In Spring of 2003, Advanced Systems, Inc. became involved in a project with Unilever-Bestfoods Corp. for one of their plants located in Chicago. Advanced integrated an automatic truck loading system into its design and competed with 2 other bidders to supply a turn-key system to automatically load semi-trailers with pallet loads of finished goods.

The scope of the bid specification for the project included: 1) Relocating five case palletizers from the current location to a warehouse adjacent to the facility’s shipping doors; 2) Extending the existing case conveyors to the relocated palletizers; and 3) Creation of a pallet handling system designed to accumulate and meter pallets to the ATLS truck-loader in each of six loading positions.

All bidders were invited to offer voluntary alternate solutions to better solve the problem. While other competitors submitted bids based solely on the specification layout, Advanced Systems offered a number of other creative layout solutions. Chief among these was a configuration allowing the re-use of Unilever’s existing case palletizers without the need to re-orient the case in-feed sections. This provided significant cost savings, as well as helping to streamline a challenging re-commissioning process.

Design superiority combined with an overall cost advantage led Unilever to award the contract to Advanced in the 1st quarter of 2004.
Key features of this application include:

- Customer specification requested capability of automatically loading 90-120 trailers per day. (Advanced Systems built in a buffer to allow growth in the range of 175 to 190 trailers per day.)
- The ability to automatically “shunt” a portion of production to fork-pick locations for manual Rail Car load-out
- Handling ability of 2,000 lb+ CHEP pallets
- A variety of load patterns in the trailers including “pin-wheeling”
- Automatically double-stack “Club Pack” pallets prior to loading
- Custom software which maximizes sequencing, accumulation and logic for metering pallet loads to ATLS
- Complete interface with customer’s control and verification system
- Interface with customer’s SAP (host business management system)
- Unimpeded access for conventional fork trucks to dock doors not in currently in use by the ATLS
- ATLS ability to load conventional unmodified common carrier trailers of varying sizes
- A system that is programmable based on priority pick
- 24/7 operation – system runs continuously without the need for breaks, vacations or sick days.
- 100% load accuracy
- 100% Batch code tracking confirmation – The system automatically scans and confirms placement of all pallet loads (absolutely crucial in the food and beverage industry)

System Justification Elements include:

- Overall safety, due to significant reduction in fork truck traffic – ATLS module inherently safe with laser sensing pedestrian interface during dock traversing maneuvers. Automatic safety walls deploy to completely isolate ATLS during loading sequence
- Reduction in overall head count
- Reduction in size of fork truck fleet and associated maintenance
- Dramatic reduction in potential product damage

Unilever Bestfoods

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