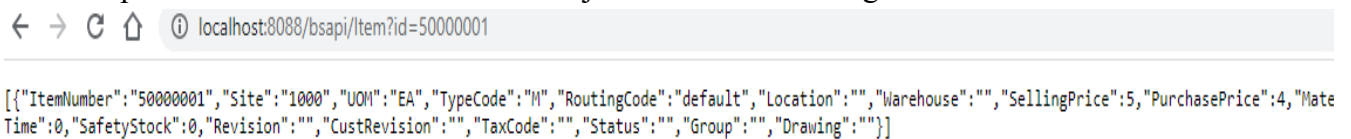
15.2.5 Item API

The Item API allows for the retrieval of a specific items in the item master of BlueSeer as well as a range of items based on calling parameters provided to the calling function. A call to the item list API can return a list of items given a set of parameters as filters. This list is returned with various fields that describe aspects of each item. A call to a specific item, given a specific id in a parameter field, will return a JSON object that has complete information about the specific item. Note: the range/list API will return header information about the item master record for the range of items returned. However, the API that calls a specific item number will more detail related to the item master record. These 'retrieval' APIs are provided as HTTP 'GET' methods within the API and have associated parameter names that provide filtering. There is no API that creates item master records at this time.

To retrieve a specific item, the API call would have to provide the specific item number as it exists in the BlueSeer database. For example, the following URL call would retrieve a JSON object for item number '500000001' :

<http://servername:8088/bsapi/Item?id=500000001>

The response received would be a JSON object similar to the image below.



The JSON object returned provides the calling program with various fields associated with the item such as description, uom, selling price, purchase price, revision code, etc.

To retrieve a list of item numbers in a range you can use the *ItemList* path along with specific parameters. You can enter something similar to the following URL :

<http://servername:8088/bsapi/ItemList?fromitem=500000001&toitem=599999999>

This will return an Array of JSON objects for each item within the range of the fromitem, toitem item number range provided in the variables. There are several other filtering variables that can be used. The list is below :

Variable	Format	Example
fromitem	varchar	500000001 (item number)
toitem	varchar	599999999 (item number)
fromcode	varchar	Item Code Type (M, P, A)
toctype	varchar	Item Code Type (M, P, A)
status	Varchar	Status (active, inactive)

Note for Item Code Type: M (manufactured), P (purchased, raw) , A (Assets)

16 EDI

EDI functionality is integrated within the BlueSeer application. Unlike other systems where the EDI mechanics is typically a separate translation system, BlueSeer can interact directly with EDI X12 without the need for a 3rd party system. The transformation of X12 occurs within the specific map for the partner and doctype and is written directly into the BlueSeer tables. Since every trading partner's EDI mappings are unique, maps are a fundamental part of the process and specific to the partner and document type engaged. BlueSeer only supports X12 EDI formatting at this time.

16.1 *Quick Guide Chronological Steps*

1. The first step to setting up a new EDI document for your trading partner is to acquire the implementation guide from your Customer. If this is a vendor specific request, then you would typically provide the implementation guide to your vendor.
2. Create the appropriate association record for this trading partner and document type in EDI Partner Maintenance (navcode= edcm) See detailed instructions below for EDI Partner Maintenance.
3. Create appropriate MAP (see Mapping below) for this specific document type and compile it under package 'EDIMaps'. Then assign this map to the map field in EDI Partner Maintenance that you created in step 2.

You can place a test/production file in the default 'edi\in' directory under the BlueSeer root directory as defined in EDI Control Maintenance. The file should be visible in menu “EDI Inbound Load”. Go to navcode 'edip' to process the file. You can review any errors using navcode 'edil' (EDI log browse).

16.2 Trading Partner Maintenance (navcode: edcm)

The trading partner id is typically the ID of the customer/vendor found in the Header portion of the EDI document. The segment labeled “ISA” is the EDI envelope segment and provides the sender / receiver identification numbers of the sender of the document and receiver of the document. Trading partner ids are typically in the ISA segment element 06 (senderid) and ISA segment element 08 (receiverid). Most of your trading partners will provide you with an implementation guideline which details the trading partner ids used along with a lot of useful detail regarding the transactions involved.

Once you've acquired your trading partner's ID, you will need to set it up in EDI Partner Maintenance. See Figure 11.2.1. This menu is the sole menu for EDI trading partner setup. It's primary function is to associate a customer or vendor code (BlueSeer's code) with an EDI trading partner ID and document type. For example, if you have a customer in Customer Maintenance defined with cust code '2000001', you would enter that code in the EDI Maintenance. You would then proceed to choose a document type and define the necessary fields that complete the configuration for this partner / document type combination. The records established in this menu drive both inbound and outbound EDI documents. It is important to note that each record represents a code / partner / doctype combination. If your trading partner would like to do three EDI transactions sets (850, 856, 810), then you will need three different records entered for the document types of (850, 856, 810). You will also need to distinguish the direction of the document type (inbound versus outbound).

Figure 16.2.1

The screenshot shows the 'Entity EDI Maintenance' window. It contains several input fields and buttons. On the left side, there is a 'Code' field with '200001', a 'New' button, and radio buttons for 'Inbound' (selected) and 'Outbound'. Below these are 'DocType' (dropdown with '850'), 'TPID / ISA ID' (text field with 'ACME'), 'ISA Q' (text field with 'ZZ'), 'GS ID' (text field with 'ACME'), 'Map' (text field with 'EDIMaps.Generic850i'), 'Our ISA' (text field with 'BLUESEER'), 'Our GS' (text field with 'BLUESEER'), and 'Our ISA Q' (text field with 'ZZ'). On the right side, there are 'Elem Sep' (text field with '42'), 'Seg Sep' (text field with '10'), 'Sub Sep' (text field with '62'), 'Prefix' (text field with 'acme'), 'Suffix' (text field with 'txt'), 'FilePath' (empty text field), 'Version' (text field with '004010'), and 'SupplierCode' (text field with 'somecode'). At the bottom right, there is a checkbox for 'Functional Acknowledgement?' and three buttons: 'delete', 'update', and 'add'.

The following definitions represent the various fields in the Partner EDI Maintenance menu :

- **Code** The code field represents the internal customer or vendor code as defined in customer

maintenance or vendor maintenance. This field associates the partner and document type with the customer or vendor defined in BlueSeer's maintenance tables.

- **Direction (inbound or outbound)** Each document type can be inbound or outbound depending on the nature of the business between you and your trading partner. For example, Purchase Orders (850) can be received from our customer or transmitted by you to your vendor. You must choose whether this partner / document type combination is inbound or outbound.
- **DocType** This drop-down selection box represents the possible transaction / document types. Choose the document type that the customer or vendor will be engaging. You can add or delete from this drop-down box by adjusting the records in Generic Code Maintenance (navcode=genm). The values are stored against the key 'edidotype' as shown in the Generic Code Browse (genb) menu in Figure 11.2.2.

- **ISA** This is the EDI envelope ID in the ISA segment. For inbound documents this is the sixth element of the ISA envelope. For outbound documents, this is the eighth element of the ISA envelope.

→ ISA*00* *00* *ZZ*ACME *ZZ*BLUESEER *120501*1553*U*00401*002273923*0*P*> Inbound

- **GS** This is the GS level ID associated with your trading partner. Your trading partner's implementation guideline will specify this value. For outbound documents, this is element 2 of the GS segment. For inbound documents, this is element 3 of the GS segment.

→ GS*PO*ACME*BLUESEER*20120501*1553*2273923*X*004010 Inbound

- **Q** This is the Qualifier associated with your trading partner's ISA ID. Typical values are 12, 01, ZZ. Your trading partner's implementation guideline will specify this value. It is always 2 characters in length.

→ ISA*00* *00* *ZZ*ACME *ZZ*BLUESEER *120501*1553*U*00401*002273923*0*P*> Inbound

- **Map** This field represents the custom map for this specific partner / document type combination. The map name is authenticated, and therefore the map must exist in the EDIMaps java package. There are several generic maps provided in the EDIMaps package. You can use these maps as templates to adjust for your specific trading partner's needs. The requirements for the map are almost always dictated by your customer's implementation guide. If it's a vendor map, then typically you will dictate the implementation guide. Note that the map name you've created must be inserted in this field as : EDIMaps.xxxxx where xxxxx = your map name. This is a case sensitive field.

- **BS ISA** This is *your* EDI envelope ID in the ISA segment. For inbound documents this is the eighth element of the ISA envelope. For outbound documents, this is the sixth element of the ISA envelope.

→ ISA*00* *00* *ZZ*ACME *ZZ*BLUESEER *120501*1553*U*00401*002273923*0*P*> Inbound

- **BS GS** This is *your* GS level ID associated with the trading partner. For inbound documents, this is element 3 of the GS segment. For outbound documents, this is element 2 of the GS segment.

→ GS*PO*ACME*BLUESEER*20120501*1553*2273923*X*004010 Inbound

- **BS Q** This is *your* Qualifier associated with *your* ISA ID. Typical values are 12, 01, ZZ. It is always 2 characters in length.

→ ISA*00* *00* *ZZ*ACME *ZZ*BLUESEER *120501*1553*U*00401*002273923*0*P*> Inbound

- **Elem Sep** This field represents the element separator in the EDI document. All segments are comprised of elemental fields. These fields are delimited by a separator. Typical separators are ASCII code 42 which represents the asterisk character. The value of this field must be the ASCII decimal code (integer format). This field is always 2 integers long.
- **Seg Sep** This field represents the segment separator in the EDI document. An EDI document is comprised of segments. These segments are delimited by a separator. Typical separators are ASCII code 10 which represents the new line character. The value of this field must be the ASCII decimal code (integer format). This field is always 2 integers long.
- **Sub Sep** This field represents the sub-element separator in the EDI document. This field represents the 16th element of the ISA segment. It is a single character and can be represented by almost any character to further subdivide an element into an array of elements. Typical sub-element separators are ASCII code 62 which represents the greater than character. The value of this field must be the ASCII decimal code (integer format). This field is always 2 integers long.

