PickPro™ WCS

Warehouse Control Systems

System Overview

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Introduction

PickPro™ is a powerful yet easy to use warehouse control system for stockroom and distribution center environments.

PickPro™ is available in either single or multiple workstation versions, operating standalone or networked depending on the customer's needs.

PickPro™ can control multiple automated horizontal or vertical carousel pods, flow rack, Pick to Light shelving, and all other bulk locations. It maintains and manages all inventory items in locations, and controls all of the picking, put away, and cycle count processes. PickPro™ provides many functions needed to efficiently manage your operation.

PickPro™'s intuitive graphical user interface minimizes the need for extensive training and allows customers to begin working productively with the software in a very short time.

This document provides a high level overview of the system, and illustrates how its main features are typically used in a production environment.

It is assumed that the reader of this document already has an understanding of automated storage systems and their use in a material handling environment.

The following documents provide additional information regarding the system:

• **PickPro™ Customer Responsibility Guide**
The guide provides information about preparing for a PickPro™ WCS system installation.
It also includes suggestions regarding preparation tasks, personnel involvement, and milestones involved in a PickPro™ WCS system installation.

• **PickPro™ Host Interface Specification**
Provides detailed information regarding communication between PickPro™ and a host system. Includes precise file layouts for the various interfaces available in PickPro.

• **PickPro™ Operations Guide**
Provides a complete description of PickPro™ software operation. Includes explanations of all menu options and functionality.

System Objectives

PickPro™ software is intended to provide the following operational improvements and their attendant cost reductions:

- Increased Storage Capacity
- Increased Material Throughput
- Reduced Material Handling
- Reduced Labor Cost
- Improved Order Turnaround Time
- Increased Order Accuracy
- Increased Inventory Accuracy
- Increased Supervisory Visibility of Operations
- Improved Ergonomics
- Increased Security

Summary of System Features

General

- Real-time control of operations
- System-directed optimized putaway
- System-directed optimized picking
- Control of multiple flow racks/workstation
- Control of multiple light-automated bulk zones
- Universal Pod control (ASRS and flow rack or shelving)
- Optimization of storage based on bin size
- Optimization of storage based on item velocity
- Bar code label generation
- Logging of all transactions
- Download from host of orders
- Upload to host of completed transactions
- Built-in reports and labels
- Ad-hoc report/label generation
- Diagnostic features for system troubleshooting
- Standalone or Network architecture
- Powerful relational database
- Runs on Windows 2000/XP/Vista
- Windows® Server 2000/2003
- Microsoft Office® 2003/2007

Security

• Security features to limit user access at different levels
• Security can be set individually or by group

Host Interface

• Bi-directional interface between PickPro™ and host computer using text file transfer
• Download from host of *inventory*, *inventory map* (location) and *employee* (users) information for initial system setup and file maintenance
• Download from host of routine Pick Orders, Putaway Orders, and Cycle Count Orders
• Upload to host of transaction history
• Order download can be requested by supervisor at any time, or can be configured to run automatically at timed intervals

Automated Putaway

• Hot put away from within an active batch
• Hot putaways associated with current put away orders
• Queued put away from list
• Host-downloaded orders or manually entered orders
• One-button confirm for putaways
• Putaway batches can be cancelled, or suspended and resumed
• System assigns optimal location based on part and location parameters, and automated balancing factors
• Manual operator override of any system assigned location

Automated Picking

• Hot picking from within an active batch
• Automatic batch generation or pre-batching from any workstation
• Host-downloaded orders or manually entered orders
• One-button confirm for picks
• Picking based on various sorts including Priority, Required Date and Order Number
• Batches can be cancelled, or suspended and resumed
• Pick labels printed on demand or automatically
• Tote labels printed on demand or automatically
• Tote manifests printed automatically
• Shortages saved for backorder reprocessing

Bulk Put away

• List-directed put away
• Optional RF handheld directed put away
• Optional truck-mounted RF pc directed put away
• Barcode laden put away lists for minimal data entry
• Unlimited active put away batches in any zone
• Host-downloaded orders or manually entered orders
• System assigns optimal location based on part and location parameters
• Putaway confirmation at any workstation at conclusion of putaway
• Mark list as complete with simple keystrokes, or record put away exceptions
• Put away to automated or bulk as primary storage
• Easy reassignment or overlapping of put away zones

