VSM Features

Expiration date
VSM will support an expiration date tied to an sku-location combination. The sku definition is used to denote a particular sku requires an expiration date. When this sku is stored the operator is required to enter an expiration date for the sku-location combination. Skus approaching an expiration date may be printed using the print icon on the VSM main menu.

Select full quantity (Reel selection)
This option is set via the sku definition for the particular sku. When enabled and when the sku is selected the requested quantity is ignored and the entire quantity at the location for the sku is substituted. This is use for the selection of wire and electronics on reels where the entire reel must be pulled and then stored back into the system when complete

Sku verification
There are four locations in the system that an operator actually handles the skus. These are order selection, hot picks, order replenishment and hot replenishment. Before starting let me define these function. Hot picks are the retrieving of one sku at a time from the system. Hot replenishments are the storing of one sku at a time into the system. Order selection is a set of skus and associated quantities that are selected from the system. Order replenishment is a set of skus and associated quantities that are stored into the system. It is during these four events that a mistake is most likely to occur. For this reason VSM may be configured to verify the sku in any one or all of these software events.

This is usually done using a bar code scanner and a label on the location containing the sku number. VSM may also be configured to produce a label on demand (i.e. the operator clicks a function key) during any of these operations to produce a sku label to be placed on the location. This allows the operator to label locations as a new location is added for a sku or in the event a label requires replacing. The operator is not allowed to remove or store the product unless the sku scanned matches the sku associated with the event.

Historical tracking
VSM creates an extensive data base of all activity that occurs in the system. This is much more than just a simple log.

Information may be kept for decades and easily and quickly searched. This is especially important for drug companies and manufacturers. This feature allows the data to be searched by sku number ,order number and date. In addition to displaying this information the data may be printed or a comma delimited file may be created for use in

other software systems. The information stored includes employee number, employee name, system location (ie. Vlm,tray, etc) , date, time, activity ,etc.

Lot numbers
VSM may be used to manage lot numbers. In systems requiring order selection based on a lot number then the lot number is normally incorporated as part of the sku number. For this reason the length of the sku number in VSM is 50 characters. For those systems that only require hot pick and hot replenishment and no order selection then they may chose to use the sku notes area as a place to store the lot number. This area is always displayed during hot picks and hot replenishments for this reason

Touch screens
VSM is designed to use touch screens if desired.

Kitting
VSM supports true multilevel kitting. This feature permits kits to be submitted and maintained. Kits may be composed of skus and kits.

Bill of materials
Full support for bill of material processing. Create, maintain, host download, host upload, order creation, display and or print shorts before submitting for order selection. This is available both for the vlm operator and for work stations within the facility and over the network local and remote.

Workstation support
VSM now supports work stations with access to inventory and various functions within the system including bill of materials. With over 100 functions all security protected.

Access control
VSM supports 999 location access definitions. A definition may be assigned to one or more employees and defines the trays or carriers that an employee will have access to. When an employee is set up an access definition is assigned to that employee. This feature is referred to as LAC an acronym for (L)ocation (A)cess (C)ontrol and is an option available with VSM-II. The standard version of VSM uses one feature of LAC that in many instances is all the security required for a system. This option when enabled will move all verticals to carrier one or move tray one to the selection point of all vlms when the operator signs off.

Inventory Accuracy
The accuracy of inventory should be the focal point of any software package designed to control a storage device like a vlm or a vertical. This is achieved by system design and features that allow the operator to check and double check the process. For VSM this may mean turning on sku verification during operations (see sku verfication feature) but it may also include the access to a detailed history of what actions occurred in the system.

The VSM history permits the supervisor to look up the activity and operator regarding a specific sku over the life of the system. This could be years if not decades of information (if so desired) via VSM's history feature.

And finally inventory accuracy is easier to maintain when the required functions are implement with large PC screens containing information that allows the operator to see what the software believes the inventory should be. This information is displayed by the system at every possible screen allowing the operator to check and recheck inventory effortlessly

Quarantine product
VSM supports quarantining a sku-location combination. This may be done automatically as product is stored or via operator maintenance. Once quarantined the sku-location is no longer available for selection until released from the quarantine status

AKA support
VSM supports an unlimited number of akas (also known as) for each sku. Whenever an sku is entered by the operator VSM looks up the particular sku. If no match can be located VSM will attempt to locate an aka entry for the sku entered.

If an aka entry is located then the true sku number replaces the aka entered by the operator and the process continues.

User security
VSM uses ten levels of security to determine the degree of access that an operator is permitted. These are numeric levels ranging from 0 to 9 with level 0 being the most restrictive security level. Each employee that uses the system must be setup via the VSM employee maintenance and a security level must be assigned before he or she is permitted to use the system.

Barcode scanning
All data used by VSM may be scanned into the system using a barcode scanner. There are literally hundreds of available scanners that may be easily attached to the system.

Controls 1 to 24 units
VSM will control 1 to 24 verticals or vlms

Movement tracking
VSM records and reports movement for all skus in the system

Locate sku by search descriptions, skus, and notes

VSM allows an operator to search for a particular sku using a piece (i.e. some text string contained within) of the description, sku or sku notes. This feature is available via the hot replenishment function.