→ ISA*00* *00* *ZZ*ACME *ZZ*BLUESEER *120501*1553*U*00401*002273923*0*P* **Inbound**

- **Prefix** This field is for **outbound** only. This assigns a prefix code of your choice to the outbound document generated for this specific partner / document type combination.
- **Suffix** This field is for **outbound** only. This assigns a suffix code of your choice to the outbound document generated for this specific partner / document type combination. Typical values can be 'txt', 'edi'. The 'dot' will be placed automatically prior to the suffix.
- **FilePath** This field is for **outbound** only. This represents an alternate path (relative to the blueseer root directory) for the outbound document.
- **Version** This field is for **outbound** only. This field establishes the EDI X12 version that will be assigned in the ISA and GS segments.
- **SupplierCode** This field is for **outbound** only. A supplier code that is specific to this partner / documentation type can be assigned here. This is typically your supplier code as assigned by your customer and may or may not be different than your ISA ID.
- **Functional Acknowledgement** This is a checkbox field that represents whether or not you require functional acknowledgements (997) to be transmitted upon receipt of an inbound EDI document. This is for **Inbound** only.

Figure 16.2.2

select	Code	Key
	CELL	CELL1
	CELL	CELL2
	CELL	CELL3
	Discounts	Freight
	Discounts	Volume
	Discounts	Other
	Discounts	Promo
	ediddoctype	850
	ediddoctype	810
	ediddoctype	856
	ediddoctype	940
	ediddoctype	943
	ediddoctype	944
	ediddoctype	945
	ediddoctype	219
	ediddoctype	220
	ediddoctype	204
	ediddoctype	990
	ediddoctype	214
	edixref	1000
	engineer	frank
	engineer	Ted
	ItemType	FG
	ItemType	RAW
	ItemType	SUB
	ItemType	ASSET
	ItemType	SERVICE
	labeltype	cont
	labeltype	pouch

Note: The map must exist as a `somefilename.java` class in the “EDIMaps” source directory. For example, you can copy one of the default example java files in EDIMaps, and paste and rename to create a new map file. Figure 6.3 shows a screenshot of the NetBeans IDE which has the BlueSeer project loaded. You can see the .java classes under the “EDIMaps” source directory. You can add, edit, or delete files within this directory depending on your needs. The names of the maps are case sensitive.

Going back to our EDI TP/DOC record, once you have the map created and it is in the proper directory, enter the map name (without the .java extension) into the MapName textbox as shown in Figure 6.2. Then click 'Add' to commit the record (association) to the database. Remember, the Map names are case sensitive, so the value you entered in the MapName textbox must match (case) the map name in EDIMaps source directory (minus the .java extension).

Figure 6.3

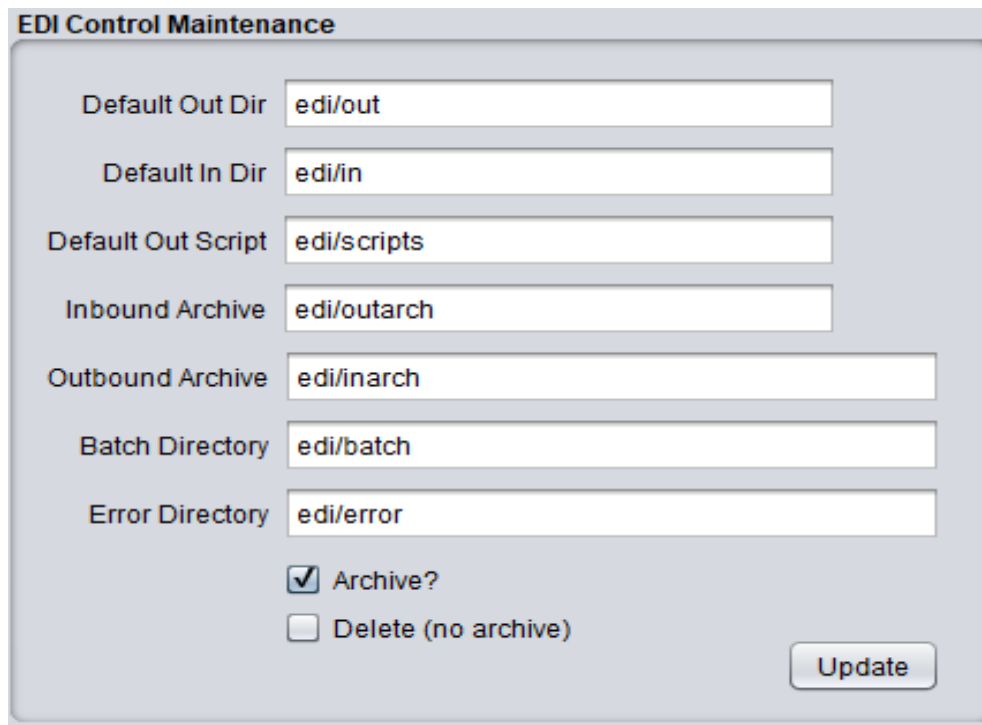
The sample .java map classes in “EDIMaps” are an excellent starting point for any customer/vendor custom mapping requirements. More information regarding inbound / outbound map construction is provided below in the EDI Map Development section.

16.3 **EDI Control File** (navcode: edic)

The EDI Control menu provides a location to store relevant information about the EDI directory environment. All the paths in the control fields are relative to the BlueSeer home folder location. For example, you can create a directory called “your_in_directory/inbound” and place your inbound EDI files within this directory. The loader program will look in the Default In Dir location for the inbound files. In this case, the Default In Dir would be defined as “your_in_directory/inbound”...which should reside within the BlueSeer execution folder. Figure 11.3.1 shows the screenshot of the default directory values for the EDI environment. Notice there is an EDI folder within the BlueSeer directory. The EDI file has several sub-directories specifically for controlling the EDI traffic.

The archive check box dictates whether you desire to archive the processed documents automatically. Leave this box unchecked if you already have other archiving methods in place. The Delete checkbox will override the archive function by deleting the inbound file after processing.

Figure 16.3.1



The screenshot shows a dialog box titled "EDI Control Maintenance". It contains several text input fields for directory paths, each preceded by a label. The fields are: "Default Out Dir" with value "edi/out", "Default In Dir" with value "edi/in", "Default Out Script" with value "edi/scripts", "Inbound Archive" with value "edi/outarch", "Outbound Archive" with value "edi/inarch", "Batch Directory" with value "edi/batch", and "Error Directory" with value "edi/error". Below these fields are two checkboxes: "Archive?" which is checked, and "Delete (no archive)" which is unchecked. An "Update" button is located at the bottom right of the dialog.

Field	Value
Default Out Dir	edi/out
Default In Dir	edi/in
Default Out Script	edi/scripts
Inbound Archive	edi/outarch
Outbound Archive	edi/inarch
Batch Directory	edi/batch
Error Directory	edi/error

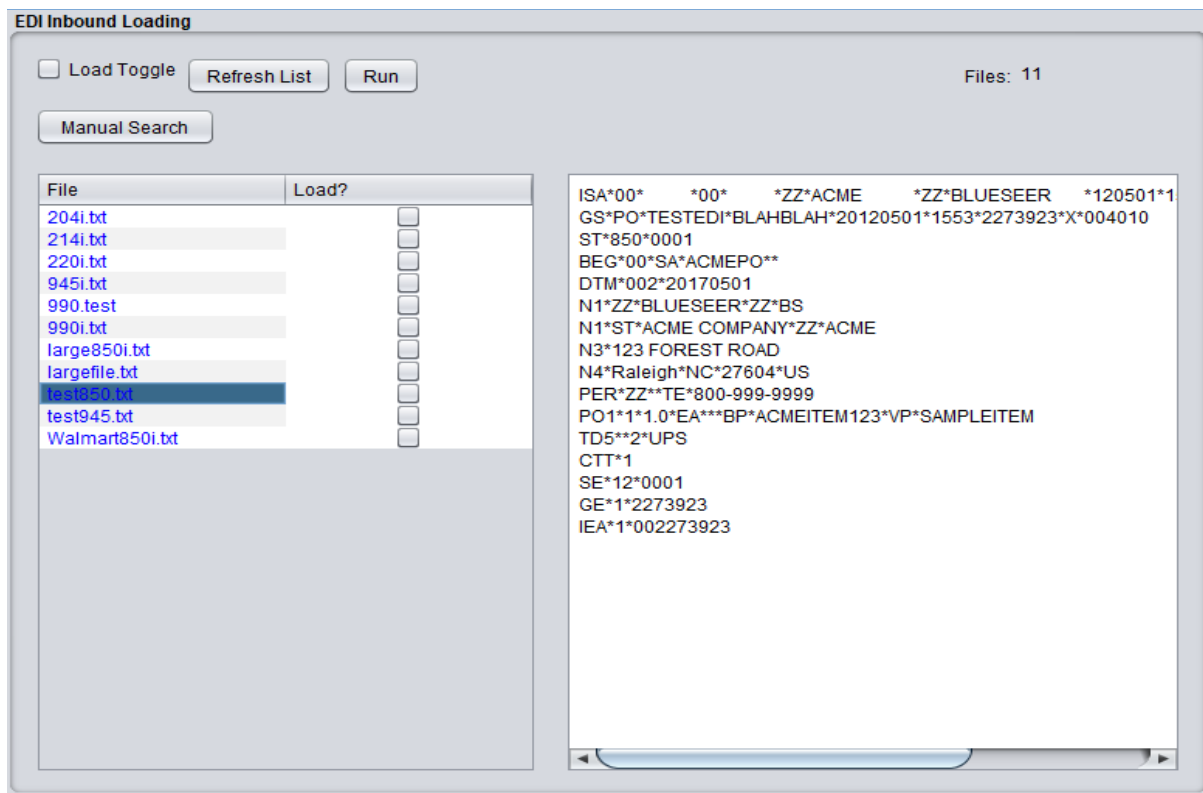
☒ Archive?
☐ Delete (no archive)

Update

16.4 EDI Loader (navcode: edip)

To load EDI files, go to enter 'edip' in the navigation text-box on the main menu bar. This will bring up a panel with a list of files that are sitting in the inbound queue. Note: The inbound queue is defined in the EDI Control File. The first column of the file list has the actual file name within the queue. You can click on this filename to show the contents of the file in the text area in the right panel. There is also a 'load' toggle box in the second column of the list. Toggling this box on or off will select or de-select files to be loaded. Any list items with the toggle box checked will load when you click the 'Process' button. After you've processed the files, you should go to the EDI Log menu to see the status of the loaded files (pass/fail/audit information) (navcode = edil). Figure 11.4.1 shows the screen shot of the EDI Loader program.