Bulk Picking

• List-directed picking
• Optional RF handheld directed picking
• Optional truck-mounted RF pc directed picking
• Barcode laden pick lists for minimal data entry
• Unlimited active pick batches in any zone
• Host-downloaded orders or manually entered orders
• Pick multiple concurrent lists
• Picking based on various searches including Item Number or Vendor Item Number
• Pick labels printed on demand or automatically
• Tote labels printed on demand or automatically
• Tote manifests printed automatically
• Pick by Single-Order Pick lists or Batched Pick list
• Pick confirmation at workstation at conclusion of picking
• Mark list as complete with simple keystrokes, or record picking exceptions
• Easy reassignment or overlapping of bulk pick zones

Allocation

• Full supervisory control of Pick Order allocation process
• Orders can be allocated manually or automatically
• Orders can be de-allocated and later reallocated
• Inventory allocated for an order is not available to subsequent orders
• System allocates inventory from Automated zones or Bulk zones based on Pick Fence/Split Case rules

Lot Number Tracking

• Tracks lot numbers for any item
• Can specify particular lot number in Pick Order
• Can utilize FIFO by Lot Expiration Date
• Scan Verify Pick and Put Away transactions

Serial Number Tracking

• Tracks serial numbers for any item
• Serial number information for picked items is uploaded to host system
• Can specify particular serial number on pick order
• Scan Verify Pick and Put Away transactions

