

IMAGE ENTERTAINMENT

*Distributor of Laser Disc and DVD
Products and Equipment
Van Nuys, California*

- ❖ 70,000+ sq. ft. Distribution Center in Las Vegas, Nevada
- ❖ Fully mechanized facility with Pick-to-Light, Carousels, automated Conveyors and RF Data Collection
- ❖ VT220 Terminal Emulation Spread Spectrum RF Data Collection Network
- ❖ Returns processing
- ❖ Inbound QA inspection
- ❖ Work order packaging processing
- ❖ Scan and verify packing function
- ❖ Carousel and Pick-to-Light Interfaces
- ❖ Zone/Max velocity directed putaway
- ❖ Wave management/evaluation
- ❖ RF directed batch replenishment
- ❖ Kitting/assembly operations
- ❖ Tracer X manifesting interface
- ❖ QANTEL Host system interface
- ❖ DEC Alpha model 4000 5/400 with RAID running under DEC UNIX

[*New expandable "green field"
Distribution Center in Las Vegas*

CORPORATE EXPRESS

*Commercial office products direct
marketer and distributor
Broomfield, Colorado*

- ❖ 21 Sites in U.S. implemented.
- ❖ Six more sites are going live this year.
- ❖ Hub Distribution Centers supporting satellite warehousing operations
- ❖ VT220 Terminal Emulation Spread Spectrum RF and paper-based receiving, putaway, picking, replenishment, and shipping per site requirement
- ❖ Blind and assumptive receiving
- ❖ Wrap and label cross docking
- ❖ Special marry-up order processing
- ❖ Carrier appointment scheduling
- ❖ Random and directed putaway
- ❖ Same day order processing
- ❖ Containerization
- ❖ Wave management/evaluation
- ❖ Conveyor interface
- ❖ Pick and pass operations
- ❖ Outbound quality assurance (QA) processing
- ❖ Clippership shipping/manifest system interface
- ❖ HP/9000 mainframe Host Interface
- ❖ Various HP/9000 Servers

**YELLOW FREIGHT:
MERIDIAN IQ**

*Less than Truckload U.S. leader
with Value Service Division of
Meridian IQ
Overland Park, Kansas*

- ❖ The WMS and HotVisibility supports Yellow in its management of inventory for some of its key customers, such as Eaton, Dana, and CureCrete.
- ❖ 15 warehouse facilities involved
- ❖ Serial Tracking for Outbound shipments
- ❖ 3PL Billing components generated
- ❖ Pro Number tracking
- ❖ Linux operating system platform

WAREHOUSE BASICS

*Third Party Logistics Provider
Atlanta, Georgia*

- ❖ *Providing 3PL warehousing for multiple customers*
- ❖ *120,000 sq. ft. facility*
- ❖ *Overflow Storage*
- ❖ *Pick and pack operation*
- ❖ *Kitting*
- ❖ *LTL and truckload*
- ❖ *BOL generation*
- ❖ *Pro number tracking*
- ❖ *VT220 terminal emulation, spread spectrum RF with paper-based receiving, putaway, picking, replenishment, and shipping*
- ❖ *Linux operating system platform*

MATTEL: PLEASANT COMPANY

*Manufacturer and direct marketer of collectable dolls and accessories
Madison, Wisconsin*

- ❖ *400,000+ sq. ft. manufacturing and catalog fulfillment distribution operations*
- ❖ *Peak season outbound order processing requirements of 100,000+ orders with 400,000+ order lines per day*
- ❖ *Raw materials and finished goods tracking*
- ❖ *VT220 Terminal Emulation Spread Spectrum RF Data Collection Network*
- ❖ *Returns processing*
- ❖ *Inbound QA inspection*
- ❖ *Automated assignment of putaway locations based on user-defined operating parameters*
- ❖ *Same day order processing*
- ❖ *Containerization*
- ❖ *Wave management/evaluation*
- ❖ *Pick and pass operations*
- ❖ *Auto-replenishment*
- ❖ *Kitting/assembly operations*
- ❖ *HP mainframe-based Oracle Order Entry, Manufacturing and Financial Applications interface*
- ❖ *Sun model E4000 running under Sun Solaris*

-] *WMS integration with Oracle Applications leading to Oracle Cooperative Applications Integration (CAI) Certification*
-] *Benchmark test of WMS verified outbound order processing throughput of 100,000+ orders with 400,000+ order lines in less than 4 hours*