Figure 16.4.1



EDI Log Browse (navcode: edil)

The EDI Log menu is shown in Figure 11.5.1 below and is accessible from navigational code 'edi'. The EDI Log menu allows you to audit edi inbound and outbound traffic and load. Various information regarding the control numbers, dates, and trading partner Ids are visible within this reporting tool. You can filter for specific transactions and/or specific trading partners with the options in the left panel. You can also filter by load date as well. This log file essentially audits info type message as well as error type messages, and you have the option to choose either or both in your output. The far right panel allows you to view the raw file by clicking on the file name in column 5. With regards to inbound orders (850), if the order successfully loaded, you will see the actual order number generated in the Ref column. You can click on this column to navigate to the actual order in Order Maintenance.

Figure 16.5.1

From Date: 2020-01-01

Run

Hide Detail

Hide Text

Show Entire File

To Date: 2020-02-24

TradeID

DocType

Total Transactions: 2

Total Errors: 0

Select	Id/Vbr	SenderID	Receiver...	Dir	DOCTYPE	TimeSta...	File	isaCntrNbr	gsCntrNbr	stCntrNbr	DocBeg	DocEnd	Seg
	2	ACME	BLUESE	In	850	2020-02...		002273...	2273923	0001	162	396	10
	1	ACME	BLUESE	In	850	2020-02...	R00000...	002273...	2273923	0001	162	396	10

ISA'00'

'00'

'ZZ'ACME

'ZZ'BLUESEER

'12050111553'U'00401'002273923'0'P'>

GS'PO'TESTED'BLAHBLAH'201205011553'2273923'X'004010

ST'650'0001

BEG'00'SA'ACMEPO**

DTM'002'20170501

N1'ZZ'BLUESEER'ZZ'BS

N1'ST'ACME COMPANY'ZZ'ACME

N3'123 FOREST ROAD

N4'Raleigh'NC'27604'US

PER'ZZ'TE'900-999-9999

PO1111.0'EA''BP'ACMIETEM123'V'P'SA'IPLEITEM

TD5''2'UPS

CTT'1

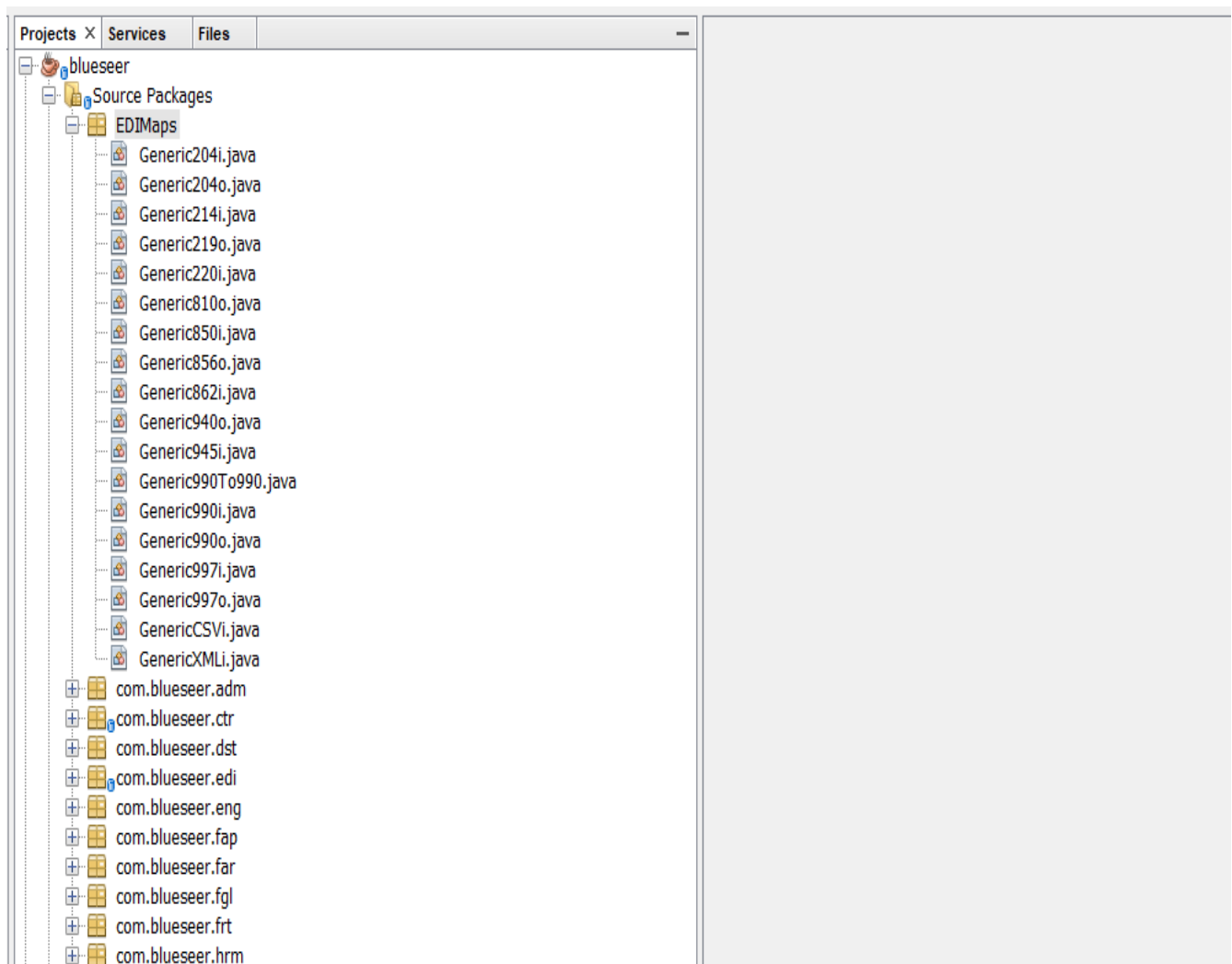
SE'12'0001

GE'1'2273923

IEA'1'002273923

16.6 *EDI Mapping Mechanics*

The EDI maps used by BlueSeer are simple java files maintained within the “EDIMaps” source directory under the BlueSeer root directory. There are many formats of EDI, however, BlueSeer only supports ANSI X12 EDI formatting. There are hundreds of X12 EDI transactions, but the most prevalent in the ERP use case is the purchase order (850), Ship Notice (856), and Invoice (810). There are generic sample maps for the EDI 850, 856, and 810 transactions. They are located in the EDIMaps source directory. These maps are easily edited and compiled with the NetBeans IDE application, but any IDE or text editor can edit the maps. If a custom map is required, it is suggested to copy, paste, and rename one of the generic sample maps since these already have the imports and structures required to operate with BlueSeer. A screenshot of the NetBeans IDE with BlueSeer EDI map classes is shown below:



16.6.1 Processing Engine (Control Array Defined)

Within BlueSeer, the `com.blueseer.edi.EDI` class contains most of the structures and methods that drive the EDI functionality. The inbound and outbound processing are distinct in their methods and structures.

Inbound processed documents typically involve parsing X12 segments and elements for a specific doc and overlaying the data onto a specific java object (for example an `com.blueseer.edi.EDI.edi850` object). This object is then passed to a method that injects the object directly into the SQL tables. For example, the `edi850` object class is passed into the sales order related tables directly by the method `com.blueseer.edi.EDI.createOrderFrom850`.

Outbound processing also heavily relies on the `com.blueseer.edi.EDI` class. Outbound processing differs from the inbound processing by creating files from Array-to-String concatenation operations. The typical starting point is methods that extract data from SQL tables. The `ASN` and `Invoice` methods, for example, pull data directly from the shipper related tables (`ship_mstr`, `ship_det`) and creates Arrays of Header, Detail, and Trailer structures that are concatenated together to form a file document. This file document is then wrapped with an EDI X12 envelope (ISA, GS, GE, IEA) to complete the EDI document.