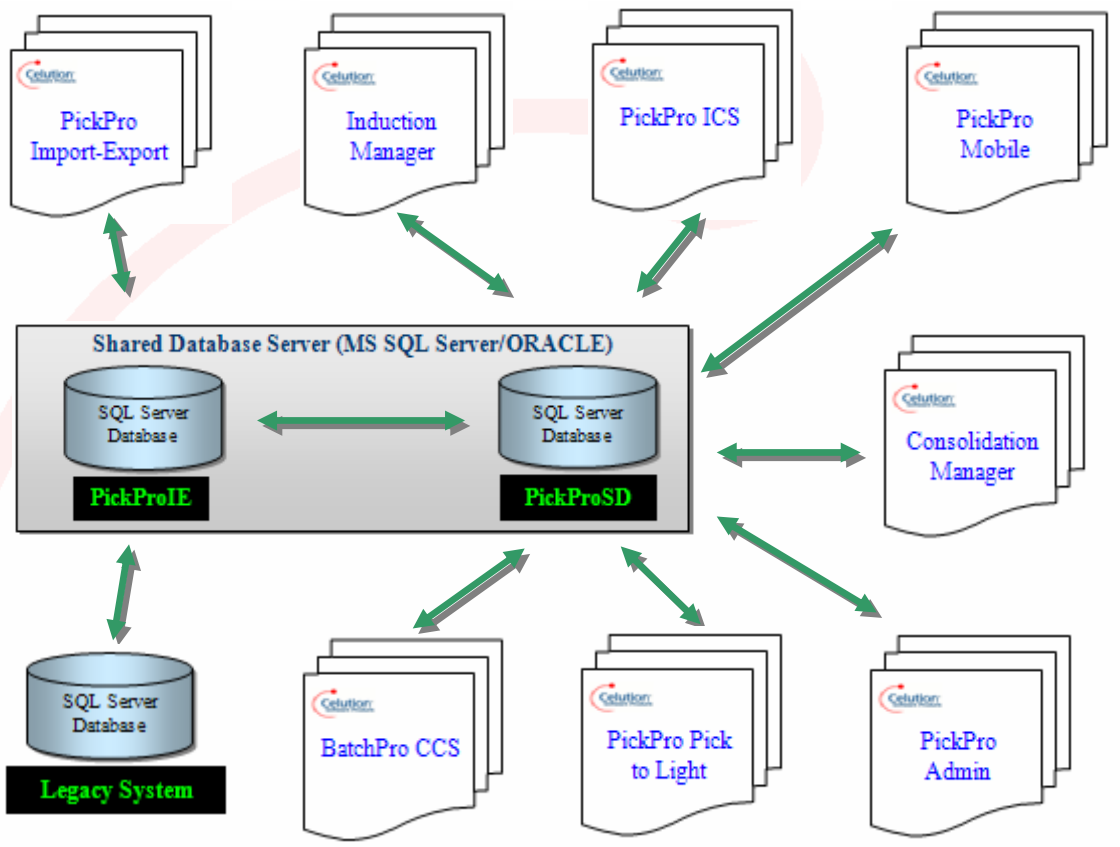
Replenishment

• Creates the pick orders from designated replenishment-from zones, and put away orders to replenishment-to zones
• Replenishment pick list printing is supervisor initiated
• Replenishment is controlled by supervisor-settable minimum quantity of items either for a location or throughout the replenishment-to zones.
• Stock reorder list for replenishment-from items

Cycle Counting

• Host-downloaded cycle count requests or manually entered count requests
• Create count by Location, Part Number, or range of locations, item value, last counted date, or any combination thereof
• Audit feature creates cycle counts from discrepancies between a downloaded host system count and the PickPro™ inventory count
• Counts can update inventory on the spot
• Counting results are available for upload to the host system

Computer System Architecture



The diagram above illustrates a typical PickPro™ configuration, consisting of;

- SQL Database Server
- Supervisor workstation
- Bulk workstation
- PickPro™ ICS (ASRS) workstation
- PickPro™ Mobile using BulkPro™ on hand held wireless devices
- Consolidation workstation
- PickPro™ Pick to Light System with Bucket Brigade technology
- BatchPro Conveyor Control System
- PickPro™ Administrator module with Order Release management

This configuration has a laser printer at the Supervisor station for printing of reports, and a laser printer at the Bulk station for printing of pick lists and putaway lists (travelers). It also has barcode label printers at each of the two automated workstations, for the printing of pick labels and order/tote labels.

The main functions of each workstation are as follows:

• Server
The server station is the central repository for all database information. It contains all of the shared data required by the PickPro™ workstations. Users do not generally access it directly. The server must be connected to a host computer system via a Local Area Network or similar connection for automated information transfer. There is no license fee for the server.

• Automated station
An automated workstation controls one pod of ASRS devices. A pod may contain multiple ASRS devices. Each pod may contain only one automated workstation. An automated workstation may also manage off-automated shelving and multiple bulk zones.

• Bulk station
The bulk workstation controls off-automated bulk shelving. Multiple bulk zones are possible depending on their location in the warehouse.

• Supervisor
The supervisor station is generally used for generating reports, and for viewing system activity, and file maintenance. It runs the automatic download processes, importing and exporting.

PickPro™ may have any number of supervisor stations.

• Administrator
The administrator station is generally used for generating reports, and for viewing system activity, and file maintenance. Operators can release into Pickpro™ orders to be allocated and processed.

PickPro™ may have any number of Administrator workstations.

All of the PickPro™ computers are connected to each other via a Local Area Network. The PickPro™ computers may also be integrated into a customer's existing network. The real time communications generated by the system may require dedicated connections to maintain a speedy response.

In addition to the computers, the system may be configured with the following equipment:
• Label Printers
Label printers will typically be placed at each automated pod. They are used to print Pick Labels (Pick Tickets) and Order Labels (Tote or Carton Labels).

• Barcode readers
Corded or cordless barcode readers are typically used at the automated workstations and the bulk workstations.

• Laser/Inkjet Printers
Printers may be set up at the bulk workstations, the supervisor workstations, or anywhere report printing or pick list printing is required.

System Setup

Setup of PickPro™ requires installation of several files on each workstation. The databases can reside on the local machine for a single workstation system or on the file server as detailed in the diagram above in the networked environment.

PickPro™ can be installed and configured by Celution Software's engineers at the ScottTech headquarters if desired. The computer system is then shipped to the customer as a 'turnkey' system, ready for immediate use.

See the *Customer Responsibility Guide* for more information about the process of PickPro™ setup and installation. See the *Host Interface Specification* for technical details regarding the installation process.