WESLEY JESSEN

*Contact lens manufacturer
Des Plaines, Illinois*

- ❖ *70K sq. ft. mechanized distribution facility*
- ❖ *120,000+ lens types*
- ❖ *20 Diamond Phoenix Carousel systems, each storing over 115,000 individual lenses*
- ❖ *Over 8,000 individual lens pair orders per day*
- ❖ *Serial number tracking*
- ❖ *Expiration date control*
- ❖ *Paper-based receiving, putaway, picking, replenishment, and shipping, phasing into RF by task type*
- ❖ *Customer returns disposition*
- ❖ *Multiple fixed (dedicated) locations per SKU*
- ❖ *User defined scheduling of order group releases*
- ❖ *Same day order processing*
- ❖ *Threshold picking control to minimize the number of pick groups*
- ❖ *Task confirmation via fixed scanners*
- ❖ *Customized shipping labels per carrier*
- ❖ *HP mainframe host interface*
- ❖ *HP/9000 model K460 with HP/UX*

-] *Consolidating multiple operations into new distribution facility as supported by the WMS*

UNIVERSAL FURNITURE

*Contemporary furniture
manufacturer
Morristown, Tennessee*

- ❖ 750,000+ sq. ft. manufacturing and distribution operations
 - ❖ Multi-site implementation
 - ❖ Lot control tracking
 - ❖ Customer returns processing
 - ❖ Raw materials and finished goods tracking and processing
 - ❖ UCC-128 Customer compliance labeling
 - ❖ Outbound Advanced Shipment Notification (ASN) to retail customers
 - ❖ License plate tracking
 - ❖ ASN receiving, putaway, picking, replenishment, and shipping
 - ❖ Bulk storage management
 - ❖ Random and fixed locations
 - ❖ DEC Alpha model 4100 5/533 DEC UNIX; Unisys 2200 host system (migrating to Oracle Applications)
- [Consolidation of 3 bedroom and dining room manufacturing and distribution facilities
- [WMS integration with Oracle Applications based on Oracle Cooperative Applications Initiative (CAI) Certification

COLUMBIA SPORTSWEAR

*Outerwear and sportswear
manufacturer
Portland, Oregon*

- ❖ 300K sq. ft. fully mechanized distribution facility
- ❖ 20,000+ SKUs (changing seasonally)
- ❖ Apparel sizing sequence on all screens and reports
- ❖ Style/Color/Size SKU definition
- ❖ License plate tracking (cartons)
- ❖ Non-standard carton quantities
- ❖ Distributed conveyor controls (486-based)
- ❖ Integrated tilt-tray Sorter
- ❖ Accusort scanning interface
- ❖ Intelligent RF Spread Spectrum Data Collection Network
- ❖ RF case and pallet picking
- ❖ "Hands-free" batch picklist across 3-level unit pick mezzanine
- ❖ Wave management/evaluation
- ❖ Auto-replenishment
- ❖ Kitting/value added services
- ❖ Quality Assurance
- ❖ 120 automated packing stations with wedges/scanners
- ❖ Labor standards/productivity measurement
- ❖ UCC-128 labeling
- ❖ Integrated weigh scales and parcel manifesting system
- ❖ HP mainframe host interface
- ❖ IBM RS/6000 model 58H with AIX

- [Awarded 'Warehouse of the Month' by Modern Material Handling Magazine, Aug. '94
- [Selected as the "Showcase Application", Warehouse Mgmt Systems, for ScanTech '95

**INTERAMERICAN:
MICROSOFT CORPORATION**

*Software products manufacturer
Indianapolis, Indiana*

- ❖ Intelligent RF Spread Spectrum Data Collection Network
 - ❖ Integrated with Somerset's custom transportation and billing systems
 - ❖ Carrier scheduling and performance tracking
 - ❖ Damage tracking
 - ❖ Bulk storage locations
 - ❖ Wave management/evaluation
 - ❖ International shipments
 - ❖ DEC VAX host interface
 - ❖ IBM RS/6000 Model C-10 with AIX
- First outsourcing of software development by Microsoft
- Key component to successfully ship 'Windows 95'

**INTERAMERICAN:
PROCTER & GAMBLE**

*HABA (Health and Beauty Aids Division), Western Regional Distribution Hub
Chino, California*