A primary construct that is shared by both inbound and outbound processing mechanics is the concept of a control array that is used to pass key data elements to and from the document being processed. The method `com.blueseer.edi.EDI.initEDIControl()` defines the control array and initializes the elements to empty strings. The assignment of the control elements are critical in the life-cycle of the document processing in both inbound and outbound processing. It's important to note that these elements have different values depending on inbound versus outbound processing. Some elements may be blank in one direction versus the other. The elements are defined as follows :

```
String[] c = new String[23]; // control array
```

Control Element	Assignment	Comments
c[0]	senderid	For inbound, this is the ISA 06 element; for outbound this is the BlueSeer code for bill-to, warehouse, or carrier code
c[1]	doctype	Document Type (850, 810, etc)
c[2]	map	The Package qualified map name; for example EDIMaps.Generic810o
c[3]	infile	Inbound file (inbound only)
c[4]	ISA_controlnum	ISA control number (inbound only)
c[5]	GS_ctrlnum	GS control number (inbound only)
c[6]	ST_controlnum (docid)	ST control number (inbound only)

c[7]	ref	Reports the key field created; for example order number, shipper number, etc (inbound only)
c[8]	outfile	Outbound file name
c[9]	sd	Segment Delimiter
c[10]	ed	Element Delimiter
c[11]	ud	Sub Element Delimiter
c[12]	override	Override (used at command line to avoid DB read and translate format to format directly)
c[13]	ISA_String	Entire String of ISA envelope (inbound only)
c[14]	GS_String	Entire String of GS envelope (inbound only)
c[15]	direction	Direction of document (1=inbound; 0=outbound)
c[16]	idxnumber	Log number of EDI log table entry
c[17]	ISA_Start	Starting character position of the ISA string
c[18]	ISA_End	Ending character position of the ISA string
c[19]	ST_Start	Starting character position of the ST string
c[20]	SE_End	Ending character position of the SE string
c[21]	receiverid	ISA receiver ID (inbound only)
c[22]	Error handling subelement	This element is a composite of error handling messages delimited by ;

16.6.2 Outbound Map Mechanics

Outbound Mapping is in many ways a more simple process than inbound. Each map consists of methods to retrieve data from relevant SQL tables for the specific transaction, and creating the necessary segments of the EDI document. The segments are grouped into three sections. Header, Detail, and Trailer represented by three static ArrayLists (**H, D, T**). You can expand on these sections with custom code as necessary, but most transactions will have at a minimum these three constructs.

There are essentially 3 *Blocks* to an outbound map. The first block is 'housekeeping' declarations of necessary key variables and arrays. The second block is the query methods to collect the relevant information from the SQL tables followed by assignment of the H, D, and T static arrays that represent the Header, Detail, and Trailer Sections of the outbound document. The third and final block is simply packaging the concatenated sections and creation of the file.

The outbound maps must use the method `Mapdata(ArrayList doc, String[] c)` along with a few other required methods as defined by the interface `EDIMapi.java`. Each map **must** extend `com.blueseer.edi.EDIMap` (which implements `EDIMapi.java` interface). A walk-through of the *Generic810o* map is provided below.

The declaration of the map name 'Generic810o' is shown below. Note that it extends the class `com.blueseer.edi.EDIMap`. All outbound maps must be declared with this extending class.

```
public class Generic810o extends com.blueseer.edi.EDIMap {
```

Each map must contain the `Mapdata` method with two parameters as shown below. This is typically the only method inside the Map class. Inside this method, the entire construction of the outbound file occurs.

```
public String[] Mapdata(ArrayList doc, String[] c) throws IOException
```

Block 1.

the creation of the object 'edi' below allows you to call the `EDI.writeFile()` method to output the created document to the default location as defined by the entries in the EDI control menu.

```
com.blueseer.edi.EDI edi = new com.blueseer.edi.EDI();
```

The `setControl()` method is required to assign various variables that are used in the creation of the outbound document. This must be called by all outbound maps.

```
setControl(c);
```

The `setOutPutEnvelopeStrings()` method is required 'after' the `setControl()` method. This method must be called by all outbound maps.

```
setOutPutEnvelopeStrings(c);
```

Block 2.

Once these above methods have been called, the next code block of the map is to collect the data from the SQL tables via method calls that query the database directly. Typically, this is a header and detail table. An example of both the invoice and ASN query method for the header section is provided below.

```
String[] h = OVData.getShipperHeader(key);
```

Under most situations, querying for header and detail information of a shipper, invoice, etc will provide you with the necessary fields to create the three sections (Header, Detail, and Trailer). Each section is defined by **H**, **D**, and **T** `ArrayList<String>` objects **statically** defined in the `EDIMap` class. If you discover a situation where a specific field is not satisfied by the data query, then you can adjust the sql data method call (for example `OVData.getShipperHeader()`) to suit your needs. When the sql data has been collected into array objects, you can then proceed to construct the Header, Detail, and Trailer sections. An example of the Header section is shown below.

*Note: the creation of the Header, Detail, and Trailer sections are completely **Free-Form Coding** and should follow the requirements placed by the implementation guide of your customer or vendor.*

```
H.add("BIG" + ed + h[5].replace("-", "")) + ed + key + ed + h[4].replace("-", "") + ed + h[3]);  
H.add("REF" + ed + "ST" + ed + h[1]);  
H.add("N1" + ed + "RE" + ed + OVData.getDefaultSiteName() + ed + "92" + ed + h[1]);  
H.add("DTM" + ed + "011" + ed + h[5].replace("-", ""));
```

Block 3.

Once the **H**, **D**, and **T** `ArrayList` are assigned with your free-form segment creations, the final block is the collapse of these arrays into a single `String` object and the subsequent write of this `String` object to a file.

The following two **required** methods are called at the end to complete the map.

```
packagePayload();  
edi.writeFile(content, "", outfile);
```

The construction of the outbound maps are completely free-form and occur primarily in section 2 above. You will notice that there is no syntax checking for proper EDI X12 syntax. This is entirely left as an exercise to the developer of the map. You have free reign to bake in default values and error-handling as required by the implementation guide.

16.6.3 Inbound Map Mechanics

Inbound mapping involves the parsing of an X12 inbound document such as an 850 purchase order. The document is parsed for relevant information and passed through the the relevant SQL tables by means of an intermediate object creation. The `com.blueseer.edi.EDI` class contains several methods to create various table records such as Sales Orders (from EDI 850), Warehouse Shipments (from EDI 845) and Freight Orders (from EDI 204). These can be extended for other transactions as necessary. The creation of these SQL records from their respective method calls requires the transformation of the X12 data to an object of the appropriate class. For example, to insert a sales order from an inbound 850, it is necessary to absorb the segment data of the file and transform this data into an `edi850` object defined by the `com.blueseer.edi.EDI.edi850` class.

The inbound map can be broken up into 3 blocks. The first block represents a few variable and array declarations that are necessary to traffic the document. The second block is the bulk of the code. An array of all X12 segments of the inbound document is processed in this block of code. It essentially loops through each segment in the array and assigns various values to the object depending on the nature of the segments traversed. For example, the BEG segment is a single occurrence only segment in the 850 purchase order that provides the purchase order number. Since it occurs once, this segment is used in the creation of the `edi850` instance object and calls the `setPO()` method of the `edi850` object to assign the purchase order number to the object. The purpose of the map is to call other methods based on the purpose of the segment in the loop and assign relevant data to the object. The third and final block is essentially a single method call to pass the object to the appropriate 'create' SQL method.

The inbound maps must use the method `Mapdata(ArrayList doc, String[] c)` along with a few other required methods as defined by the interface `EDIMapi.java`. Each map **must** extend `com.blueseer.edi.EDIMap` (which implements `EDIMapi.java` interface). A walk-through of the *Generic850o* map is provided below.

The declaration of the map name 'Generic850o' is shown below. Note that it extends the class `com.blueseer.edi.EDIMap`. All inbound maps must be declared with this extending class.

```
public class Generic850o extends com.blueseer.edi.EDIMap {
```

Each map must contain the `Mapdata` method with two parameters as shown below. This is typically the only method inside the Map class. Inside this method, the entire processing of the inbound file occurs.

```
public String[] Mapdata(ArrayList doc, String[] c)
```

Block 1.

The `setControl()` method is required to assign various variables that are used in the creation of the outbound document. `setISA` and `setGS` methods must also be called. These methods be called by all inbound maps.

```
setControl(c);  
setISA(c[13].toString().split(EDI.escapeDelimiter(ed), -1));  
setGS(c[14].toString().split(EDI.escapeDelimiter(ed), -1));
```

The edi850 object needs to be declared in Block 1. An instance of the object will later be defined by the presence of a key segment. Other supporting variables and arrays may be created and initialized here as necessary.

```
edi850 e = null;
```

Block 2.

Once these above methods have been called, the next code block is essentially the bulk of the map. In this block, the program loops through the inbound EDI segments and assigns relevant data to edi850 object. The array that contains all the segments is label defined as 'x' below. Note: the order of the segments in the array will always be top to bottom as represented by the contents of the EDI file. An example of a key segment is the BEG segment of edi 850 document type. The code below shows the creation of the edi850 object along with assignments of BillTo and PO number on the occurrence that the current segment in the loop is 'BEG'. The variables in green background were set by the setControl method above in Block 1.

```
if (x[0].toString().equals("BEG")) {  
    e = new edi850(isa06, isa08, gs02, gs03, isa13, isa09, doctype, stctrl);  
    e.setOVBillTo(OVData.getEDICustFromSenderISA(isa06, doctype, "1"));  
    e.setPO(x[3]);  
}
```

This portion of the mapping is free-form in that you can cherry pick and assign data as necessary to complete the creation of the sales order. Other 'header' related segments can be picked and assigned as necessary (see Generic850i for more examples). Segments that loop will have to be inspected with both recognition of the segment tag and custom constructs of loop identifiers. The Generic850i map has examples of such constructs. “shiploop” is an example of the N1 ST loop to identify the shipto address of the inbound purchase order.

The line item detail of the inbound 850 is a special looping construct. Each line item on the inbound EDI 850 purchase order is represented by the “PO1” tag. Upon recognition of a PO1 tag in the map, you must call the addDetail() method of the edi850 object. This will increment an internal counter and establish an element within the 'Detail' array to hold this line's data information. The PO1 has information about the item number, quantity, price, and potentially other information (as defined by the customer implementation guide). An example of the PO1 tag is shown below.

```
if (x[0].toString().equals("PO1")) {  
    e.addDetail(); // must call for each PO1  
    e.setDetCustItem(i,x[7]);  
    e.setDetQty(i,x[2]);  
}
```

Block 3.