Host Interface

PickPro™ typically works in cooperation with a host computer system. The host system controls issues such as order entry, accounting, etc., while PickPro™ handles automated and bulk inventory, order execution, cycle counting, inventory management, and device control.

PickPro™'s host interface consists of what are known as uploads and downloads or imports and exports.

PickPro™ receives downloaded order data from the host system on a regular basis. This order data contains requests for Picks, Putaways, and Cycle Count activity. PickPro™ also uploads information to the host regarding inventory changes and tasks that have been completed.

The PickPro/Host System interface is performed by means of file transfers or direct table population. For this purpose the host system must have access to the PickPro™ server and its networked disk drives, typically in the form of an Ethernet or other local area network connection.

Using a fixed file data transfer, information being sent from the host to PickPro™ is written to a file in a directory that is available to PickPro™ server. PickPro™ can read

this file from the directory when necessary. Information being sent from PickPro™ to the host system is also written to a file in a directory. It is the responsibility of the host system to read this file when appropriate. Various file formats are supported.

The table data transfer configuration allows for the placing transactions in an Import table for processing, and retrieving processed transactions from the Export table.

An operator can also manually enter all information that may be downloaded from the host system. If the connection to the host is ever lost temporarily, a supervisor will be able to manually enter picking and putaway orders. Manual entry may also be useful for emergency orders or orders not tracked by the host. PickPro™ may be configured to perform uploads and downloads on an automatic timed basis, e.g. every 30 seconds.

Inventory Allocation

After PickPro™ receives a pick order from the host system, order allocation must take place. *Allocation* is the process of checking that there is enough available inventory for the order(s), and choosing specific locations to pick from. Once specific inventory is allocated, it is considered unavailable to any future orders that require the same part.
If there is insufficient inventory for an order, an order shortage report will be generated. If there is a shortage, PickPro™ may, based on a configurable setting, cease processing of the shorted order, or may continue to process the remainder of the order.
Order allocation may be performed manually by a supervisor, based on order priority or other factors, or may be configured to occur automatically whenever an order is received from the host.

A supervisor may manually cancel the allocation of an order and reallocate it at any time. When the same part exists in multiple locations, the system decides which location to pick from based on an algorithm that takes into account a number of factors which include:

- FIFO
- Serial Number (if required)
- Lot Number (if required)
- Pick Fence (used to decide what quantities are picked from bulk locations)
- Location quantity

Automated Pick Batch Setup

PickPro™ allows orders to be picked individually or in a batch mode. PickPro™ can batch any number of orders or up to the number of sort bar locations configured in the system. The number of sort bar locations is a system configuration option (unlimited positions can be configured).

The batching process is configurable; an example process is as follows:
To begin work the operator stages a group of empty totes or boxes on the sort bar.

The operator then associates orders to pick positions in one the following ways:
• The operator scans a bar coded order label, or uses the screen to select an order from all available orders. This is done for each position being used.
• The operator selects the “auto-batch” option in PickPro, and the system automatically selects orders to fill all sort bar locations. Orders are selected based on one of the many available order sequence options.

As the order associations are made, PickPro™ defines the staged group as a batch. If tote label printing is turned on for the orders in the batch (a configurable option), a tote label is printed for each tote in the batch at this time.

If automatic pick labels are configured a label will be printed for the pick currently being processed, or if desired they can all print at once.

Automated Picking

When the operator completes the process of grouping orders into a batch, the system begins the picking process.
The system sorts all the picks into the optimal picking sequence, i.e. the sequence that requires the least amount of automated movement.
All Automateds will begin positioning immediately to their first pick locations. If an automated happens to already be at its first pick location it will not spin at all initially. A light on the lightree will light up indicating the automated to pick from, the unit of measure of the part, and the total quantity to pick. At the same time, lights will light up on the sort bar indicating into which totes items from this pick are to be placed. Each lit sort bar location will display the quantity for that position’s tote. If pick labels are defined for the order lines being picked (a configurable option), a pick label is printed at this time for each order that is part of this pick. See Figure 2 for a sample pick label format.