- ❖ *Multiple businesses in multiple Buildings on one WMS CPU*
- ❖ *Integrated weigh scale picking system*
- ❖ *Intelligent RF Spread Spectrum Data Collection Network*
- ❖ *Integrated with transportation system*
- ❖ *Custom billing system*
- ❖ *ASN/EDI*
- ❖ *Stock status/inventory management*
- ❖ *Damage tracking*
- ❖ *Bulk storage locations*
- ❖ *Wave management/evaluation*
- ❖ *IBM mainframe host interface*
- ❖ *IBM RS/6000 Model 580 with AIX*

- ⌈ *Awarded the 1995 Inc./MCI Positive Performer Award in the service category*
- ⌈ *Named P&G 'Warehouse of the Year*

**INTERAMERICAN:
GALOOB TOYS**

*Toy and Game manufacturer
Ontario, California*

- ❖ *425K sq. ft. distribution facility*
- ❖ *Intelligent RF Spread Spectrum Data Collection Network*
- ❖ *Inbound advanced shipment notice*
- ❖ *Fluid receiving/fluid putaway*
- ❖ *Wave management/evaluation*
- ❖ *Lot tracking/lot control*
- ❖ *FIFO product rotation*
- ❖ *Bulk pallet storage operation*
- ❖ *SKE substitution*
- ❖ *Pallet consolidation*
- ❖ *Auto-replenishment*
- ❖ *UCC-I28 labeling*
- ❖ *Pallet tracking/history*
- ❖ *IBM AS/400 host interface*
- ❖ *IBM RS/6000 model C-20 with AIX*

- ⌈ *Named Galoob Toys West Coast Distribution Hub*

**INTERAMERICAN:
ALBERTO CULVER**

*Consumer products manufacturer
Ontario, California*

- ❖ *250K sq. ft. distribution facility*
- ❖ *Intelligent RF Spread Spectrum Data Collection Network*
- ❖ *Inbound advanced shipment notice*
- ❖ *Wave management/evaluation*
- ❖ *Lot tracking/lot control*
- ❖ *FIFO product rotation*
- ❖ *Case and full carton picking*
- ❖ *SKE substitution*
- ❖ *Pallet consolidation*
- ❖ *Auto-replenishment*
- ❖ *UCC-I28 labeling*
- ❖ *IBM mainframe host interface*
- ❖ *IBM RS/6000 model C-10 with AIX*

- ⌈ *Named Alberto Culver Southern California Distribution Hub*

INTERAMERICAN: BECTON DICKINSON

*Pharmaceutical, medical
instruments manufacturer
Chino, California, and
Indianapolis, Indiana*

- ❖ *Multiple divisions operating from a single WMS CPU*
- ❖ *Intelligent RF Spread Spectrum Data Collection Network*
- ❖ *Wave management/evaluation*
- ❖ *Lot tracking/lot control*
- ❖ *FIFO product rotation*
- ❖ *Case and full carton picking*
- ❖ *Auto-replenishment*
- ❖ *Multiple host interfaces*
- ❖ *IBM RS/6000 model C-10 with AIX*

] *Named by Becton Dickinson as their 'Warehouse of the Year'*

CSI DONNER

*Distributor of bathroom fixtures and home security products
Sylmar, California*

- ❖ *Intelligent RF Spread Spectrum data collection*
- ❖ *UCC-128 labeling*
- ❖ *UPC-SCS, UPC-A, or SKU scanning*
- ❖ *Fluid receiving/fluid putaway*
- ❖ *Directed putaway*
- ❖ *Quality assurance*
- ❖ *Inbound advanced shipment notice*
- ❖ *Material transfer orders*
- ❖ *RMA Processing*
- ❖ *Wave management/evaluation*
- ❖ *RF based piece, case, and full pallet picking*
- ❖ *Auto-replenishment*
- ❖ *RF packing*
- ❖ *Ship primarily to mass merchants*
- ❖ *Remote facility operating from the WMS host CPU*
- ❖ *DEC VAX host interface*
- ❖ *DEC Alpha CPU with DEC UNIX*

] *Mass merchant customer base*
] *Atlanta radio frequency activity controlled by server in CA*

BUGLE BOY INDUSTRIES

*Apparel manufacturer
Simi Valley, California*

- ❖ *Operations and logistics consulting*
 - ❖ *Distribution network modeling/data collection*
 - ❖ *Physical layout and process improvements*
 - ❖ *Material flow and information systems requirements definition*
-] *Implemented flexible "what-if?" logistics model to support ongoing strategic decision making in implementing distribution cost savings. Key variables supported are:*
- *Projected sales*
 - *State-to state outbound transportation costs*
 - *Weight per unit shipped*
 - *Labor cost per unit improvements*
 - *Inbound cost fluctuations*