Once edi850 'e' object has been assigned with header and detail information from the inbound 850 x12 data, the final block is essentially the call to the create order method passing the object as a parameter.

```
com.blueseer.edi.EDI.createOrderFrom850(e, c);
```

The construction of the inbound maps are completely free-form. You have the option to create any methods necessary to retrieve the data in the segment array and pass to the edi850 object. Error handling and default value assignments are left as an exercise to the developer. Given the availability of the source code, you can also adjust the createOrderFrom850 method above to suit your needs are fill any gaps per the unique definition of the customer's implementation guide.

16.7 *EDI Command-Line Translator*

The typical processing of EDI inbound and outbound files involves some level of automation. A scheduled operation is usually constructed to execute the processing of the files on some repeated event schedule. With BlueSeer, automated setup is easy and can be established relatively quickly with a simple scheduler (either the OS scheduler, cron scheduler, or some other scheduling tool) and bat or shell files to call the BlueSeer executables.

```
Windows PowerShell
PS C:\bs\blueseer\scripts> gc etran.bat
@echo off
rem -if, -of, -id, -od, -m, -x
java -cp ".;c:\bs\blueseer\scripts\test;c:\bs\blueseer\dist\*" com.blueseer.edi.EDIbs %*
PS C:\bs\blueseer\scripts>
```

```
Windows PowerShell
PS C:\bs\blueseer\scripts> ./etran.bat -if test\edi\in\990i.txt -of out.txt -m generic990
```

16.8 EDI Utilities

BlueSeer has several utilities that facilitate working with EDI files and directories containing edi documents. These utilities can be used to traffic files from one directory to another or filter a directory for specific document types and trafficking these specific documents to other directories for processing.

The java class “com.blueseer.edi.EDIbs” has several methods that can be executed depending on the parameters passed to it when executed at the command line. These parameters are used in combination with other parameters to call a specific method within the EDIbs class. The EDIbs class contains a 'main' method and can be wrapped in a simple bash script (linux) or bat script (windows). A simple bat script (**etran.bat**) is shown here :

Contents of bat File: **etran.bat**

```
@echo off
rem sample .bat file contents|
java -cp ".;dist\*" com.blueseer.edi.EDIbs %*
~
~
~
~
~
```

Once you have your bat or bash script set up and assigned as executable, then you can call it with various combination of parameters to perform certain functions. These functions are listed below :

16.8.1 Utility: Filter Directory For Various X12 transaction types / partners

-fd (Filter Directory). This method parameter is the 'key' parameter used to filter a directory that contains any type of file(s) for specific types (ANSI X12 doc types) of files and further overloaded by the 'definition file' using the **-tf** parameter. Any file in the targeted directory that matches an element in the transaction type list and/or definition file is processed to the target directory. All other files are simply archived (along with processed files) and all files are subsequently deleted from the source directory.

Here's an example:

```
./etran.bat -id C:\temp -od C:\targetdir\ -fd 850,997 -ad C:\archivedir\ -tf defFile >>filterlog.txt
```

The source directory specified by **-id** parameter is “**c:\temp**” and contains a collection of files. The above command will review each file and process only files containing ANSI X12 850 purchase orders and 997 acknowledgments as defined by **-fd** (a comma delimited collection of types). These files will be copied to target directory **-od** by default. Each file that is reviewed in source directory will be archived to archive directory specified by **-ad** parameter and all files within **c:\temp** will be deleted.

The **-tf** parameter (definition file) has parameters that will allow for certain combinations of transaction types and trading partners (as defined by ISA06 Sender ID) within the file to overload the target directory (**-od**) with a more specific directory as defined within the **-tf** definition file. The contents of **-tf** defFile are defined as each line contains 4 fields delimited by a comma. Field1 is the X12 transaction type, Field2 is the ISA06 SenderID, Field3 is the overloaded target directory, and Field4 is the overloaded archive directory. This file is read during execution to determine which transaction type / trading partner will overload the default target directory as defined by the **-od** parameter and send the file to the alternate directory as defined by Field3 within the definition file. Here's an example of the **-tf** definition file :

```
850,WALMART,c:\other\targetdir\,c:\other\archivedir\  
850,AMAZON,c:\some\other\target\dir,c:\somedir\  
997,,c:\still\some\other\directory\other\than\-od,c:\somedir\
```

Note: If Field2 is left blank...all files of the transaction type will go to the alternate target directory.

Note: You must include the trailing backslash “\” on the -od and -ad parameters and Field3 and Field4 of definition file.

16.8.2 Utility: Simple File traffic utility with Append Option

-td (Traffic Directory). This method parameter is the 'key' parameter used to simply traffic (move) files from one directory to another based on rules in the definition file **-tf** parameter. Any file that matches a rule in the definition file is moved to the target directory defined within Field3 of the definition file. If a file does not match a rule, the file is left untouched in the target directory. This is a true 'move' of files that match as the file is deleted from target and copied to directory defined by Field3 in the definition file.

Here's an example:

```
./etran.bat -td C:\temp -tf defFile >>filterlog.txt
```

The definition file contains 4 comma delimited fields. (This is not to be confused with the definition file of other methods). Field1 is the string used to match the filename. Field2 is the destination directory of the filename that “matches” Field1. Field3 is the archive directory. Field4 is an overload field that if not blank, all files that match this rule will be appended to the file as named by Field4.

Note: Field1 is a 'contains' match. if Field1 is “abc”, any filename that contains the characters “abc” will trigger this rule.

Here's an example of the **-tf** definition file :

```
customer_810,c:\outbound\invoice\directory\,c:\archivedir\,810_appendfile.txt  
customer_856,c:\outbound\asn\directory\,c:\archivedir\,
```

Any file in the source directory **-td** that contains the string “customer_810” will be “appended” to c:\outbound\invoice\directory to a file called “810_appendfile.txt and the original source file will be deleted from the source directory and archived to [c:\archivedir](#).

Files matching “customer_856” rule will not be appended per the rule above since Field4 is blank.

17 Custom Application Guide

17.1 Customization Overview

One of the best features of BlueSeer is its ability to customize the core package or extend functionality by creating new classes. The parent menu 'custom' is childless by default. You can create your own java JPanel class and include this class under the custom menu. There are a few constraints to observe when adding custom applications, but the functionality you add to your custom JPanel class can be completely independent from the core BlueSeer package albeit a few minor exceptions. The minimum requirements for a custom JPanel class are:

1. The class you create must be a JPanel class. BlueSeer is essentially a large collection of JPanel classes. Each Class is associated with a Jmenu option in the parent frame and is 'selected' by clicking on the associated menu. The act of selection essentially pulls the selected JPanel forward (visible = true), and all other JPanels have their visible flags set to false.
2. The class you create must exist in a java package called 'custom'. For example, if you create a class called 'myclass', it must reside in a java package as custom.myclass.
3. The jar file that contains custom.myclass for example, can be named anything. However, it must be placed in the -cp path prior to the blueseer.jar file. For example, the following java command line statement is legitimate (assuming you called your jar file 'custom.jar' and placed in the dist directory) :

```
javaw -cp dist\custom.jar;dist\blueseer.jar bsmf.MainFrame
```

Note: you must ensure that your 'myclass' is defined in the 'custom' package within the 'custom' jar file. You should be able to see your custom class with the following jar viewer command :

```
jar tf dist\custom.jar |find "myclass"
```

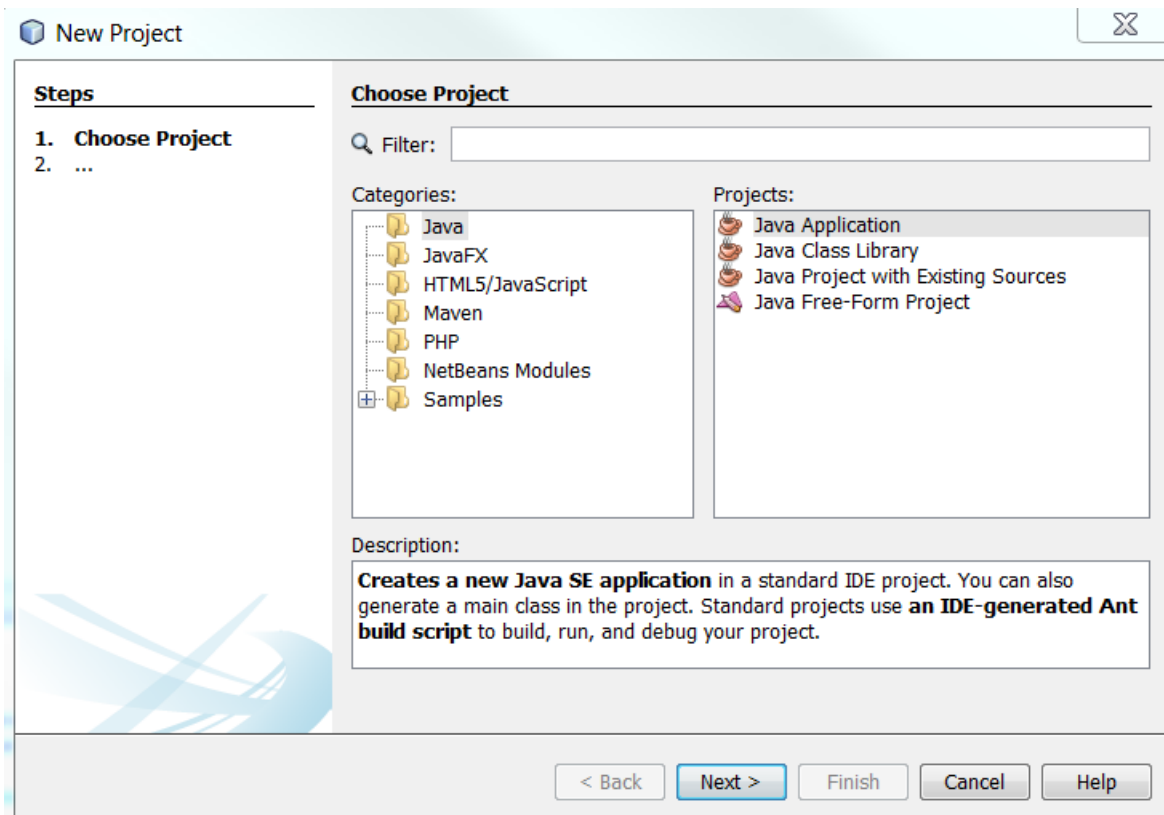
This command should return : custom/myclass.class