Figure 2. Sample Pick Label

The operator will then pick the total pick quantity out of the automated and distribute it into the indicated totes. When the pick is completed, the operator will indicate this to the system either by pressing one of the task complete buttons on the lightrees or the sort bar,

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or by pressing the *Task Complete* key on the computer.
If the item being picked is a serialized item, the operator will be required to scan a serial number for each unit picked.
When a pick is completed, the automated picked from will immediately begin positioning to its next pick location. It is possible that the next pick location is in the same bin, in which case the automated will not spin. The operator will immediately be directed by the light tree to the next pick location. There will rarely if ever be any wait time between picks, since while a pick is being performed in one automated the others are already positioning to their next locations.

Picking from flow rack in an automated pod is also light directed. Prior to each flow-rack pick, a light on the flow-rack sort bar will indicate the location to pick from and the quantity to pick. At the same time lights on the tote sort bar will indicate the quantities to place in each tote. Upon completion of a pick the operator will press one of the *Task Complete* buttons. All flow-rack picks will be performed before the automated picks to minimize the possibility of operator error in picking.

Upon completion of a pick the system updates its inventory database, logs the transaction, and instructs the operator to perform the next pick. If the automated just picked from needs to move in order to reach its next pick location, it will begin positioning at this time.

When a batch is completed, the operator will be notified as to which totes require picking at other zones. For example, a tote that requires further processing in another zone should be directed to that zone at this time.

During the picking process, a number of error situations can be handled:
Full tote: When a tote is filled but there are still more picks to be placed in the tote, the operator may request an additional tote label be printed by the system. The full tote, with its label, will be moved to the side or sent on for further processing, and a new empty tote will be put in its place with a duplicate label.
Short pick: If the system requests a pick but there is not enough stock in the location to pick the full amount, the operator notifies the system that a shortage exists by pressing the “Pick Short” key. The system will note the actual quantity picked, and will adjust the quantity in the location. If the missing quantity exists in a different location in the same pod, the system will add a new pick to the end of the batch to make up the difference.

Hot pick/put: A batch can be suspended at any time by pressing the Exit key. The batch will remain in the system and the operator will be able to perform a hot pick or a hot Put away immediately. The operator can resume the suspended batch after the hot pick or put is completed.

Safety cutoff: If a photo-eye is tripped, or any other condition causes the safety cutoff to be engaged, automated movement will stop and the operator will be immediately notified. The operator in this case must reset the safety cutoff and press the "Respin" key. Work will continue where it left off and no information will be lost.

Bulk Picking

There are two options for bulk pick processing, using BulkPro™ or using a paper-based system.

BulkPro™

Paper-based Processing
Bulk picking is performed using printed pick lists. An operator at a bulk workstation can select one or a number of orders to group into a pick list, and can then specify that the system print either a Batched Pick list or an Order Pick list.

In a batched list, the picks are sorted by location, with each pick specifying which order/s it belongs to and the quantity for each order. This method is suitable for a pick-to-cart type of picking where the operator walks through the bulk area with a tote for each order. Items are picked from shelves and distributed into the totes in a manner similar to that at the automated pod, but without light tree directed picking or confirmation.

With order pick lists, a separate pick list is printed for each order. To pick such a list, the operator will have to circulate through the bulk area once for each order.

With either type of pick list, the picks are printed in location order for optimal operator travel through the area When picking of the list or lists is completed, the operator proceeds to any bulk workstation in order to notify the system of the completed picks. If the list was picked with no errors or shortages, the operator can notify the system that everything was completed as planned. The system updates its inventory at this time and logs the transactions.

If any items were picked short, the operator will have the option of reviewing the pick list on the screen and entering any shortages. The system will update the inventory based on the actual quantities picked and log the transactions.

Multi-Zone Picking

It is possible to have one order that requires picks from multiple automated pods, or an order that requires picks from both automated pods and the bulk area.
Orders from multiple zones can be handled in two ways:

Pick and Pass In this case an order will be picked into a single tote at multiple zones. Thus when all picks for a particular tote in a particular zone are completed, the tote will be passed to another zone and additional picks will be placed in it. After the tote is completed at all automated zones it may be passed to the bulk zone to be consolidated with any bulk picks for the order.

Parallel Pick In this case an order may be picked into multiple totes, with one tote being used for each zone in the order. At the end of the picking process the totes will be brought to a consolidation area where totes will be combined.