As an example, let's say that an emergency nurse wishes to know every sku with the word scissors in the description. This feature would allow her to look up these skus.

Let's say that each employee stores his or her equipment in a tray and adds their name to the sku-notes section of the stored sku. By searching for the name in the notes section a list of only storage areas associated with the individual could be located.

Sku Notes
VSM will associate user data or user information when storing or retrieving a sku. The information is stored along with the sku-location combination. This may be 50 characters of information that then gets displayed and is available to be altered anytime the sku-location combination is selected or replenished.

This may be used to store a lot number for the sku-location combination. It may be used as a place to tie the location with an employee (see locate sku feature). It turns out to be just a very handy piece of information to have in some systems.

User Data upload to host
During selection and replenishment orders the operator may enter information with each sku that is then added to the host upload file and sent back to the host along with the sku information.

Weight scale support
VSM will support most weight scales on the market today. As a sku is stored or retrieved the unit weight of a single sku is passed to the scale allowing the operator to select or store the correct quantity. This unit weight is assigned to the sku when the sku is defined via sku definition maintenance

Hot picks
As defined earlier hot picks are the selection of one sku at a time from the vlm or vertical. This is a simple three step process. (1) Specify the sku (2) specify the quantity (3)accept the location containing the sku and quantity presented. These steps are repeated to select additional skus.

Hot replenishment
As defined earlier hot replenishments are the storing of one sku at a time into a vlm or vertical. This is a simple three step process (1) specify the sku (2) specify the quantity (3) accept the location selected by the software to store the sku. These steps are repeated to store additional skus.

Order selection
Order selection may or may not be used for a specific system. If it is required the process amounts to the automation of the hot pick process. The operator selects the order to be selected from a list of orders and then selects the skus one at a time as they are presented to the operator.

Order replenishment
Order replenishment may or may not be used for a specific system. If it is required the process amounts to the automation of the hot replenishment process. The operator selects the order to be replenished from a list of orders and the stores the skus one at a time as they are presented to the operator.

Create operator selection orders
This feature allows the operator to create either by typing in or scanning skus and quantity a selection order.

Create operator replenishment orders
This feature allows the operator to create either by typing in or scanning skus and quantity a replenishment order.

FIFO, LIFO and best fit
Skus may be designated and managed as FIFO, LIFO or best fit.

Labels
VSM may be configured to create labels at any or all of the four locations the operator handles the sku (i.e. hot picks, hot replenishment, order selection and order replenishment). These labels may be configured as on demand (i.e. the operator hits a function key) or automatically created. If automatically created they may be generated before the quantity is entered or after the quantity is entered.

VSM allows various printers to be used for label creation. Simply labels are supplied with the system. In addition there are exits for these labels to be modified to a customers exact requirements via an integrator if required.

Host uploads of transactions
As skus are stored and retrieved in the VSM system this activity is posted to the history and in addition posted to a host upload sub-system inside VSM. If required this data may be passed up to the host and consists of virtually every detail in the history. This is a comma-delimited file and there are exits that allow the host to pick up this data in an automated process. In addition this information is automatically backed up for seven days in the event the host would loose this data.

Comma delimited data
All files used to load VSM are comma-delimited files. This allows data to be loaded from spreadsheets directly into VSM. In addition VSM will create files from it's data bases that are comma delimited that may be loaded into a spreadsheet and then reloaded back into VSM.

Host upload files as well as host download files(selection and replenishment orders) are also comma-delimited files.

Sku picture displayed during all functions of the system
Sku pictures may be added by using the features of VSM that interface to many cameras and scanners. In addition sku jpegs may be added by merely adding their jpegs to a directory within VSM.

Visual displays
VSM visually displays the tray/carrier layouts and the location of the sku in the tray assisting the operator locate the correct location to store or retrieve.

In addition VSM displays sku movements and inventory levels within the trays/carriers using color-coding to denote degrees.

Date form
VSM may be configured to use either the date form used in the United States or the date form used in Canada. By setting the form all reports and listings displaying the date are changed.

Location capacity mode
VSM allows the location capacity to be used as a guild-line for location capacity or an absolute number for the quantity stored at a location. This is a configurable option and is

relative to how a customer uses his equipment. If configured as an absolute number then the operator is never allowed to put more than the designated maximum into the location. If the location maximum is not an absolute number then the number is used for replenishment and the operator is warned when it is exceeded but the operator is still permitted to override the number and store more than the maximum.

Nomenclature
All nomenclature in the VSM system may be set using a configuration option. The terms vlm, carousel, carrier, bin , width depth, etc.

Enable/Disable devices
Devices controlled by the VSM software may be enabled and disabled allowing the system to function regardless of the status of the hardware.

Multi-vendor support
VSM supports multiple vendors allowing the upgrade of existing hardware into new configurations with new vlms and verticals.

Fixed and random locations
VSM supports fixed and random locations

Maintenance functions
All files within the VSM system (except the employee file) may be loaded and maintained via comma delimited files. In addition operator maintenance for each of these data bases is available via the main menu of VSM.

New location each putaway
This option is set via the sku definition for the particular sku. When enabled each new putaway for this sku is stored into a new location. This is useful for maintaining receiving dates and/or products with lot numbers.