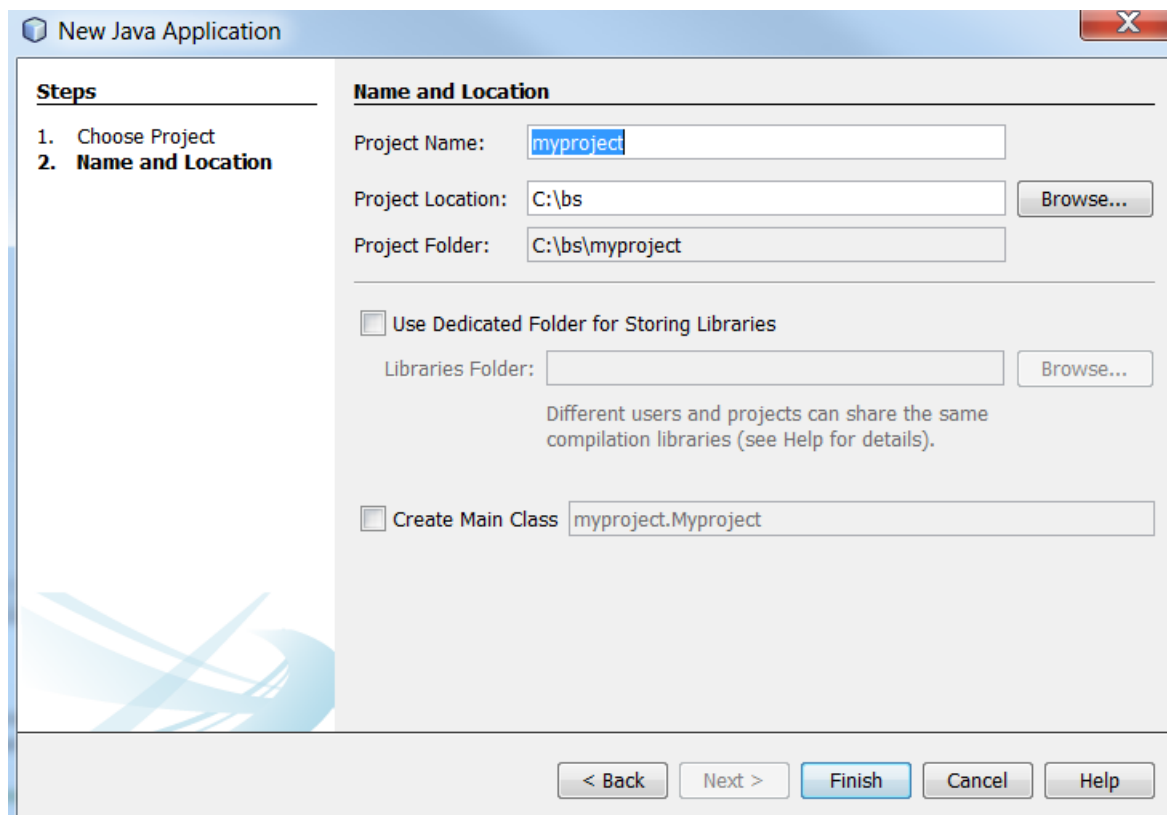
4. You should include bsmf.jar file in your library when you compile your custom package. The bsmf.jar file is the primary JFrame which controls the panels and navigation of the application. Including blueseer.jar is optional, but recommended if you plan to use any classes within the core package.
5. Lastly, you will need to update a several Maintenance records within the BlueSeer application once you've launched blueseer to 'include' your custom class within application.
 - Admin → Class Register
 - Admin → Menu Maintenance
 - Admin → User Perms Maintenance
 - Admin → Menu Tree Maintenance

17.2 Customization Example

The following steps illustrate the creation and inclusion of a sample Java JPanel Class to the BlueSeer Application :

1. Let's create a simple Java JPanel Class. We will use NetBeans IDE to create a JPanel class.
2. Within NetBeans, create a new Project by clicking on File → New Project and choosing 'Java Application'. Click Next. Enter the name 'myproject' as the name of the project and click Finish. (see screenshots below).





The 'New Java Application' dialog box is shown with the 'Name and Location' step selected. The 'Project Name' is 'myproject', 'Project Location' is 'C:\bs', and 'Project Folder' is 'C:\bs\myproject'. There are checkboxes for 'Use Dedicated Folder for Storing Libraries' and 'Create Main Class' (which is checked and set to 'myproject.Myproject'). Navigation buttons at the bottom include '< Back', 'Next >', 'Finish', 'Cancel', and 'Help'.

New Java Application

Steps

1. Choose Project
2. **Name and Location**

Name and Location

Project Name:

Project Location:

Project Folder:

☐ Use Dedicated Folder for Storing Libraries

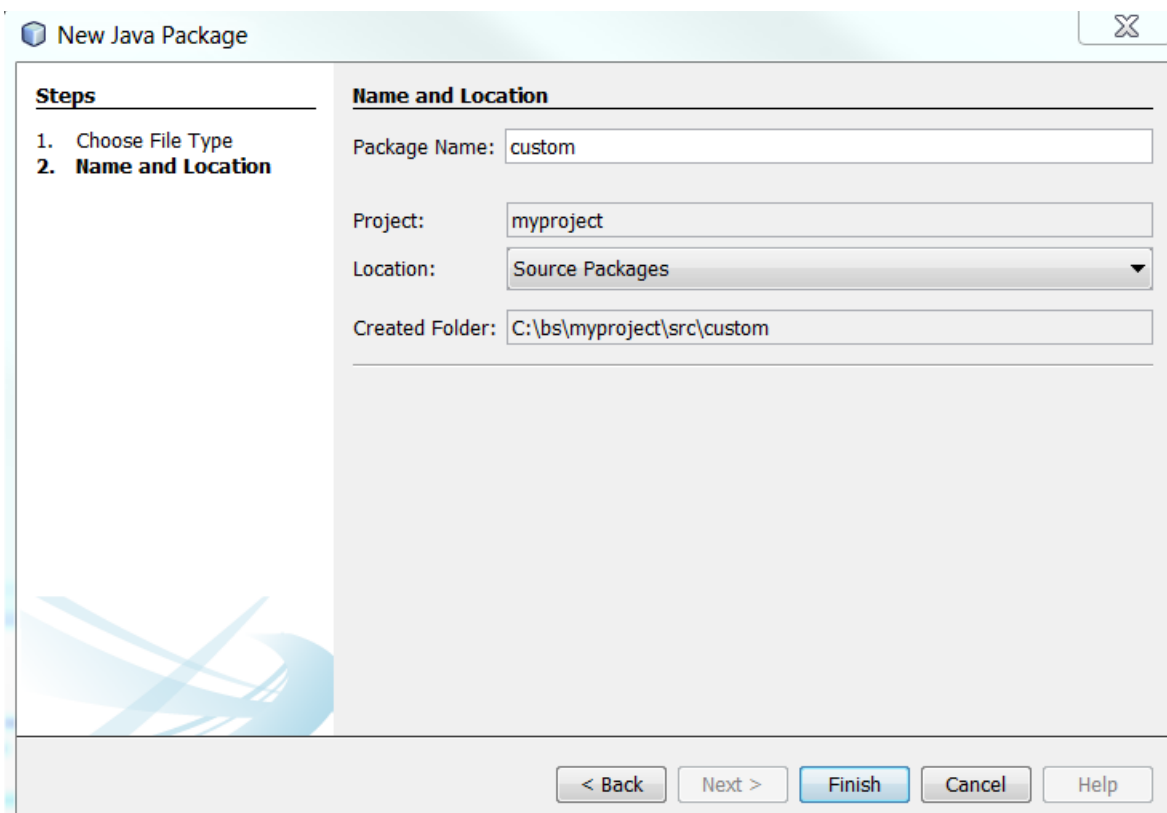
Libraries Folder:

Different users and projects can share the same compilation libraries (see Help for details).

☒ Create Main Class

< Back Next > **Finish** Cancel Help

3. Right Click on your newly created project 'myproject' and click 'New' → 'Java Package'. Enter 'custom' as the Package Name and click Finish.



The 'New Java Package' dialog box is shown with the 'Name and Location' step selected. The 'Package Name' is 'custom', 'Project' is 'myproject', 'Location' is 'Source Packages', and 'Created Folder' is 'C:\bs\myproject\src\custom'. Navigation buttons at the bottom include '< Back', 'Next >', 'Finish', 'Cancel', and 'Help'.