When a batch of picks is completed at a pod, the system will indicate if any of the orders in the batch contain picks in other zones. This will indicate to the operator to which zones the totes must be passed if Pick and Pass is being used.

Automated Putaway Batch Setup

PickPro™ allows put away (stock) orders to be put away individually or in batch mode. PickPro™ can batch any number of putaway orders up to the number of sort bar locations in the system. The number of sort bar locations is a system configuration option. The batching process is as follows:

The system goes through its putaway allocation process. This can be triggered automatically or manually. The exact location assignment depends on the putaway settings of the particular item being put away. FIFO, Lot control, Serial Control, Cell size, velocity code and primary and secondary storage parameters all enter into the decision.

Governed by the parameters above first, the system will try to top off an existing location if is not a FIFO setting. It will only top off if the complete quantity be stored can be accommodated.

The operator scans in a putaway order number (or selects one from a list), and places the item to be put away in the first tote position. It is also possible to perform a putaway without a pre-existing putaway order. In this case the operator simply enters the part number and the quantity to be put away.

The operator will be given the option to enter additional putaway orders, up to the number of sort bar locations defined for the system. When the operator fills the sort bar or indicates that there are no more putaways to add, the system will begin positioning the Automateds and directing the putaway. The system will always try to balance stock between the Automateds to avoid a situation where one automated is full while another is mostly empty. **Properly balanced Automateds will insure that during the picking process there is no wait time between picks.**

Automated Putaway

The actual putaway process is the reverse of the picking process: items are taken from the sort bar positions and placed in the automated. For each item to be put away, a lightree display will indicate where in the automated to store the item. When the putaway has been performed the operator presses the *Task Complete* button, at which time the system updates its inventory records and logs the transaction. The system then indicates the automated location for the next putaway.

During the putaway process, a number of error situations can be handled:

Full Cell: When the destination location selected turns out to be too full, or the operator chooses for any other reason not to put away the full quantity, the operator can adjust the putaway quantity at putaway time. The operator must in this case put away the remainder as a hot putaway at the end of the batch.

Hot Pick/Put: A batch can be suspended at any time by pressing the *Exit* key. The batch will remain in the system and the operator will be able to perform a hot pick or a hot putaway immediately. The operator can resume the suspended batch after the hot pick or put is completed.

Safety Cutoff: If a photo-eye is tripped, or any other condition causes the safety cutoff to be engaged, automated movement will stop and the operator will be immediately notified. The operator in this case must reset the safety cutoff and press the "*Respin*" key. Work will continue where it left off and no information will be lost.

Bulk Putaway

Bulk putaway process is similar to a reverse of the bulk picking process.
An operator at the bulk workstation selects one or a number of putaway orders to batch together on a bulk putaway list. The system goes through a destination selection process similar to that used when batching putaway orders at an automated pod. As in automated putaway, locations are selected based on part and location attributes, and the operator is given the option of modifying attributes on the spot to handle situations where no suitable location is found. The system then prints a putaway list specifying, for each order, the item to put away, the quantity, and the location to put it in. The putaways are printed in location order for optimal operator travel through the bulk area.

When the list is completed, the operator returns to the bulk workstation to notify the system of the completed putaways. If the list was completed with no errors, the operator can notify the system that everything was completed as planned. The system updates its inventory at this time and logs the transactions.

If any items were not completely put away, the operator will have the option of reviewing the pick list on the screen and entering any shortages. The system will update its inventory based on the actual quantities put away and log the transactions.

Automated Cycle Counting

Count requests can be initiated either via downloaded cycle count orders from the host, or via manual request from an operator.

When requesting a manual count, an operator can specify either an item-based count or a location based count. An item-based count will queue a count request for each location that contains a particular item. A location-based count will queue a count request for every location that falls within a specified range.

A count based on a downloaded count order will queue a count request for every location specified in the order. For every count request, the system will display the location name and the item number that is thought to be in the location. A lightree will also light indicating the exact location. The quantity thought to be in the location will not be indicated. The operator must count the items in the location, using the unit of measure of the item as a guide, and enter the counted quantity. If the operator's count does not match the system's data, the operator will be asked to perform the count again and re-enter the quantity. If the operator's count still does not match the system's (but matches his first count), the system data will be updated. The transaction will be logged, and the inventory change will be uploaded to the host system.