New Java Package

Steps

1. Choose File Type
2. **Name and Location**

Name and Location

Package Name:

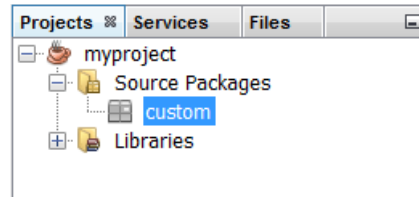
Project:

Location:

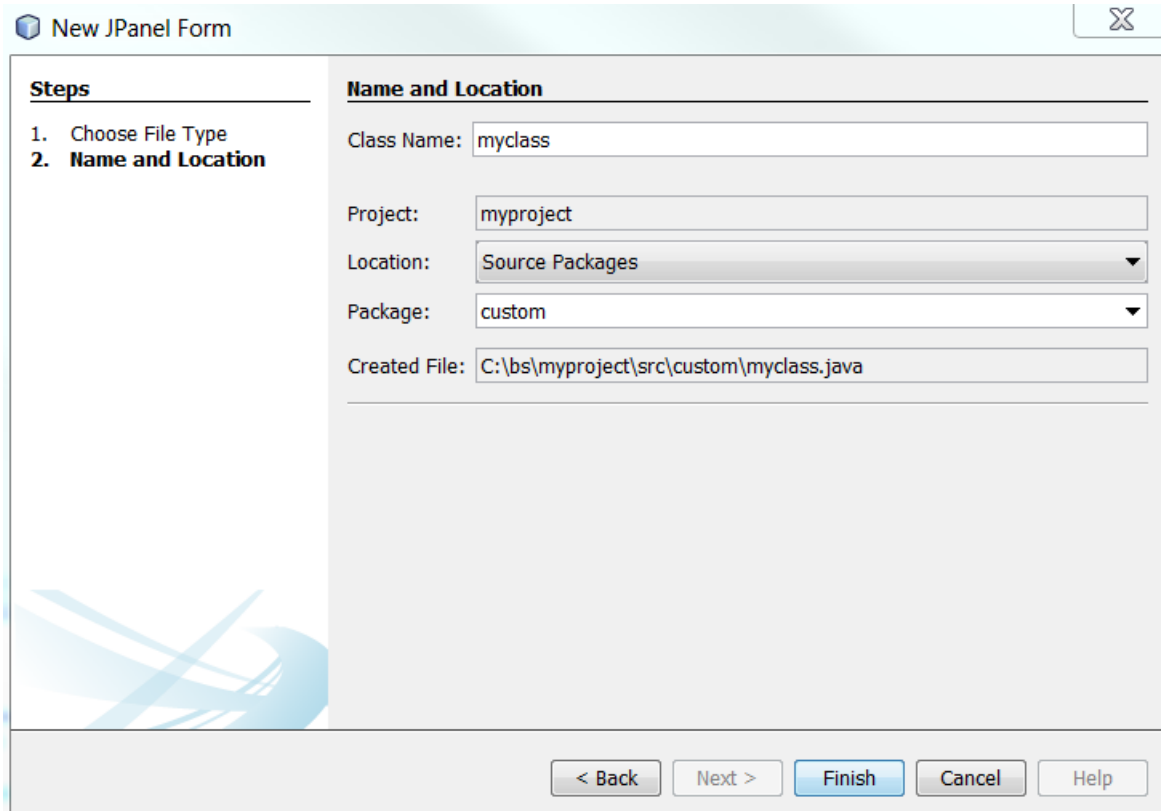
Created Folder:

< Back Next > **Finish** Cancel Help

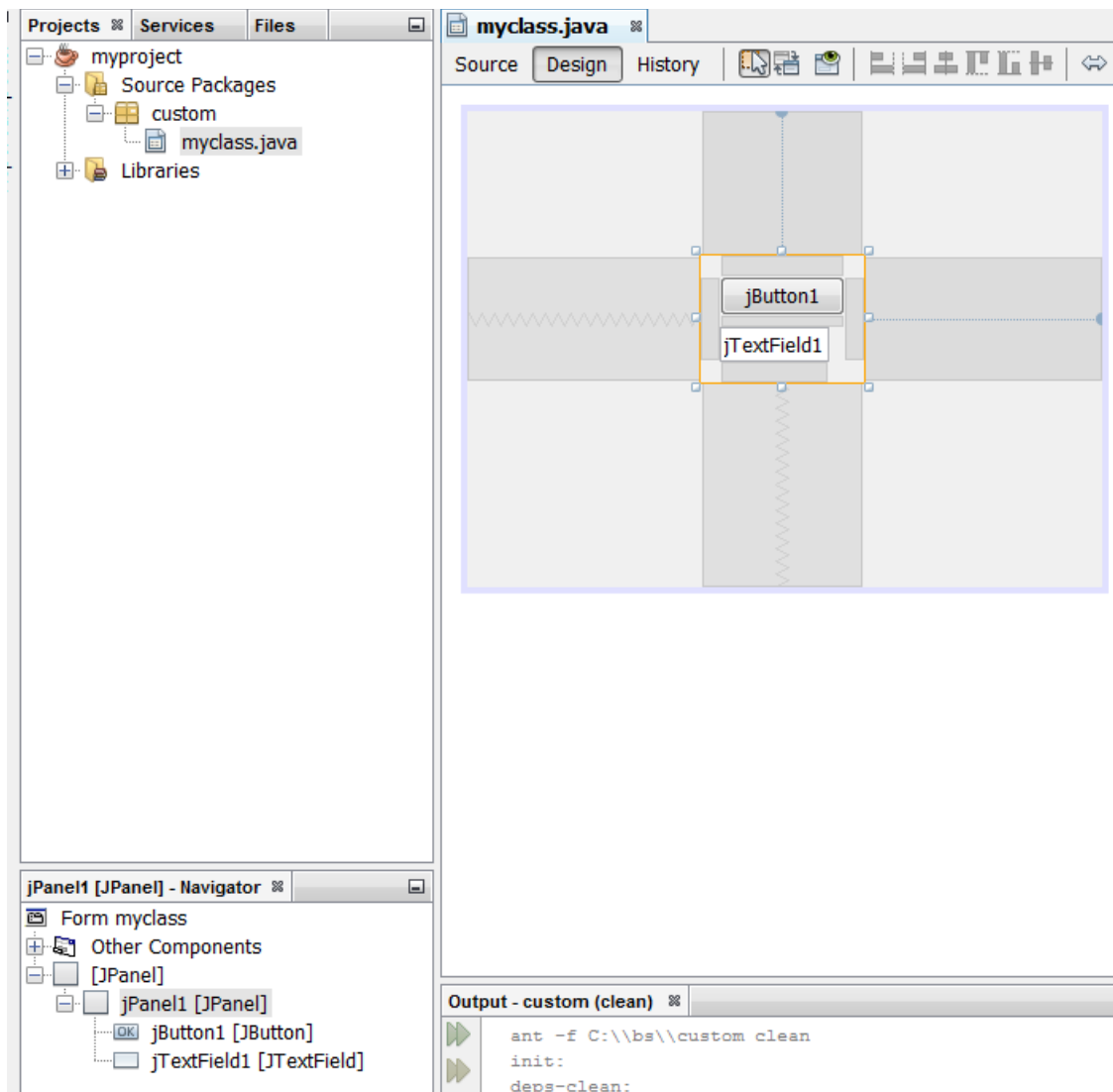
4. You should now have 'custom' as the only package in Source Packages.



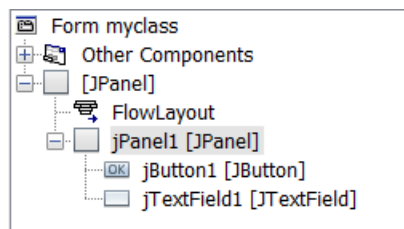
5. Right click on the 'custom' package and click 'New' → JPanel Form, enter 'myclass' as the class name and click Finish.



6. Now that you have an empty panel, let's drag a JButton and a JTextField over into the panel. Highlight both components and right click and choose 'Enclose In' Panel. This will place the two components within a small panel (jPanel1). Your components should have the following hierarchy in the image below.



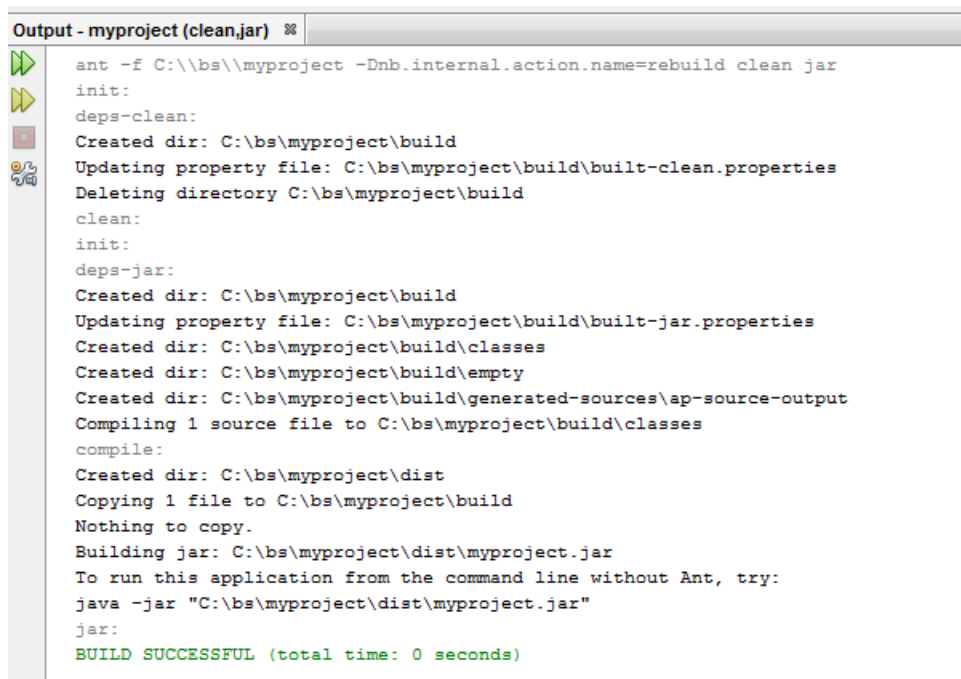
7. Right-click on the outer panel (jPanel) and click 'Set Layout' and choose Flow Layout. Your project structure should look like :