Bulk Cycle Counting

Bulk cycle counting is performed by means of printed lists, in a manner similar to bulk picking and bulk putaway. For both location-based counts and item-based counts, the system prints out a list of every location to be counted. The list specifies the item number and unit of measure, but does not specify the quantity thought to be in the location.

The operator circulates though the bulk area and marks on the list the actual quantities counted.

The operator then returns to the bulk workstation and enters the information on the list. If the operator's count does not match the system's inventory, the inventory is updated to match the operator's count

Replenishment

Replenishment is performed from designated replenish-from zones to the replenishment-to zones when inventory is low. Replenishment is a supervisor-initiated, pick list directed activity.

When replenishment is required, a supervisor initiates printing of a replenishment pick list. The system uses the item number attributes and inventory quantities to determine which parts require replenishment, and what quantities are required.

Directed by this list, an operator utilizes PickPro™ 's picking and putaway functions to replenish stock.

Reporting

PickPro™ provides various on-screen and printed reports, which provide visibility into all of the important data and system activity.
Standard reports are:

- Inventory
- Empty Locations
- Replenishment
- Transaction Journal
- Serial Numbers
- Count Statistics
- Pick Statistics
- Putaway Statistics

In addition to these reports, PickPro™ provides a limited level of ad-hoc reporting capability, allowing supervisors to design custom reports.

It is also possible to use any of a large number of third party reporting tools to access the PickPro™ database for further data reporting and analysis.

Glossary

Automateds refer to ASRS (carousels), light-directed flow rack or light-directed shelving.
Allocate Mark inventory as “set aside” for a pick order. Inventory that is allocated is not considered available for picking should another order request the same item.
Batch A group of orders that are combined together for more efficient handling.
Bin One column of storage locations within an automated unit.
Bulk An area of the warehouse generally used to store larger, slower-moving items. Non-automated storage.
Cell A single storage location within an automated unit.
Cell Size An indicator used to define the size of a particular cell. Used to match up items with their most appropriately sized storage location.
Cycle Count The process of inventory counting, used to reconcile actual inventory quantities with the quantities the software is aware of.
Download Information passed from a host computer system to PickPro. May consist of Pick Orders, Emergency Picks, Putaway Orders or Cycle Count Orders.
Ethernet A technology used to connect computers to one another in a network.
FIFO First In First Out. A type of inventory control whereby the items that have been stored in the system the longest are the first to be picked. Typically used for date-sensitive items. Requires a new location for each put away.
Flow Rack A type of carton or pallet racking where items are put in on one side, and picked from the opposite side. An incline causes the material to “flow” down from the put side to the pick side.
Lightree The vertical display adjacent to each automated that indicates bin locations, quantities, and units of measure for picking and putaway.
Pod A group of Automateds arranged in an ergonomic configuration, controlled by one operator, also known as a *Zone*.
RAD Rapid Application Development. A software technology used to develop applications with a minimum of programming.
Replenishment The process of moving inventory from a bulk area into an automated zone.
Sort bar A row of tote positions in a pod. During the picking process, the sort bar will generally contain one tote for each order being picked into. A sort bar commonly has between 8 and 20 locations. Also used to refer to the displays above or below the sort bar which indicate quantities to place in or pick out of the totes arrayed on the sort bar. Also refers to flow rack lights.
Topoff The process of selecting a putaway location or putting away an item to a location that already contains the item in question.
Tote Container into which items are placed.
Upload Information sent from PickPro™ to a host computer system. Consists of information regarding completed tasks or inventory adjustments.
Universal Pod An automated pod containing both Automateds and shelving locations (either static shelving or flow-rack).

Velocity Code An indicator used to define the frequency with which items are put into and taken out of a particular cell. Used to speed throughput by putting fast moving items into the locations that are ergonomically easiest to pick from. Also known as a **Golden Zone.**

VLM Vertical Lift Module

Zone PickPro™ breaks a warehouse down into zones. Each automated pod is considered one zone, and bulk area is considered one zone.

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