8. You will need to add a single function to your source code called 'initvars(String)'. It just needs to be declared. It is used by bsmf.jar for initialization purposes.

```
public class myclass extends javax.swing.JPanel {  
  
    /**  
     * Creates new form myclass  
     */  
    public myclass() {  
        initComponents();  
    }  
  
    public void initvars(String myvars) {  
  
    }  
}
```

9. Lastly, double click the jButton1. You will be navigated to the jButton1ActionPerformed function. Inside this function write the following statement:
- jTextField1.setText("BOO");
10. Now that your coding is complete, right click on the 'myproject' icon and click 'Clean and Build'. This will create your jar file for you. The jar file is labeled 'myproject.jar' in your dist directory. You can see the location of the jar file in the Output screen as shown here:



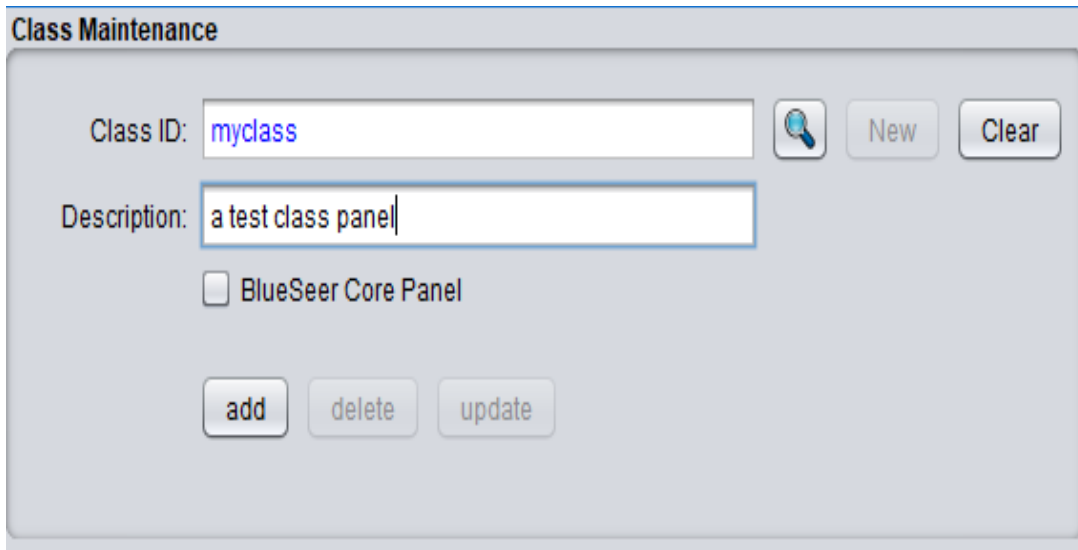
```
Output - myproject (clean.jar)  ⌵  
ant -f C:\bs\myproject -Dnb.internal.action.name=rebuild clean jar  
init:  
deps-clean:  
Created dir: C:\bs\myproject\build  
Updating property file: C:\bs\myproject\build\build-clean.properties  
Deleting directory C:\bs\myproject\build  
clean:  
init:  
deps-jar:  
Created dir: C:\bs\myproject\build  
Updating property file: C:\bs\myproject\build\build-jar.properties  
Created dir: C:\bs\myproject\build\classes  
Created dir: C:\bs\myproject\build\empty  
Created dir: C:\bs\myproject\build\generated-sources\ap-source-output  
Compiling 1 source file to C:\bs\myproject\build\classes  
compile:  
Created dir: C:\bs\myproject\dist  
Copying 1 file to C:\bs\myproject\build  
Nothing to copy.  
Building jar: C:\bs\myproject\dist\myproject.jar  
To run this application from the command line without Ant, try:  
java -jar "C:\bs\myproject\dist\myproject.jar"  
jar:  
BUILD SUCCESSFUL (total time: 0 seconds)
```

11. Now it's time to insert your newly created class into the BlueSeer application flow by including the jar file in your class path and registering your class with the application.
12. Copy the 'myproject.jar' file and place in the c:\blueseer\dist directory.
13. Adjust your java launch path (in login.bat if you installed the demo) to include this jar

file like so (on windows):

```
javaw -cp dist\myproject.jar;dist\blueseer.jar bsmf.MainFrame
```

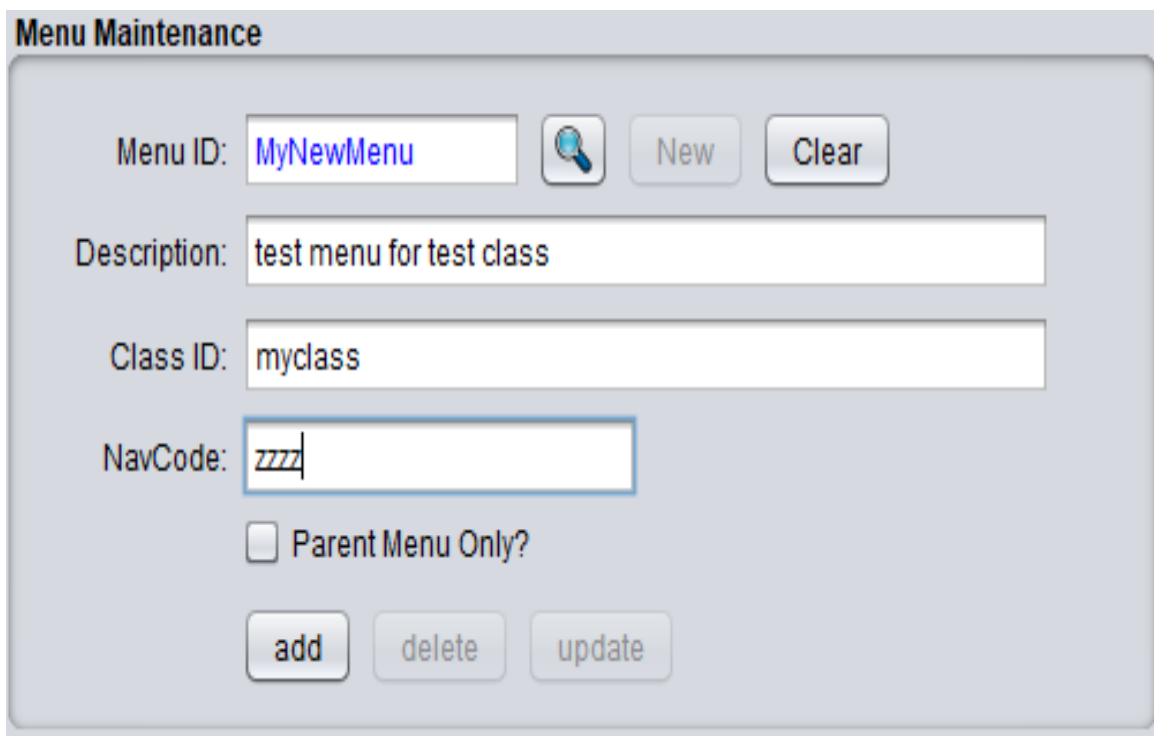
14. Launch BlueSeer either with the javaw statement above or from your 'edited' login.bat file.
15. Once launched, click Admin → Class Register. Click 'New' and enter 'myclass' in the class ID field and click 'add'.



The 'Class Maintenance' dialog box contains the following elements:

- Class ID:** A text field containing 'myclass'.
- Description:** A text field containing 'a test class panel'.
- BlueSeer Core Panel:** An unchecked checkbox.
- Buttons:** A magnifying glass icon, 'New', 'Clear', 'add', 'delete', and 'update' buttons.

16. Click Admin → Menu Maintenance. Click 'New' and enter 'MyNewMenu' in the Menu ID field and 'myclass' in the Class ID field. Then click 'add'. Do not check parent menu only.



The 'Menu Maintenance' dialog box contains the following elements:

- Menu ID:** A text field containing 'MyNewMenu'.
- Description:** A text field containing 'test menu for test class'.
- Class ID:** A text field containing 'myclass'.
- NavCode:** A text field containing 'zzzz'.
- Parent Menu Only?:** An unchecked checkbox.
- Buttons:** A magnifying glass icon, 'New', 'Clear', 'add', 'delete', and 'update' buttons.

17. If you are using the 'admin' login in BlueSeer, the creation of the menu automatically creates permissions for 'admin' to use that menu so you don't have to do this step. Any other users will have to have their perms adjusted to use the menu in Admin → User Perms Maintenance
18. Enter 'sysc' in the navigation text-box. This will bring you to the system control menu. Click the 'custom' check-box. This checkbox informs the system that custom panels are present in the classpath.
19. Finally click Admin → Menu Tree Maintenance to add your new menu to the menu tree. Enter 'Custom' in the Parent Item and tab to the Component field. This drop down box is 'editable'. Enter the 'component' of your new menu 'MyNewMenu' that was previously created in Menu Maintenance. Tab down and enter a descriptive name like 'My New Menu' (this will be visible portion of the menu to the enduser). Choose JMenuItem, check Visible and Enabled and click 'Add'.

The screenshot shows the 'Menu Tree Maintenance' window. On the left, the 'Parent Item' is set to 'Custom' and the 'Component' is 'MyNewMenu'. The 'Name' field contains 'My New Menu' and the 'Type' is 'JMenuItem'. The 'Visible?' and 'Enabled?' checkboxes are checked. The 'Add' button is highlighted. On the right, a tree view shows the menu structure with 'Custom' selected. A 'Message' dialog box is overlaid on the bottom, displaying an information icon and the text 'Added Menu Tree Record' with an 'OK' button.

20. Before you will see your new menu under the Custom Menu, you will need to close the application, and re-launch BlueSeer. (Note: BlueSeer registers all menu at time of launch. Changing the menu tree structure will always require a re-launch to see the changes).

You should now be able to click on the Custom Parent menu and your 'My New Menu' to see the results of your new class code. Enjoy! :)

